



NORWEGIAN MINISTRY OF FINANCE

Report No. 10 (2009–2010) to the Storting

# The Management of the Government Pension Fund in 2009





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# The Management of the Government Pension Fund in 2009

Report No. 10 (2009–2010) to the Storting

*Recommendation of 26 March 2010 from the Ministry of Finance,  
approved by the Council of State on the same date.  
(The Second Stoltenberg Government)*



*Part I*  
*The management of the*  
*Government Pension Fund*





## 1 Introduction

### *Main aspects*

The purpose of the Government Pension Fund is to support government savings to finance the pension expenditure of the National Insurance Scheme and long-term considerations in the spending of government petroleum revenues. Sound, long-term management of the Government Pension Fund will help ensure that Norway's oil wealth can benefit all generations.

The Government Pension Fund comprises the Government Pension Fund Global (GPFG) and the Government Pension Fund Norway (GPFN). The operational management of the two parts of the Government Pension Fund is conducted by Norges Bank and Folketrygdfondet respectively, within guidelines laid down by the Ministry. The Government Pension Fund is not a separate legal entity and does not have its own executive board or administrative staff.

The Government's ambition is for the Government Pension Fund to be the best managed fund in the world. This entails identifying leading international practice in all parts of the Fund management and striving for this.

Through the investment strategy, the Ministry of Finance strives to take advantage of the characteristics of the Fund such as its size and long investment horizon and to attain the best possible trade-off between return and risk.

The Fund's investments have a very long time horizon. The strategy is therefore based on assessments of expected long-term returns and risks. It is also seen as important to have broad diversification of investments among different regions, asset classes, sectors and companies.

The Fund's investment strategy appears to work well. From the Fund's establishment until year-end 2007, the average annual real rate of return exceeded the Ministry's long-term expectations. The returns in 2008 changed this picture significantly. The global financial crisis had a dramatic impact on the financial system and the economy in many countries. This was one of the main causes of the unusually large negative returns in international equity markets, which dominated

the performance of the Government Pension Fund in 2008.

A strong recovery in 2009 largely reversed the losses incurred in 2008. In 2009, the return on the Fund was the highest since its establishment. The lessons learned from the last two years do not indicate any need to adjust the estimate of 4 per cent real return as a reasonable expectation of the Fund's long-term rate of return.

At the same time, experience also shows that we must be prepared for market volatility from time to time. The Government Pension Fund is well positioned to withstand such volatility. The Fund does not have obligations forcing holdings to be sold as a result of poor performance. The investment strategy does not, therefore, aim for minimal value fluctuations in the short term. A strategy devised only to minimise annual fluctuations would have yielded significantly lower expected returns.

The Fund's investments are spread over several thousand individual equities and bonds in the international financial markets. This helps ensure broad diversification of risk in the Fund. Nevertheless, there will always be a risk of losses on individual investments in this kind of portfolio. The purpose of the investment strategy for the Fund is not to avoid losses on individual investments, but to ensure that the sum of investments provides maximum financial return with a moderate level of risk.

In its annual reports to the Storting on the management of the Government Pension Fund, the Ministry puts considerable emphasis on illustrating the risk of short-term fluctuations in the Fund's performance. One way of illustrating the Fund's risk in different periods of market volatility is to simulate the Fund's rate of return during different crises. Figure 1.1 illustrates how the GPFG would have performed in two historical crises, compared with its actual performance during the financial crisis.

For example, the crisis in the 1930s would have led to a 3 per cent decline in the value of the Fund in the first year and further declines of close to 3 per cent and 13 per cent in the following two

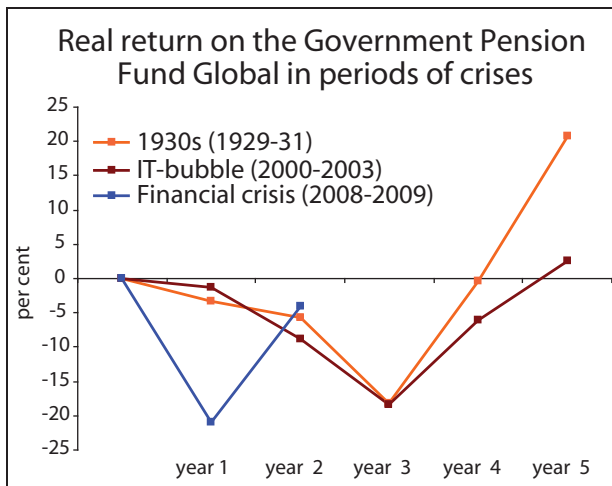


Figure 1.1 Simulated accumulated gross real rate of return (geometric) on the benchmark portfolio of the GPFG in various periods of crisis.<sup>1</sup> Per cent

<sup>1</sup> These simulations are based on the current asset allocation and regional distribution. The analysis of the historical crises does not contain return data for corporate bonds, as these data are not available.

Source: Ministry of Finance and Dimson, Marsh and Staunton (2009)

years. However, the rate of return in the fourth year would have compensated for these losses. The figure also shows that the losses incurred in this financial crisis were somewhat greater than they would have been in previous downturns. At the same time, this crisis so far appears to have been shorter, and it appears that the losses will therefore be recovered more quickly.

Many useful lessons can be learnt from the financial crisis for the management of the Government Pension Fund. One valuable lesson is the importance of maintaining the strategy over time. One should not abandon the strategy and sell securities immediately after they have fallen in value. It is the very risk of reductions in value that investors are rewarded for taking. In order to reap this reward, an investor must have the will and the ability to maintain the strategy even during periods of market volatility. The financial crisis can therefore be said to have tested the robustness of the Fund's strategy.

The Storting's deliberation of last year's report on the management of the Government Pension Fund showed that there is still broad agreement on the general long-term strategy for the Fund. However, it also underscored the importance of continuous development of methods to identify, manage and communicate different risk factors that can affect the Fund's rate of return.

### *Active management of the GPFG*

The Ministry of Finance has determined the main features of the investment strategy for the Fund by establishing a benchmark index. Norges Bank can deviate from this benchmark within guidelines set by the Ministry. This is called active management. The purpose of active management is to achieve return in excess of what would have been achieved by investing exactly as stipulated by the benchmark index.

The financial crisis revealed that the risks associated with the active management of the fixed income portfolio had not been sufficiently identified and communicated. The Ministry of Finance believes it is essential that active management is based on a solid foundation and that it has broad-based support. The experiences gained from the management of the Fund in 2008 revealed a need for reassessment of the foundation for active management in order to clarify the role active management would play in the overall investment strategy in the future.

In last year's report on the management of the Government Pension Fund, the Government announced that it would return to the Storting in spring 2010 with more information and an assessment of whether and to what extent active management of the GPFG ought to be continued.

The Ministry's assessment of the role of active management is based on the general investment strategy. The role that active management should play as part of the overall strategy should therefore be based on weighing expected returns against expected risk and on an assessment of the degree to which active management is useful in exploiting the characteristics of the Fund. The report considers various strategies for active management and the scope of active management.

The Ministry intends to maintain a certain limit to deviate from the Fund's benchmark index. A pure passive management strategy would be expected to add unnecessary costs and the Fund's special characteristics nevertheless points to a potential for positive excess returns that to some extent should be exploited. Beyond this, a certain degree of active management will have positive spill over effects on other parts of the management.

At the same time the Ministry intends to implement several changes that together will give less room for active management. Key changes are:

- The present maximum limit for expected tracking error of 1,5 per cent is replaced by regula-

tions stating that Norges Bank should aim for a tracking error not exceeding 1 per cent. At the same time it is recognised that the limit can be exceeded in special circumstances.

- Norges Bank is required to set supplementary risk limits to limit deviations from the benchmark index that empirically are not well captured by tracking error. Examples of such supplementary risk limits are limits on deviations from the benchmark measured nominally in kroner and requirements regarding minimum overlap between the benchmark portfolio and the actual portfolio.
- Norges Bank is cut off from leveraging the portfolio with the aim of increasing the Fund's exposure to risky assets. This restriction will exclude some of the strategies that previously have been used in active management of the fixed income portfolio.
- The Bank will also be required to measure and report on the Fund's exposure to systematic risk factors.
- Several of these changes are already implemented in the guidelines given by the Executive Board of Norges Bank to Norges Bank Investment Management (NBIM). Beyond this, several measures aimed at strengthening the supervision of the management have been implemented the last few years, see section below on the management framework.

#### *GPFG's real estate investments*

It has previously been decided to invest up to 5 per cent of the GPFG's assets in real estate. This is the third largest asset class in the world after equities and bonds. Many large international funds invest in real estate. The decision to include real estate as a separate asset class can be regarded as a natural continuation of the strategy to exploit the characteristics of the Fund and as a means of spreading the investments more widely. This report presents the guidelines for investments in real estate, which came into force on 1 March this year.

#### *Responsible investment practices*

The Government Pension Fund is managed on behalf of the Norwegian population. The population's widely shared ethical values form a basis for the responsible management of the Fund. We must ensure a good, long-term return from which future generations can benefit. A good financial

return over time depends on sustainable development in economic, environmental and social terms. By virtue of our long-term investments in a large number of the world's companies, we therefore have a responsibility for and an interest in promoting good corporate governance and safeguarding environmental and social concerns.

In 2008, the Ministry of Finance conducted a broad evaluation of the ethical guidelines for the GPFG. The findings were presented to the Storting in last year's report. The Ministry has implemented a number of new measures to promote responsible investment practices. The measures focus on factors that can have an impact on the long-term return of the Fund, including good corporate governance and the integration of environmental and social considerations in all parts of management. The Ministry has initiated a new programme aimed at environment-related investment opportunities and is participating in a research project to study in more detail how climate challenges can affect the financial markets. The work linked to active ownership and exclusion has also been strengthened in line with our ambition of contributing to sustainable development. This was reflected in the new guidelines for responsible investment practice, introduced on 1 March this year, which are presented in this report. The new guidelines replace the existing ethical guidelines of 19 November 2004.

#### *Performance of the Government Pension Fund in 2009*

In 2009 the GPFG achieved a return on investments of 25.6 per cent, or NOK 613 billion. This is the best result achieved since 1998. The GPFN investments yielded a return of 33.5 per cent last year, which corresponds to more than NOK 29 billion. Norges Bank's active management achieved excellent results last year, especially on its fixed income investments. This must be seen in the context of the gradual normalisation of the bond markets internationally and the reversal of the low market prices on fixed income securities in 2008. In 2009 Folketrygdfondet achieved poorer results than the benchmark for equities and better results than the benchmark for bonds. The overall result was weaker than the benchmark.

The combination of high petroleum revenues and moderate rates of return means that the Government Pension Fund is now one of the largest funds in the world. At year-end 2009, the market value of the Fund was NOK 2,757 billion (see

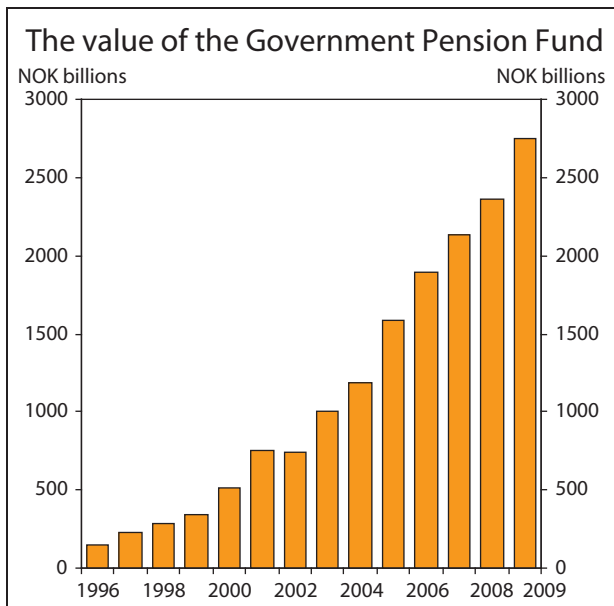


Figure 1.2 The market value of the Government Pension Fund. 1996–2009. NOK billion

Source: Ministry of Finance

figure 1.2). This corresponds to more than one year's total GDP in Norway, or roughly NOK 570,000 per capita in Norway.

The growing accumulation of financial capital means that the Fund is a major owner in the financial markets. Internationally, the value of the GPFG equalled roughly 1 percent of the total value of the world's listed companies at year-end 2009. The value of the GPFN equalled on average 4.4 percent of the total value of the Norwegian companies listed on the Oslo Stock Exchange.

#### The management framework

Improvements in the management framework play an important role in the Ministry's work related to the management of the Government Pension Fund. The report discusses various measures that have been implemented in recent years to improve the management of the Government Pension Fund. Important measures include:

- more extensive reporting to the Storting from 2007 in a separate report on the management of the Fund,
- amendment of the Norges Bank Act to clarify the division of roles between the Executive Board and the Supervisory Council of Norges Bank,
- new auditing arrangements and introduction of statutory internal auditing in Norges Bank,

- new regulations on risk management and internal control in Norges Bank,
- improving Norges Bank's internal management structure, with clearer division of roles and responsibilities between the Executive Board and the investment management department (NBIM),
- substantial organisational changes at NBIM resulting in significantly strengthened risk management and strengthened risk reporting,
- the strengthening of the Executive Board's oversight of NBIM, *inter alia* through a new investment mandate for the Chief Executive Officer of NBIM containing more detailed rules about what the GPFG can be invested in and the level of risk in the Fund as well as new principles for risk management, and
- reorganisation of Folketrygdfondet as a company by special statute, establishment of new audit arrangements and introduction of new guidelines for the management of the GPFN that entail much stricter requirements concerning measurement, management and control of risk and reporting than previously.

In addition to these measures, the Ministry has also announced that it will be introducing new rules for Norges Bank's active management, see the relevant section above. The Bank has itself published its internal guidelines for risk measurement and management.

#### Status of risk management in the GPFG

In last year's report on the management of the Government Pension Fund, the Government announced that it would reassess the status of risk management in the GPFG. In the National Budget 2010 the Government said that it believes that it is appropriate for such an external review of the risk assessment within the Bank's asset management to be conducted as a certification assignment given by Norges Banks Supervisory Council to the bank's external auditor.

This report gives a review of a report from the auditor (Deloitte) on design and implementation of the organisational structure and the framework for management of operational risk within the Bank. The certification assignment gives an independent assessment of the status of risk management within Norges Bank, including whether risk management is designed and implemented in accordance with relevant frameworks and standards. The review shows that the Bank in all mate-

rial aspects has designed and implemented an organisational structure and a framework for management of operational risk that are in line with recognised standards, and that the Bank in all material aspects has followed up the recommendations from the previous review of risk management as concern organisational structure and the framework for management of operational risk.

### *Summary*

In the Ministry's opinion, the Government Pension Fund has weathered the financial crisis well. There is still broad support for the long-term investment strategy, and the strong performance last year has largely reversed the losses incurred in 2008. The financial crisis has taught us a number of important lessons, including our understanding of the risk factors that affect the Fund's returns and the need for better methods to identify, manage and communicate the Fund's exposure to these factors. The Ministry, Norges Bank and Folketrygdfondet have invested a great deal of time and effort in recent years to improve the management of the Government Pension

Fund. Several measures have only recently been implemented or are going to be introduced during the coming year. The Ministry believes that these measures together will ensure a significant strengthening of the management of the Fund.

This Report consists of two parts: Part I provides an account of the management of the Government Pension Fund on the basis of the three main areas of the Ministry's responsibilities relating to the Fund: the investment strategy, responsible investment practise, and monitoring and development of the management framework. Part II contains feature articles on a number of topics discussed in Part I.

The Government Pension Fund Act, the Regulations relating to the management of the Fund, with supplementary provisions, and the respective management agreements are available on the Ministry's website ([www.regjeringen.no/gpf](http://www.regjeringen.no/gpf)). The annual reports of Norges Bank and Folketrygdfondet are appended by reference (see [www.norgesbank.no](http://www.norgesbank.no) and [www.ftf.no](http://www.ftf.no)). The Council on Ethics' annual reports are available on [www.etikkra-det.no](http://www.etikkra-det.no).

## 2 Investment strategy

### 2.1 Foundation of the Fund's investment strategy

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The Government Pension Fund's investment strategy is derived from the purpose and characteristics of the Fund, the owner's return expectations and risk preferences, as well as views on how the financial markets work.

#### 2.1.1 Purpose and characteristics

The Government Pension Fund is an instrument for general savings that is managed with a view to ensuring a good financial return. In the Government Pension Fund Act, the Storting resolved that the Ministry of Finance is responsible for the management of the Fund.

Allocations to and withdrawals from the Fund are integrated with the Fiscal Budget. Due to the prospects of a continued inflow of petroleum revenues and a responsible fiscal policy, the Fund is still set to grow and therefore has a very long investment horizon.

The Fund is already one of the world's largest funds. Its size is expected to provide economies of scale in the management. The total management costs, measured as a share of the Fund's market value, will be lower for a large fund than for a small fund. Economies of scale also make it possible to accumulate expertise in all parts of the management, which will be an advantage when the Fund's investments are to be spread across new markets, countries or financial instruments.

The Fund's long-term investment horizon is also of great importance to the investment strategy. Firstly, the investment horizon influences the Fund's tolerance of volatility in the short and medium term. Secondly, it is of significance to the work on responsible investment.

In addition to the Fund being large and for the long-term, it does not, unlike traditional pension funds, have any specific liabilities. There is little risk that the owner of the Fund will make large withdrawals over a short period of time. The Fund has, therefore, a greater risk-bearing capacity than many other investors. Many investors may

lack both the capacity and willingness to take market risk after a period of weak results. This will not, to the same extent, be the case for the Government Pension Fund. The allocation of the actual investments is adjusted regularly in order to conform with the strategic asset allocation (so-called rebalancing). This has meant that the Fund has systematically sought to purchase assets after they have fallen in value.

The Fund's investment goal is to achieve the highest possible return. At the same time certain fundamental requirements and prerequisites must be met:

- The Fund should have a market risk that is acceptable to the owners – the Norwegian people as represented by the government.
- The Fund should have good control of operational risk, i.e. the risk of financial loss or loss of reputation as the result of defective internal processes, human error, systems error or other loss caused by external circumstances that are not a consequence of the market risk associated with the portfolio.
- The Fund should be a responsible investor. In the long term the Fund's financial return depends on sustainable development in economic, environmental and social terms. The Fund should not make investments that represent an unacceptable risk of the Fund contributing to grossly unethical acts.
- The Fund's characteristics as a large and long-term investor should be exploited in the best possible manner.
- The Fund should follow good governance principles. The actual organisation of the activities should be based on a clear division of responsibilities. Decisions concerning the management of the Fund must be based on knowledge and professionalism. Transparency is a prerequisite for maintaining confidence in the current management model. At the same time, transparency is an important contribution to well-functioning financial markets, inasmuch as it means that there is no major uncertainty on the part of other market participants when it

comes to the modus operandi of a large participant like the Government Pension Fund.

#### *A closer look at responsible investment*

The goal of good financial returns is closely linked to the ambition to be a responsible investor. This responsibility entails ensuring that the Fund is managed in a way that promotes well-functioning, legitimate and efficient markets and sustainable development in the broadest sense. Investors who are broadly diversified – both geographically and across different types of investments – are often referred to as «universal owners». Such owners will benefit from making sure that good corporate governance and environmental and social issues are safeguarded, since considerations of this type may influence their long-term returns. For example, one company shifting costs onto the environment, which can increase this company's returns in isolation, may have a negative impact on other companies in the portfolio. This can result in a weakening of the overall portfolio return. This question is discussed in more detail in the special topic article on universal ownership in Chapter 3.

It also follows from the mandate as manager of national savings that widely shared ethical values must be taken into account. In some cases, the concerns of ensuring long-term financial returns and taking widely shared values into account will coincide, but not always. For example, the Fund will not invest in companies that are in gross breach of fundamental ethical norms, regardless of the effect this will have on returns.

It is important that the GPFG's responsible investment practice is carried out in such a way that support among the population of Norway and legitimacy among market players is ensured. This demands a high degree of transparency, predictability and a high level of expertise. The GPFG is a major and visible investor and has, therefore, a special responsibility to monitor and contribute to the development of the leading international practice in this area.

The Fund is not capable of safeguarding all the ethical commitments we have as a nation. Other political, regulatory or financial instruments will often be better suited to safeguard these commitments. The Fund has the greatest chance of exerting a positive influence if the focus and instruments are a natural consequence of the Fund's role as a financial investor. The Fund's objective is not to act as for example a development aid or foreign policy instrument.

#### **2.1.2 Views on how the markets work**

The investment strategy must be based on fundamental assumptions on how the financial markets work. The Fund's investment strategy is based on the following views:

- *Market efficiency*: The Ministry assumes that the financial markets are largely efficient in the sense that new information is reflected quickly in the prices of financial assets.
- *Diversification*: Since the returns between different investments do not move wholly in step with each other, a better trade-off between the expected return and risk can be achieved by diversification of the investments. Because of this relationship, the benchmark of the Government Pension Fund is spread across a broad range of geographical regions, countries, sectors and companies. The benchmark indices are based on a principle of market capitalisation weights. This means, for example, that the composition of the benchmark for equities reflects the companies' relative share of the value of the combined equity market in each region.
- *Risk premiums*: The risk associated with the Government Pension Fund's benchmark is reduced through broad diversification across regions, countries, sectors and companies. A higher return is expected to compensate the remaining risk in the benchmark. For example, a higher average return is expected on the equity investments than on investments in bonds, because the return fluctuations of equities are higher. However, the magnitude of this excess return, or equity risk premium, remains uncertain. The Fund's investments are also exposed to various types of systematic risk factors other than market risk, such as for example credit risk and liquidity risk. See a more detailed discussion of various types of risk premiums in Chapter 7.
- *Benchmark and active management*: The Fund's benchmark is meant to reflect the owner's preferences of the balance between risk and expected return. With financial markets that are broadly efficient, it is difficult to achieve a higher return than the market return through active management without taking higher risks. In keeping with this, the Government Pension Fund's management guidelines have been formulated so that the Fund's risk over time largely follows the benchmark set by the Ministry, see discussion on active management in Section 2.3.

- *Manager and market liquidity:* Selection and monitoring of the manager is of great importance if parts of the investments are made in less liquid markets, where it is not easy to trade securities without influencing the prices. It will normally be relatively straightforward for an investor to achieve the market return in liquid markets, while performance in illiquid markets depends, to a significantly higher extent, on the skills of the manager. When transferring the Fund's investments gradually from liquid to less liquid markets, more weight must be attached to the quality of the control systems and the formulation of incentives, for example in relation to fees.
- *Responsible investments:* The integration of environmental, social and governance considerations (ESG considerations) into the management is partly due to the possibility of market failures that it is in the financial interest of the Fund to counteract. Good corporate governance to help ensure that companies operate in accordance with the long-term interests of owners, and efforts to promote well-functioning and well-regulated markets, are examples of this. For a long-term and broadly diversified investor, sustainable economic development in the long term will also be decisive for the Fund's return over time.

There is no easy answer to what the GPF's correct level of risk is. It will depend on the risk tolerance of the owners, as represented by the government. In recent years, the Fund's benchmark has gradually been expanded to include new market segments, countries and asset classes. In conjunction with the Storting's support of the Government's plans to increase the equity portion of the GPF gradually to 60 per cent in 2007, this has contributed to defining what constitutes an acceptable level of risk in the Fund. The changes in the Fund's investments in recent years have been in direction of greater weight on investments in real assets such as real estate and equities. This reflects a desire to improve the trade-off between the expected return and risk, where risk is defined as the uncertainty associated with the future development of the Fund's international purchasing power.

The types of changes to the Fund's investment strategy that are submitted to the Storting are subject to a decision-making process that contributes to ensuring a robust strategy. The decision-making process is, at the same time, time-con-

suming, and therefore less suitable for decisions where timing is of the essence. The size of the Fund also limits how swiftly major changes to the Fund's asset allocation can be implemented without the market impact imposing considerable costs on the Fund. Changes to the Fund's general investment strategy will, therefore, not be based on an expectation that the periods when markets or market segments subsequently emerge as «cheap» or «expensive» can be identified in advance.

The desire to seek a consensus on the Fund's investment strategy may contribute to a reduction in the return on the Fund. This will, for example, be the case if the Fund is systematically late when it comes to investing in new market segments or in markets where investors could in retrospect have reaped a premium by making early investments.

However, the desire for a consensus may also be an advantage. If consensus views on how the market works also remain valid over time, then it will make the Fund's strategy more robust. A robust theoretical foundation of the strategy means that the strategy can be maintained during times of market unrest, which is an important contribution to avoiding the classical trap of «buying high and selling low». The Fund's ability to rebalance the Fund's exposure across various asset classes has contributed to a higher return over time.

The Ministry intends to provide broad reporting on the management of the Government Pension Fund to the Storting on a regular basis, with main emphasis on the annual report presented in the spring. The Ministry desires to address the need for maintaining and developing the strategy by annual reviews. At the same time, the strategic choices are made on the premise that they are to remain unchanged over a long period of time. More frequent reviews of the investment strategy are, therefore, not considered to be appropriate.

## **2.2 Expected long-term real rate of return and risk in the GPF's benchmark**

In Report no. 16 (2007-2008) and Report no. 20 (2008-2009) to the Storting the Ministry of Finance described what market assumptions the calculation of the GPF's expected long-term return and risk is based on. The Ministry worked out these assumptions around two years ago, and they were evaluated and found to be reasonable



by the Ministry's Advisory Council on Investment Strategy. More specifically, assumptions for the long term real return and risk (volatility) were prepared for the global equity and bond indices that are part of the Fund's strategic benchmark, and for a globally diversified real estate portfolio. The correlation coefficients between the real return of these asset classes were also estimated. These expected values are reproduced in Tables 8.1 and 8.2 in Chapter 8.

The market assumptions are based on an analysis of historical returns and a review of recent research literature. The assumptions are meant to apply in a very long-term perspective. They represent estimates for the average annual rate of return and risk (volatility) over a period of several decades, or over a period that is long enough to encompass many economic cycles and the associated periods of growth and decline in the financial markets. In the short to medium term, for example over a 10 to 20-year period, the expected values can deviate from the long term values. However, the Ministry has not prepared special estimates for a medium term horizon.

The estimates for the expected real return and risk should be evaluated on a regular basis in light of new information. The financial crisis and its impact on the world's capital markets over the last couple of years represent important new information in this respect. It is, therefore, interesting to look more closely at to what extent the financial crisis has changed the historical average real return and risk, and to what extent it alters the Ministry's estimates.

It is the development of the Fund's real value in foreign currency, or its international purchasing power, that is relevant. A review like this one should, therefore, focus on the real return rather

than the nominal return. The inflation risk linked to the various asset classes that are included in the GPF's benchmark can thus be captured. For example, nominal government bonds emerge as more risky for the Fund when emphasis is placed on the real rate of return, since the inflation risk is a significant factor in pricing this asset class. Investments that directly or indirectly provide the right of ownership to real assets, such as shares and real estate, provide better protection against this type of risk over time.

It turns out that the asset returns during the financial crisis in 2008-2009 have not influenced the historical average returns and risk to any significant degree, as shown in Chapter 8. Stock market volatility has increased marginally, from 15 per cent at the end of 2007 to 15.6 per cent at the end of 2009, based on the average from 1900. The historical distribution of annual real stock market returns has also become somewhat more skewed in the direction of a lower returns. This is discussed in more detail in Chapter 8.

There are no unambiguous and generally recognised research results that suggest a major re-evaluation of the expected long term real return and risk, solely as a result of the financial crisis.

On the other hand, long term structural developments or global macro trends, such as productivity, economic policy, demographics, environmental and climate changes, access to natural resources and geo-political developments will undoubtedly be of greater significance to the long term expected return and risk. The Ministry will evaluate such long term risk factors, and in this context it is currently engaged in a study of long term climate impacts on capital markets, in cooperation with other major international funds, see

Table 2.1 Expected long term real return and risk in the GPF's benchmark, measured in the Fund's currency basket.<sup>1</sup>

Portfolio (equities/bonds)	Average annual real return (geometric) over 15-year periods (pct.)	Standard deviation of annual real return (pct.)	Standard deviation of average real return over 15 year periods (pct.)	Probability for negative accumulated real return after 15 years (pct.)	Probability for annual real return < 4 (pct.)	Sharpe-ratio <sup>2</sup>
60 / 40	4.25	9.8	2.5	5.3	46.3	0.28

<sup>1</sup> An allocation of 60 per cent equities and 40 per cent bonds over an arbitrary 15-year period is assumed. When the return is measured in the currency basket, the return is weighted according to the currency distribution of the Fund's benchmark.

<sup>2</sup> The Sharpe-ratio is estimated as the relationship between the expected arithmetic real return (not shown in the table) over and above the «risk free real interest rate» (assumed to be 2 per cent) and volatility (measured as the standard deviation of the annual real return).

Box 2.1. It is expected that the results of this work will be presented in the autumn of 2010.

Given the information available, there are no grounds for significant changes to the Ministry's long term market expectations as they were formulated two years ago. Nevertheless, a few minor adjustments have been made. Firstly, it seems reasonable, based on historical volatility, to adjust the expected equity volatility up from 15 per cent to 16 per cent. Secondly, it is natural to assume a weak degree of negative skewness in the distribution of the annual real return on equities. This can provide more realistic estimates of the risk of major losses in the GPFG's strategic benchmark. There is no change in the expectations linked to bonds or real estate investments. Updated market expectations are shown in Table 8.4 in Chapter 8.

The Ministry's estimate for the return on government bonds is somewhat higher than the historical average, while the opposite is true for equities. The estimates for volatility are close to the historical averages for both bonds and equities. The reason for the deviations from the historical returns are explained in more detail in Chapter 8.

With the revised estimates, the portfolio simulations give values for the expected real return and risk for the GPFG's benchmark as shown in Table 2.1. The calculations are made by means of

simulation of the development of the portfolio's value 15 years into the future (60 per cent equities and 40 per cent bonds). This horizon is long enough to include long term effects such as several rebalancings of the portfolio, and a weak degree of mean reversion in the equity markets, but not so long that the calculations lose their relevance to economic planning in the short term.

In this type of simulation the asset classes' value will follow different paths, which can deviate significantly from the expected value. Return and risk can thus be estimated.

There are only small changes in the calculated return and risk compared with the figures given in the two previous reports to the Storting. The expected average (geometric) annual real return on the GPFG's benchmark is still a little over 4 per cent, while the expected annual portfolio volatility increases a little, to 9.8 per cent. The standard deviation of the average annual real return over 15 years is 2.5 per cent, see fourth column in Table 2.1. It is estimated with 68 per cent probability that the annual real return will be between 1.6 and 6.9 per cent over a 15-year period. It should also be noted that there is a significant estimated probability (around 46 per cent) of an annual real return of less than 4 per cent over a 15-year period. In addition, there is a relatively small estimated probability (5.3

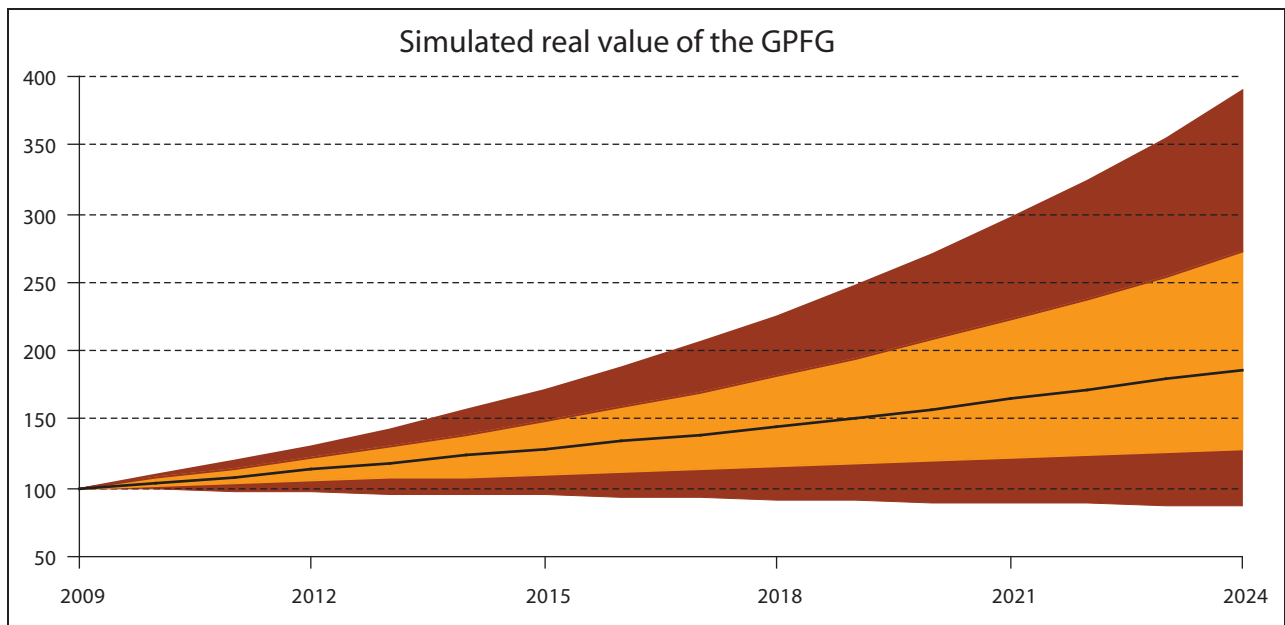


Figure 2.1 The simulated development of the real value of the GPFG's benchmark 15 years from now (60 per cent equities and 40 per cent bonds). The expected path is represented by the solid black line. The orange and brown fans show the 68 per cent and 95 per cent confidence intervals respectively. It is assumed that there will be no inflows or outflows in the period. The real value, equalling 100 at the end of 2009, is measured in the currency basket of the benchmark.

Source: Ministry of Finance

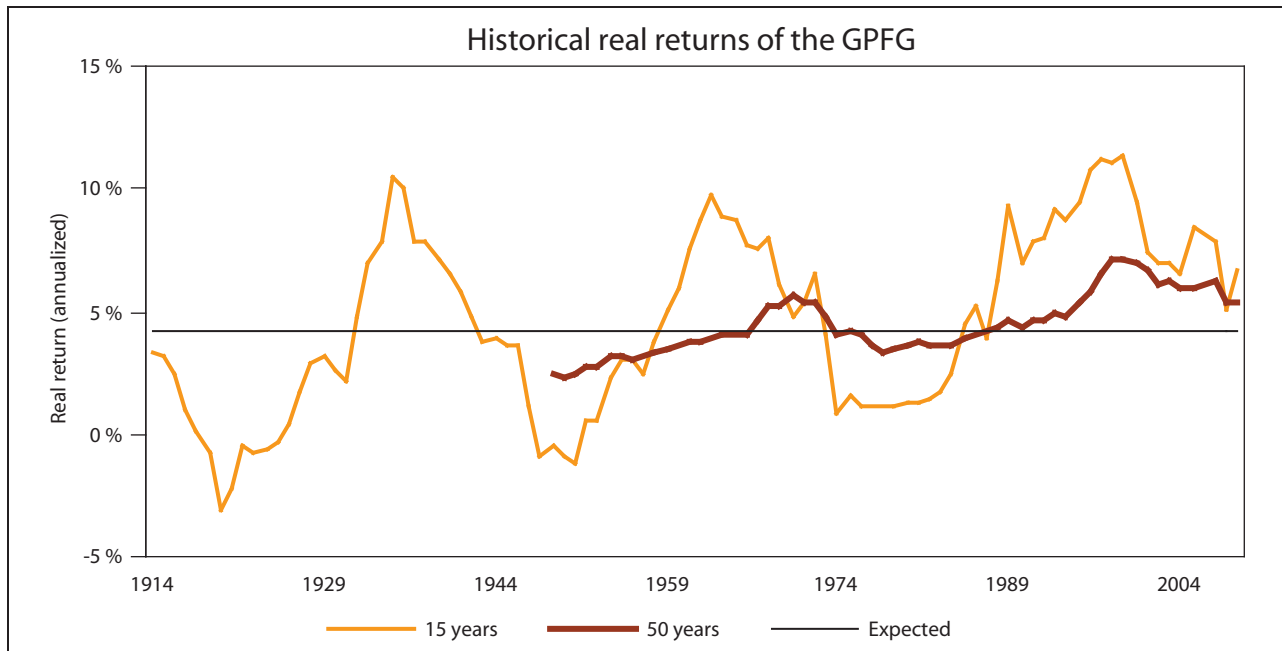


Figure 2.2 Historical real return on a portfolio roughly equivalent to the GPFG's benchmark, over rolling 15- and 50-year periods (geometric averages). The Ministry's long term assumption is indicated by the straight line. Real values are measured in the currency basket of the benchmark.

Source: Dimson, Marsh and Staunton (2009) and the Ministry of Finance

### Box 2.1 Climate change research project

The Stern Review report<sup>1</sup> showed that global warming may have serious impacts on global economic growth. For a major universal investor like the GPFG, it makes sense to ask which impacts this may have on financial markets and how investors ought to react.

To illuminate these issues the Ministry of Finance signed an agreement with the consulting firm Mercer in autumn 2009 to study the consequences of climate change on the global capital markets in general and on the GPFG portfolio in particular. Several other large pension funds from Europe, North America, Asia and Australia are also participating in the project. As the external consultant on the project Mercer has chosen the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science. The institute, which is headed by Professor Sir Nicholas Stern, will contribute economic analyses and scenarios for climate change and international climate policy.

The project has a time frame of around one year and will result in two reports. The first re-

port, which is scheduled to be made public this autumn, will illuminate the consequences the various scenarios may have for capital markets, primarily up until 2030. It will differentiate among various asset classes and regions. The second report will be adapted to the particular participating fund and will analyse the funds' vulnerability to climate risks and identify possible changes in investment strategies that may reduce this risk and/or increase returns.

It is the first time major international pension funds are joining forces to evaluate a global risk factor that may be important for their long-term returns and risk. The aim of this work is to expand the knowledge base. Climate change represents a long-term risk. Through the research project the Ministry is seeking to learn more about how climate change may affect the Fund's investments in the long term.

<sup>1</sup>«The Economics of Climate Change – The Stern Review», Nicholas Stern, published by Cabinet Office – HM Treasury 2006

per cent) that the accumulated real return will be less than zero, an increase of 1.6 percentage points relative to the previous estimate.

Figure 2.1 illustrates the uncertainty of the development of the real value of the strategic benchmark 15 years into the future, given an investment of 100 (in local currency) at the end of 2009, and zero net injections or withdrawals throughout this period. There are estimated probabilities of 68 per cent and 95 per cent, respectively, that the real value will lie within the orange and brown fan-shaped fields. The expected path is marked by a fat, solid line. While it is expected that the real value will increase by 87 per cent over a 15-year period (the real value will increase from 100 in 2009 to 187 in 2024), there is a high probability that the outcome will be different.

Historical data shows that there is significant variation over time in the real return of globally diversified equity and bond portfolios. This gives rise to historical time variations in the real return on a hypothetical portfolio close to the GPFG's benchmark, with 60 per cent equities and 40 per cent bonds. Over rolling 15-year periods, the fluctuations in the annualised real return on such a benchmark are large. Over longer periods, for example rolling 50-year periods, the fluctuations are significantly smaller, see Figure 2.2. Similar fluctuations must also be expected in the future. The question of whether such fluctuations can be forecasted is discussed in Chapter 8.

Figure 2.2 also shows that the annual average real return on a portfolio close to the GPFG's benchmark has been higher than 4 per cent over both the last 15 and 50 years.

These calculations apply to the GPFG's benchmark. The development of the actual portfolio will deviate from the benchmark as a result of active management and management costs. Over the last 12 years the Fund has had an average gross return that is 0.25 percentage points higher than the benchmark's return, and overall costs corresponding to 0.10 per cent of the portfolio. The actual return has, therefore, on average been 0.15 percentage points higher than the benchmark's return. If a corresponding margin is applied to the future, then the expected annual real return would be around 4.4 per cent.

It is emphasised that there is considerable uncertainty regarding the estimates for the expected return. Empirical data shows that the return can fluctuate a great deal. This uncertainty is so great that there is no reason to change the current real return estimate of 4 per cent, which forms the ba-

sis of the guidelines for economic policy, based on the return achieved since 1997. Not until the actual real return has been significantly higher or significantly lower than 4 per cent over many years, will there be grounds for considering whether the estimate of 4 per cent represents too high or too low an expectation for the future real return.

## 2.3 Evaluation of the active management of the GPFG

### 2.3.1 Introduction

The Ministry of Finance determines the general investment strategy for the GPFG. The Ministry presents important issues to the Storting prior to implementation. The task of carrying out the operational management of the Fund has been delegated to Norges Bank. Norges Bank shall seek to achieve the highest possible return on the Fund's assets within the guidelines set by the Ministry of Finance.

The Ministry of Finance has determined a strategic benchmark and limits for the permitted divergence between the Fund's actual investments and the benchmark. The strategic benchmark is a detailed description of how the Fund's assets should be invested. The benchmark is divided between equities (60 per cent) and fixed income (40 per cent), and across three geographical regions, see Figure 2.3. Going forward, the fixed income allocation will be reduced gradually in favour of a real estate allocation of up to 5 per cent.

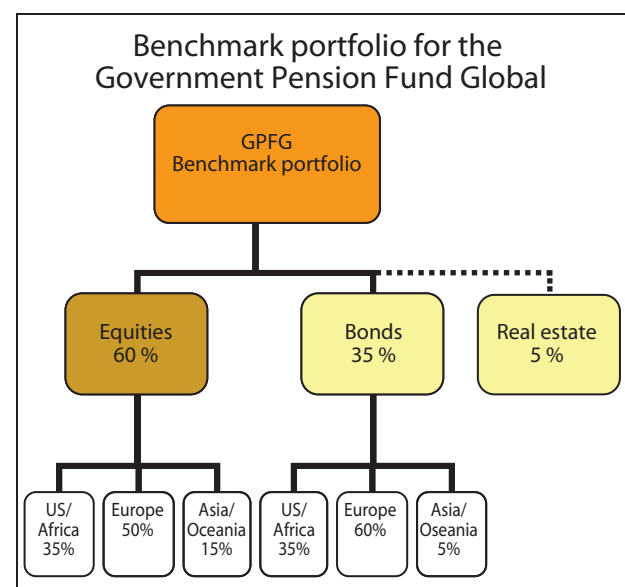


Figure 2.3 The strategic benchmark of the GPFG.

Source: Ministry of Finance

The composition of the benchmarks for equities and bonds is based on market capitalisation weights within each geographical region. This means that if the GPF's investments in European equities corresponded to 1 per cent of the market capitalisation of all the companies in Europe, then the benchmark will include a 1 per cent interest in each individual company in the index. Even though the Ministry of Finance determines a benchmark for the Fund that is company specific, there is no individual assessment of each individual company in the benchmark.

To the extent that the actual portfolio deviates from the benchmark there will be a difference in the return between the two portfolios. Passive management means that the manager tries to follow the benchmark as closely as possible. Active management means that the manager tries, within certain limits, to achieve excess returns by deviating from the benchmark.

The Ministry lays down guidelines for the scope of active management. A limit has been set for how much the difference in return between the actual portfolio and the benchmark is expected to vary (so-called expected tracking error). Under certain statistical assumptions, and provided Norges Bank fully utilises the limit, the current limit for annual tracking error of 1.5 per cent means that the difference in return between the actual investments and the benchmark is expected to be less than 1.5 percentage points in two out of three years. The difference is expected to be less than 3 percentage points in 19 out of 20 years, and less than 4.5 percentage points in 99 out of 100 years.

The expected tracking error limit of 1.5 per cent was first outlined in the National Budget for 1998. The Ministry stressed that the Fund's investments should largely reflect the Fund's benchmark. It was pointed out at the same time that factors such as cost-effective management of the market portfolio, the need for flexibility during a period of significant transfers to the Fund and a certain degree of active management all pointed towards setting a limit for the permitted divergence. It was concluded that a limit of 1.5 per cent should be established.

In the National Budget for 2001 the question of the tracking error limit was assessed once again, following, among other things input from Norges Bank. Weaknesses associated with the relative volatility measure were also pointed out then. The Ministry wrote for example:

«It is emphasised, however, that there will always be sources of error in a model-based measurement of market risk, and measurements of the expected relative risk can, therefore, never be interpreted as completely accurate for the actual market risk that exists. Norges Bank also uses a number of other analysis tools to monitor the market risk in the various portfolios.»

The Ministry concluded that the limit of 1.5 per cent should be continued.

In the National Budget for 2006, the Ministry aimed, in accordance with input from Norges Bank, to make several adjustments in the guidelines for Norges Bank's management of the Fund. These adjustments opened up for a somewhat broader investment universe. New requirements were stipulated at the same time for valuation, measurement of the rate of return, risk management and control. At that time, the Ministry mentioned several weaknesses with expected relative volatility as a measure of risk. The Ministry wrote:

«There are some markets and instruments where there are weaknesses associated with the measurement of relative volatility. This applies, for example, to bonds issued by non-listed companies and by companies with substantial government ownership. The same applies to bonds that are traded at significantly lower rates than face value.»

It was premised at the same time that these weaknesses would be identified by other procedures within the bank's measurement of risk. It was pointed out that the bank's formal approval system for investments in new countries, instruments or asset classes etc., would require documentation on how the market and credit risk are to be measured. Reference was also made to the fact that Norges Bank's management and its risk management in particular would be reviewed by external expertise.

The changes that were mentioned in the National Budget for 2006 did not entail any change to the tracking error limit of 1.5 per cent. This has thus been fixed since 1997.

For 2008 Norges Bank reported that the actual return was 3.4 percentage points lower than the return on the benchmark. Such results must be expected on rare occasions, given a full utilisation of the risk limit. The result, however, was unexpectedly poor given the risk that was actually reported, which was significantly lower than the maximum

permitted tracking error. There were significant differences between the results for the equity and fixed income management. The negative excess return of the fixed income portfolio was 6.6 percentage points, while it was approximately 1.2 percentage points for the equity portfolio.

The Ministry of Finance concluded in Report no. 20 (2008-2009) to the Storting that the results of the active management must be evaluated over a long period of time, but that they were not satisfactory in 2008. This statement must be seen in connection with the fact that the underlying risk in the management has not been identified and communicated appropriately. The Government announced at the same time that it would return to the Storting in spring of 2010 with more information and an assessment of whether and to what extent active management of the GPFG ought to be continued.

### 2.3.2 Evaluation process

As notified in last year's report, the Ministry has evaluated the experiences with active management and the foundation for active management in the future. The Ministry has made use of external expertise for this work. The process has had a broad theoretical foundation, and the importance of including different opinions has been emphasised.

Four reports have been written. A group comprised of three internationally recognised financial experts, Professors Ang, Goetzmann and Schaefer, have, on behalf of the Ministry of Finance, evaluated the theoretical basis for active management, assessed the results in the GPFG since the Fund was established and given advice for active management in the future. In addition, Norges Bank has in a letter dated 23 December 2009 (including a detailed report) to the Ministry of Finance presented its evaluation and a plan for the Fund's active management going forward. Two reports on active management in other funds have also been written on the Ministry's behalf by the consulting firm Mercer. The four reports were published in December 2009 and have been the subject of public debate, at, for example, a seminar held by the Ministry of Finance on 20 January. Chapter 1 of the report from Ang, Goetzmann and Schaefer and Norges Bank's letter (without the detailed report) have been enclosed as Appendices 3 and 4 to this report. The reports and material from the conference on 20 January were pub-

lished in their entirety on the Ministry's website ([www.regjeringen.no/gpf](http://www.regjeringen.no/gpf)).

### 2.3.3 Theoretical basis for active management

Neither the report from Professors Ang, Goetzmann and Schaefer nor the letter from Norges Bank, suggest following the Fund's benchmark mechanically through passive management. Both reports also point out that the GPFG has some advantages compared with other funds, and that these advantages should be exploited through active management.

Professors Ang, Goetzmann and Schaefer have reviewed the academic research on active management. They think that the literature shows that it is difficult to «beat the market» through active management. Nevertheless, they do not rule out that some market participants with advantages related to information, research and trading could achieve a financial gain.

Reference is also made to the fact that many of the research results that are available on the profitability of active management have been based on funds with significantly higher costs than the GPFG. Several studies show that these funds have achieved an excess return before costs, but negative excess return when the costs are deducted. If Norges Bank can keep its costs low due to its size, and attracting capable managers at the same time, then these studies indicate a certain potential for excess returns.

Even though the markets are efficient, there can be good reasons to deviate from a market-weighted benchmark. Professors Ang, Goetzmann and Schaefer believes that the Fund should deviate from market weighted benchmark indices, but these deviations should in their opinion consist of deliberate positions against other systematic risk factors in addition to the market risk. Systematic risk factors are sources of risk that investors cannot get rid of through diversification. Those who are willing to take such risks will be compensated in the form of higher expected returns. Professors Ang, Goetzmann and Schaefer's preferred solution is to modify the benchmark indices so that Norges Bank can be measured against an index that includes several of these risk factors in the future. They write:

«In the case of several systematic risk factors, empirical studies clearly reject that the market portfolio is efficient, and other static or time-va-

rying combinations of assets provide a better trade-off between return and risk».

According to this they recommend that four main elements can be included in active management when exposure to systematic risk factors is included in the benchmark:

- time varying overweighting or underweighting of risk factors that are included in a new benchmark,
- exposure to less established new risk factors and possibly new segments and markets outside the benchmark,
- investments related to the Fund's role as responsible investor and strategic ownership in individual companies,
- a certain room for company-specific strategies.

A more detailed description of this is provided in Table 8 of the report from Ang, Goetzmann and Schaefer. In addition, they point out the need for cost-effective management of the market portfolio.

Professors Ang, Goetzmann and Schaefer have analysed the results of active management of the Fund from 1998 and until the end of September 2009. Their conclusion is that the degree of active management has been very limited, but that it has contributed to improving the Fund's results. They also point out that a large portion of the results in the active management can be explained by exposure to systematic risk factors. The evaluation of the active management of the GPFG is discussed in more detail in Chapter 14.

In its review of the literature, Norges Bank concludes that it is possible under certain circumstances for investors to acquire an information advantage that can be exploited to achieve excess returns. They point out at the same time that the cost level of the management determines how much of this excess return that will be passed on to the customer. Norges Bank believes that they can exploit the Fund's size and long-term perspective in the active management. Their ambition is to achieve an average annual net value added from active management of around 0.25 percentage points over time. In other words, the expected net return is 0.25 percentage points higher than what could have been achieved with passive index management. In the Bank's view, the results achieved since 1998 support such an expectation. The Bank writes:

«The scope and orientation of active strategies will, over time, be determined by results. In

2001, Norges Bank set a target of annual value added through active management of 0.25 percentage points. This target was quite ambitious given the relative risk associated with the fund's management. After 12 years of active management, our assessment is that the experience has largely been positive. The annualised annual excess return relative to the benchmark portfolio currently stands at 0.22 percentage points, which is close to the target. This performance confirms that active management can make an important contribution to the overall return on the fund over time. Assuming an unchanged regulatory framework, Norges Bank will retain this target of an annual excess return of 0.25 percentage points.»

Norges Bank also emphasises that active management has a positive reciprocal impact on other aspects of their management of the GPFG, including active ownership. It is expected that such a reciprocal impact will become more important in the future if the Bank increases its involvement in individual companies. At the same time, Mercer's analysis of other funds' experiences of active ownership concludes that the choice between active or passive management is more important with respect to what types of issues are addressed in the active ownership than for the actual effectiveness of the active ownership. For example, active ownership by passive managers will normally be based more on principles and focus to a lesser extent on influencing individual companies.

In principle, active management based on the analysis of individual companies should have a positive spill-over effect on active ownership. In principle the exercise of ownership rights can contribute to increasing the value of the companies the Fund has invested in, and information from active management analysis can be utilised in the exercise of ownership rights. Mercer finds that the two activities are integrated to a limited extent in other funds, and that it is difficult to identify any reciprocal impact. Norges Bank appears, therefore, to place greater emphasis on integrating these activities than other funds.

On behalf of the Ministry of Finance the consulting firm Mercer has conducted a survey on active management that included 14 of the largest funds in the world. In Mercer's view these funds are representative of large, long-term international funds. The funds were asked, for example, about their use of active management and planned changes in the use of active management. The survey confirms that it is common practice in oth-

er funds to include an element of active management. Only one of the funds had limited active management to strategies in less liquid markets. Moreover, the survey showed that the funds felt that their long-term horizon was an important advantage in active management. In addition, their ability to keep costs down and hold onto internal expertise was also pointed out as comparative advantages. The funds were also asked whether they had changed the practice of active management after the financial crisis. None of the funds replied that they had plans for any major reduction in the scope of active management, but several were planning to implement changes related to risk management, control and evaluation of the active management. With regard to actual active management strategies, it appears that several funds planned to increase their exposure to less liquid positions and reduce exposure to leveraged strategies.

### 2.3.4 Main strategies for active management

The management model for the GPFG has been adapted to a clear division between active and passive management. The Ministry of Finance is responsible for the Fund's benchmark, while Norges Bank seeks to achieve a higher return than the benchmark within given limits for active management. In practice, the division between active and passive management is not completely clear. Even passive management requires a competent manager who can make active choices on a continuous basis related to the execution of the management, and the distinction between what constitutes a good adaptation to the benchmark and what is active management may vary.

In the management of real estate, the active management element will necessarily be significant. This is because it is not possible to construct portfolios with only a small tracking error in relation to existing indices. The discussion on active management below is limited, therefore, to equities and bonds. Examples of three main strategies for active management that are all described in the report by Professors Ang, Goetzmann and Schaefer and in the letter from Norges Bank are given below.

#### *Strategies for management of the market portfolio*

Strategies for management of the market portfolio consist of active choices that are meant to exploit weaknesses in the Fund's benchmark. These

weaknesses are related in part to the fact that the Fund's benchmark is not fully representative of the entire market, and in part to how often and in what way the benchmark changes: Several weaknesses have been pointed out:

- Professors Ang, Goetzmann and Schaefer refer to studies that suggest that the prices of securities are influenced by major transactions. For example, there is a tendency for equities that are included in an index to increase in price on the day they are included, presumably because many large investors purchase these equities at the same time. For the GPFG this means that there will be costs associated with following the current benchmarks mechanically.
- Norges Bank points out that while the Fund's benchmark for equities represents the stock market well, the benchmark for fixed income covers only a limited portion of the investment opportunities for fixed income instruments. For example, the index does not contain any bonds with less than one year left to maturity, floating-rate bonds or bonds with credit ratings lower than BBB. This means that parts of the market for fixed income are excluded from the benchmark.
- Another weakness of the fixed income index is the fact that the benchmark weights of each bond is calculated based on the notional value of bonds outstanding. This means that the bond issuers with relatively large amounts of debts are allocated a high weight in the index and that a passive manager automatically ends up lending large amounts to issuers with a high debt ratio.
- The issuer's other loans are not taken into consideration in the overall weighting of the benchmark index. This means that the weight in the benchmark is not necessarily representative of the issuer's overall debt. In principle, a passive manager must accept the weighting of the index, while a manager that can deviate from the index can refrain from investing in a company's bonds or investing less than what the index weight suggests based on an evaluation of a company's overall debt.
- Norges Bank also points to weaknesses related to how and how often the bond index changes. It must be assumed that these weaknesses lead to high transaction costs for a manager who follows the benchmark mechanically:
  - A passive manager must, in principle, sell a bond when there is less than one year left until the bond is to be redeemed.



- Bonds that no longer satisfy the credit rating requirements are removed from the index at 5:15 p.m. on the last trading day each month. Bonds, with an upgraded credit rating are included at the same instance. According to Norges Bank it is natural to observe major price fluctuations at this point in time. By refraining from conducting these transactions at the same time as the index changes, the transaction costs can be reduced.
- It can take up to a month from when a bond is issued until it is included in the index. A passive manager will have to wait to buy the bond until the last trading day of the month in question, while a manager that can deviate from the index can seek to obtain a premium by purchasing a bond at a time other than when the index change takes place, for example, in connection with the issuance of the bond.
- Moreover, the index does not differentiate between how liquid the bonds are. In principle, a passive manager will be forced to buy bonds that will be difficult to trade. This has, for example, consequences for the costs of rebalancing the Fund's equity portion.

The bank also writes that life insurance companies and pension funds are subject to regulations concerning the matching of their bond investments to their pension liabilities. These adaptations can create opportunities for the GPF, which is not subject to the same restrictions. Price differences can arise correspondingly between different classes of shares and between shares in the same company that are traded on different markets. Norges Bank believes that the GPF can utilise such differences in its adaptation to the market portfolio.

Norges Bank writes that deviations from the benchmark, based on a desire for effective management of the market portfolio, will generally be of a short-term nature and related to benchmark changes and specific company events. In cases where management of the market portfolio entails the replacement of securities in the benchmark that are regarded as expensive with elements outside the index that are considered to be cheap, this may nevertheless increase the potential for major losses in periods of turmoil. There are two reasons for this. Firstly, the assets that are invested in will typically be more difficult to trade than those that are included in the benchmark. Market

turmoil will lower the prices of these assets relatively more than the assets in the benchmark. Secondly, a fall in prices during periods of turmoil will be reinforced by the fact that many other market participants have corresponding positions that they will be forced to reverse.

#### *Company-specific strategies*

Company-specific strategies are based on a fundamental analysis of individual companies and the equities and interest-bearing securities they have issued. These strategies are managed internally by Norges Bank and through external managers.

The key common denominator for the bank's various internal management mandates based on company-specific strategies is the fact that the decisions are made based on a detailed analysis of the individual company's financial situation, the individual company's strategies and other company-relevant development characteristics. The mandates do not have any common approach beyond this. Norges Bank attaches importance instead to giving each individual employee the opportunity to decide what the best analytical tool is, given the manager's investment views and approach. This is meant to strengthen the diversity and reduce the risk of group thinking that may occur if all the managers adapt to the same investment process.

External management assignments based on company-specific strategies are awarded to organisations with special expertise within clearly defined investment strategies. In recent years an increasing number of these mandates have been granted in markets that the bank considers less efficient, i.e. markets where information is not reflected as quickly in the prices for financial assets. This applies in particular to emerging markets.

Size may be an advantage in the analysis of company-specific strategies. By virtue of its size, the GPF can more readily obtain information directly from the companies they invest in and thereby make the management less dependent on information through third parties.

Norges Bank points out that size and a long-term perspective form the foundation of the advantages in connection with the identification, selection and follow-up of external managers. These advantages manifest themselves in the Bank's ability to negotiate competitive terms and the availability of adequate resources to cover a broad range of sources of information.

There are no research results that can confirm that size gives an information advantage, but the

bank points to its own results as support for the fact that they can deliver excess return over time.

Professors Ang, Goetzmann and Schaefer write that the Fund's historical results only provide weak support for positive contributions to the Fund's return from company-specific active strategies over time. Nevertheless, they believe that there is theoretical support for some amount of this type of active management. In addition, they write that this type of active management should constitute a limited part of the active management dependent on the costs, and that this type of active management can also have spill-over effects on other parts of the management of the Fund.

The bank believes that company-specific strategies in the equity market will have the same type of risk as the equity market investments in general. Active management will be realised by a number of smaller portfolios that lead to risk diversification. This diversification over many mandates can lead to exposure to systematic risk factors. Such risk factors are discussed in more detail below. The bank points out that the measurement and management of the Fund's exposure to all types of systematic risk factors will be an essential part of their risk function.

### *Systematic risk*

Professors Ang, Goetzmann and Schaefer have evaluated the Fund's active management results and find that the results are systematic, see discussion in Chapter 14. By studying the development of the active management results since 1998, they have calculated that more than two-thirds of the variations in the Fund's overall excess return can be explained statistically by so-called systematic risk factors. When they analyse the equity and fixed income management separately, controlling for those factors which are considered most relevant to each asset class, the factors explain less of the development of the results. Exposure to systematic risk factors explains almost a third of the development of the results of the equity management and about half of the development of the results of the fixed income management.

Common to the systematic risk factors is the fact that they are documented types of risk that investors have historically been able to collect risk premiums from over time. The analysis shows that risk factors such as liquidity and volatility in particular have been important. This means that

Norges Bank has reported good results as long as there was a continuous improvement in liquidity and during periods with little turbulence in the markets. The results worsened in 2008, with a sharp reduction in market liquidity and major fluctuations from day to day.

The bank has organised the active management by delegating responsibility for position taking to many decision makers that work independently of each other. Nevertheless exposure to systematic risk will normally arise. One of the systematic risk factors to which reference is made in the report is differences in the return based on whether the companies are large or small. Even though the GPFG's deviation from the benchmark for equities is a result of many independent decisions, the analysis performed by Professors Ang, Goetzmann and Schaefer shows that the Fund has had a greater exposure to relatively small companies than the Fund's benchmark.

In addition to the exposure to systematic risk factors that arises as a result of company-specific strategies, the manager can choose more direct exposure to systematic risk factors. This exposure can be stable or based on an assessment that time variations in the return from these factors can be identified in advance. Such positions will not be a result of many independent individual positions, but a result of a conscious choice to make the Fund's results dependent on the development of one or more risk factors.

Experience with active management until now shows that the reported returns can be high and the measured risk low over many years, but that periods with very negative results may arise. Exposure to systematic risk factors is in many cases characterised by such a profile. Exposure to systematic risk factors will then be identified to a limited extent by traditional measures of risk such as relative volatility, since it can take a long time before this risk appears in historical return data. Therefore the risk must be monitored by other means. In its letter, Norges Bank writes that they evaluate how the exposure to systematic risk can influence the risk of individual strategies and the Fund as a whole.

### **2.3.5 The Ministry's assessments**

In accordance with what was announced in last year's report, the Ministry has assessed how and to what extent the active management of the GPFG is to be continued.

### *Should active management be continued?*

In the evaluation of whether active management can be expected to improve the Fund's results over time, the Ministry has attached particular importance to the following:

- Both Norges Bank and the three professors, Ang, Goetzmann and Schaefer, believe that there is no compelling scientific evidence to recommend a purely passive indexing strategy. The Ministry shares this view.
- The benchmark indices for the Fund's equity and fixed income portfolio are determined by the Ministry of Finance on the basis of long-term assumptions. Both the reports from Professor Ang, Goetzmann and Schaefer and Norges Bank point to weaknesses in the Fund's benchmark, especially for the fixed income investments. A certain degree of divergence from the benchmark is therefore necessary to give Norges Bank an opportunity to exploit the weaknesses of the current benchmark and to establish a cost-effective index management.
- The current limit for active management is greater than what is viewed as necessary as far as cost-effective management of the benchmark is concerned. The survey Mercer conducted confirms that this is in accordance with the practice of other funds throughout the world. Mercer's survey also shows that all the funds in the survey had some element of active management and only one of these funds had restricted active management to strategies in less liquid markets.
- The reports received all point out that the Fund's size and long-term perspective should be utilised to the Fund's advantage through active management. Size can entail negotiation strength, reduced costs and the ability to attract the necessary expertise. At the same time, size can be a disadvantage, as some active management strategies are not scalable to a relevant extent. The Fund's long-term perspective may be an advantage in active management, due, for example, to the fact that the Fund will not be forced to realise losses at unfavourable times.
- The Ministry has also experienced that flexibility to exercise judgment and make active choices has been especially important in periods when the functioning of the markets has been impaired, like in 2008. One example of this was the phasing in of a higher equity allocation throughout 2008 and 2009. With a falling equity market it was necessary to make decision on whether the Fund's bond allocation should be reduced through the sale of all types of bonds or just the most liquid bonds. A certain degree of active management can contribute to maintaining the expertise to exercise such judgment.
- Norges Bank has stated that active management can have a positive spill-over effect, for example, on the Fund's exercise of ownership. The Ministry emphasises the Fund's role as a responsible investor. Over time the Fund has increased its ownership in the world's listed equities, and it is currently the largest owner of listed equities in Europe. This represents both an obligation and opportunity to exercise ownership rights. Exercising ownership rights, also in relation to individual companies, is necessary to safeguard the Fund's economic interests. Even though other funds might view the choice between active and passive management as significant in the effectiveness of active ownership, the Ministry is supportive of the fact that Norges Bank appears to attach importance to exploiting the potential that should lie in the reciprocal impact between the active management of individual companies and the exercise of ownership. The bank's use of environment-related active equity mandates may be an example of this, since environmental management and water management are also defined by the bank as focus areas for exercising ownership. Whether the bank is successful in this area will be a natural topic of discussion in the follow-up of the bank's management in the future.
- There will also be a reciprocal impact between the bank's advice on the Fund's long-term strategy and experiences from active management. For example, the recommendations to include additional emerging markets in the Fund's benchmark in 2007 were made after the bank had acquired expertise through active management in such markets. Correspondingly, the bank had experience from the management of shares in small listed companies before this segment was included in the benchmark. When the bank acquires experience through active management and small investments in new markets, the operational risk associated with large investments following the same markets' subsequent inclusion in the Fund's benchmark, is reduced.

In the opinion of the Ministry there should still be a certain flexibility for deviation from the benchmark in the management of the Fund. There is no compelling scientific arguments in favour of a purely passive indexation. It would be unnecessarily costly to follow these indices mechanically, and the special characteristics of the Fund provide potential for excess return over time, which should be exploited to some extent. In addition to this, there is reason to assume that a certain degree of active management will have a positive reciprocal impact on other aspects of the management.

#### *Assessment of the scope and organisation of active management*

The limits for active management are part of the Fund's overall investment strategy. The basis for evaluating the limits of active management should therefore, as is the case for other parts of the strategy, build on striking a balance between the expected return and risk. In this context, the Ministry has particularly emphasised the following:

- As discussed above, the Ministry of Finance assumes that the financial markets are largely efficient in the sense that new information is quickly reflected in the prices of financial assets. This suggests that the possible excess return from active management is limited. At the same time, the external review has shown that there are weaknesses in the Fund's benchmark indices and that the Fund may have advantages with regard to active management, associated, for example, with costs and its long-term perspective. This suggests that there should be some room for deviations from the benchmark.
- A given loss should be perceived just as negatively by the owner, regardless of the cause of the loss. Therefore, a strategy with little benchmark risk and a relatively high degree of active management should be perceived as equivalent to a strategy that has more benchmark risk and correspondingly a lesser degree of active management. Nevertheless, experience from the financial crisis showed that a negative excess return from active management of 3.4 percentage points was a greater challenge to confidence in the management than the losses of 19.9 per cent in the benchmark. In the opinion of the Ministry, this reflects that the risk associated with the active management strategies was not identified and communicated as well in advance as the risk that was present in the

benchmark. With a broader anchoring of the active management this aspect of the investment strategy should be more robust in future periods of negative excess returns. Nevertheless, a certain degree of importance must be attached to the fact that significant negative excess returns in individual years may weaken confidence in the manager, even if the more long term results are good. This in itself suggests that a moderate limit for divergence from the benchmark should be maintained.

- The analyses that have been conducted confirm that it is the benchmark defined by the Ministry of Finance that is the major contributor to the Fund's risk. The impact of active management has been very moderate compared to the Fund's overall risk. The report from Professors Ang, Goetzmann and Schaefer contains an updated summary of academic research on active management and its relevance to the GPF, see Chapter 6. The professors' advice does not specify for a specific limit for active management, but it is the Ministry's opinion that their report supports that the limit should still be moderate.
- The net value added from active management in line with the bank's own ambition of 0.25 percentage points annually will over time account to significant amounts. In comparison, in the evaluation on whether to increase the Fund's equity allocation from 40 per cent to 60 per cent, it was assumed that the change could increase the Fund's average annual return by 0.4 percentage points.

In addition to assessments of the return and risk, the Ministry has evaluated whether the limits on active management would have consequences for the alignment of interests between the Fund's owner and manager. The management of the GPF requires that Norges Bank recruits and retains employees with special expertise. These persons are recruited in competition with others in a market where the use of performance-based compensation is widespread. This applies to both active and passive management. Even if the objective of performance-based compensation is to ensure that the manager has the same interest in a good return as the owner, there is nevertheless a risk that individuals or groups receive incentives that do not coincide with the owner's management goal. For active management this will apply in particular if there is a big difference between the time horizon of an active management strate-

gy and the evaluation period used in the bonus system.

Challenges related to potential conflicts of interest between the owner and manager can, therefore, in itself, suggest a reduced degree of active management. At the same time, the owner of the Fund has a clear interest in the establishment of a performance-based management culture, with a focus on both increased income and reduced costs. A well-designed compensation scheme can support this. The Ministry has submitted the new guidelines for the management of the GPFG to a public consultation process, see a more detailed discussion in Chapter 4. In this proposal it is suggested that Norges Bank must develop a system of employee compensation on the investment management side which is supportive of the goals that have been set for the management of the Fund's assets. NBIM senior management do not have performance-based compensation systems, and persons with control functions do not have compensation based on the Fund's return. Moreover, the Ministry emphasise that a clear division of responsibility and roles, clear monitoring and control functions and transparency in all aspects of the management will reduce the possible detrimental effects of performance-based compensation systems.

With regard to the formulation of the risk limit for active management, Professor Ang, Goetzmann and Schaefer recommend that a target for active risk should be defined, rather than an absolute limit as is the case today.

The Ministry does not want to define a target for expected tracking error. In some situations such a target could encourage the manager to take more risk than is desired. There are, on the other hand, good arguments for making the constraints less sensitive to general volatility in the market.

One disadvantage of risk management based on a maximum limit for the expected tracking error as it has been practiced up until now is the fact that the measured expected tracking error has increased a great deal during periods of general turmoil in the financial markets. This has occurred even though the bank has not changed its active positions. The Executive Board of Norges Bank has established a guideline that the bank shall only utilise 75 per cent of the limit for tracking error during normal periods. This suggests a tracking error of up to 1.1 per cent. Norges Bank has thus established a buffer to safeguard against an increase in the measured tracking error as a result of special market conditions.

With strict adherence to a maximum limit, the manager can in principle be forced to sell the Fund's assets at unfavourable times. The method that is used to calculate the expected tracking error is important in this context. In a letter to the Ministry of Finance dated 21 October 2009, Norges Bank has notified that it will support a change to the method used to calculate the expected tracking error. Up until now, the tracking error has been calculated on the basis of daily observations, and the latest observations are given more weight than earlier observations. In practice, a great deal of emphasis has been placed on the latest daily observations in the market. Calculating the risk on weekly prices and with three years of historical data will mean that the sensitivity to general volatility will be less. Changes in the expected tracking error will thus be attributed more to changes in the bank's positions and less to whether the markets are generally in a period of large or small variations in the return. A restructuring of the calculation methodology may lead to a greater correlation between the time horizon of the active investment decisions and the measurement period of active risk. It may also make this measurement more relevant to the continuous risk management.

The immediate effect of such a potential change will be an increase in the measured expected tracking error, so that the degree of active management permitted in the near future will be somewhat less than with the previous calculation method. This is because the volatility associated with the financial crisis will be part of the calculation when the calculations are based on the performance of the last three years. With the previous method of calculation, observations from the financial crisis will no longer be an important part of the input data.

In addition, allowing the expected tracking error to exceed the limit in very special circumstances can in the Ministry's opinion reduce the problems associated with the current formulation of the limit further.

When the maximum limit is made less absolute than today, it is natural also to reduce the actual limit. By making allowances for the fact that the risk impact may be higher than expected during periods of particularly high volatility, utilisation of the limit can be higher than it has been up until now. Based on an overall assessment, the Ministry has therefore decided that the limit for the expected tracking error of the GPFG should be lowered from the current limit of a maximum

of 1.5 per cent. In the new regulations for management of the Fund, the Ministry will require that Norges Bank should aim for an expected tracking error not exceeding 1 per cent. At the same time it is recognised that the expected tracking error may be higher in special circumstances. Our experience from 2008 showed that it was not appropriate to reduce the divergence from the benchmark, even though the measured expected relative volatility was higher than the limit of 1.5 per cent. The enforcement of the new limit must allow for a similar assessment in exceptional circumstances where the expected tracking error exceeds 1 per cent.

Tracking error is a statistical measure of risk. The advantage of this measure is that risk is quantified across asset classes, markets, instruments and currencies. At the same time the Ministry has pointed out in previous reports to the Storting that this measure of risk has many limitations. Our experience from the last two years is an example of this.

Of decisive importance to the scope of active management is how one on aggregate limits the active management risk. In this context, tracking error can be regarded as one of several relevant indicators of the scope of the active management. An adjustment to the limits of expected tracking error, which is being proposed now, must therefore be seen in the context of what other measures have been implemented, or will be implemented, to limit the risk associated with the active management overall.

Norges Bank has already carried out a major restructuring of the way it measures and manages risk. This is evident, for example, by supplementary methods for the measurement and management of risk. In addition to risk modelling based on historical returns (as tracking error), risk is measured and managed within the areas of concentration analysis, factor exposure and liquidity.

The concentration analysis consists of measurements that are not based on a quantitative model, but on how large the divergence from the benchmark is, measured nominally in Norwegian kroner. The aim is to form a picture of the risk that is not dependent on the many assumptions of the model calculations. Factor exposure measures the portfolio's exposure to systematic risk factors. Special attention is given to exposure to liquidity. For example, the bank measures the size of its positions relative to the volume that is traded in the market. This provides a basis for estimating how quickly the investments can be

changed. Norges Bank has also placed restrictions on leveraging the portfolio. The limits that Norges Bank's Executive Board has set for the supplementary risk targets and the consequences of this on the Fund's investments are discussed in more detail in Section 3.3.

The Ministry believes that the requirements that are now stipulated in the bank's own internal guidelines, the changes that will be made in the Ministry's guidelines to the Bank, see Section 4.2, and other measures that have been implemented to strengthen the control and supervision of the management, represent targeted measures to limit the risk associated with active management. A continuation of active management in combination with measures to limit risk better is also consistent with the current strategies of other funds, as described in Mercer's report on active management in other major funds throughout the world.

Within the limits that now have been set for the active management, the Ministry assumes that Norges Bank will actively manage the market portfolio in order to exploit various weaknesses in the benchmark indices, see the discussion above. There will still be room for a certain degree of active management beyond this. The Ministry believes that it is natural that the Bank itself evaluates the appropriate structure for this within the limits that have been set. This will ensure that an ongoing assessment is made of what strategies are appropriate in different market conditions. The Ministry will set requirements for the reporting of the risk and returns associated with active management, and it will review this management regularly, see the discussion below.

#### *Measurement of the results from active management*

In isolation, the costs associated with active management are higher than the costs associated with passive management. Since the aim of having a degree of active management is to achieve a higher return than with passive management, the most relevant question for the owner is whether the active management has achieved a higher return after costs than it would have with a hypothetical passive management. The difference in the return can be referred to as the net value added from active management.

The result of active management is nevertheless normally measured as the difference between the Fund's gross return (return before management costs) and the return on the benchmark.

This can be referred to as the gross excess return. The difference between the gross excess return and the net value added from active management is illustrated in Figure 2.4.

While the gross excess return follows from the Fund's accounts, the net value added from active management must be estimated, since the actual return is compared with the return from a hypothetical passive management. To estimate the net value added, it must be taken into consideration that transaction costs are incurred in the actual portfolio, that the Fund has income from security lending and that the management costs would have been lower with passive management. Since the estimates for income and costs with passive management are based on a significant degree of discretion, the calculated net value added will also be associated with a significant degree of uncertainty.

Transaction costs are incurred in the management of the Fund's portfolio that are not taken into account in the benchmark. In principle, it can be expected, therefore, that passive equity and fixed income funds have a lower rate of return than the benchmark, see discussion in Box 2.2.

It is likely that Norges Bank's transaction costs for the management of the GPFG have been higher than many other funds due to the large injections to the Fund over the last twelve years and several expansions of the Fund's benchmark to include less liquid market segments that to some extents are less well-functioning. In the National Budget for 2010 the Ministry of Finance reported, for example, that the overall costs associated with

the phasing in of new capital, increasing the weight of the equity portion to 60 per cent, phasing in of new emerging markets and phasing in of shares in small listed companies were estimated to total NOK 8.7 billion. In addition, there are transaction costs associated with the ordinary maintenance of the portfolio. These are costs that are not taken into account in the benchmark.

Norges Bank has calculated that the Fund's costs related to the investment of new capital, changes to the composition of the Fund's benchmark and rebalancing have been around 0.10 per cent annually on average since 1998. There are also running costs because the composition of the benchmark is constantly changing. Norges Bank has estimated this cost to be 0.04 per cent annually.

Security lending entails that the actual portfolio has income that is not included in the calculation of the benchmark's return. Norges Bank can lend securities in the portfolio in return for compensation. Income from this activity is included in the figures for the gross excess return. The Fund has annual average income of around 0.05 per cent of the Fund's value from security lending. Both active and passive managers can earn income from such lending. The experience from 2008 and 2009 is that these activities are not without risk. Security lending requires good knowledge of the counterparties and market, good technological solutions and a solid legal framework. In the same manner as other strategies that aim to create value for the Fund, this activity is also based on the manager's expertise. There is a reciprocal impact between this expertise and exper-

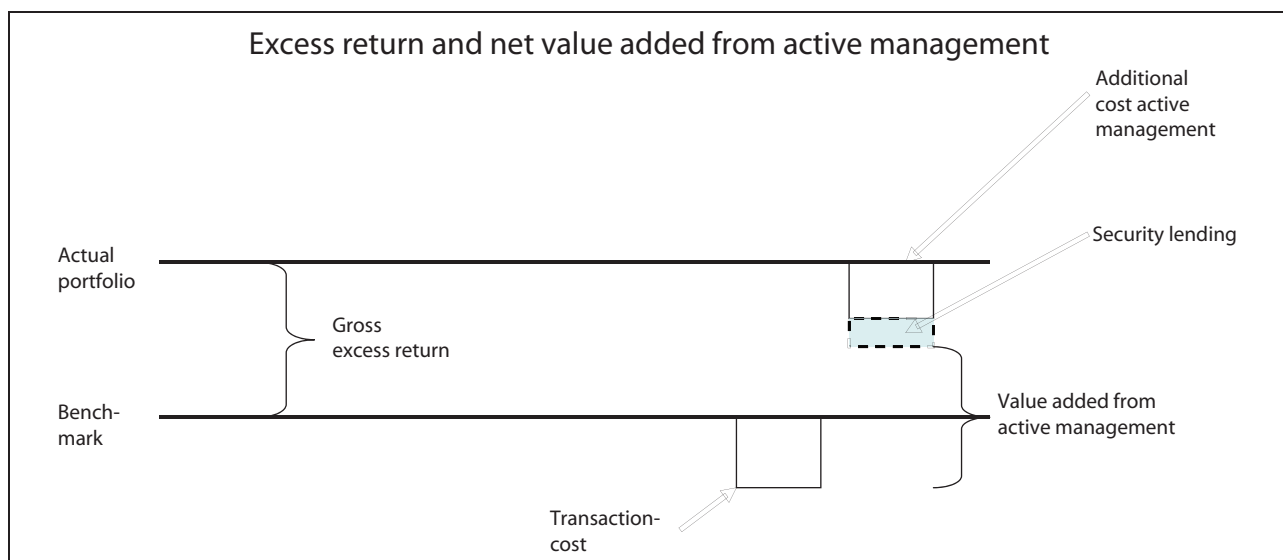


Figure 2.4 Gross excess return and net value added from active management

Source: Ministry of Finance

### Box 2.2 Return on passively managed funds

#### *Indexed equity funds*

The Ministry of Finance has asked the consulting firm Mercer to analyse the results in global passive equity funds. Mercer ranks asset managers according to four fixed criteria: idea generation, portfolio construction, implementation, and business management. The returns of the three global passively managed funds ranked highest by Mercer at the end of 2009 are analysed here.

The analysis shows that on average the three funds have achieved a return that is lower than the benchmark for the period 2005-2009.

This negative excess return supports Norges Bank's estimates in a 23 December 2009 letter to the Ministry of Finance about the negative excess return of passively managed funds as a result of transaction costs and other factors.

The three equity funds are all managed on the basis of a global equity index with about 1,500 shares distributed among 23 developed markets (MSCI World). Compared to this index the GPFG's equity index has a higher proportion of equities in Europe. European shares make up about 35 per cent of MSCI's index and fully 50 per cent of the GPFG's equity index. This is important because Mercer's figures also show that passive managers of European equities have done significantly worse than managers in the U.S. market.

Two other important differences is that while MSCI World covers large- and medium-sized companies in developed markets, the share of

emerging markets and small companies in the GPFG index are both about 10 per cent. These differences are expected to make it more difficult to achieve index returns in the GPFG, because the difference between purchase and sales prices and lower liquidity suggests higher transaction costs.

A common feature of the three funds in the Mercer study is that they use several strategies to increase returns, including securities lending and deviations from the benchmark's composition.

Consequently, these are not index funds that follow the index mechanically, but funds that are more comparable with what in this chapter is referred to as strategies for management of the market portfolio. The funds have a low realised relative volatility and a target not to deviate by more than +/- 0.5 per cent from the benchmark's return.

Table 2.2 shows that the three funds on average have achieved a return that is 0.16 percentage point lower than the benchmark return over the past five years. That is, if the GPFG had invested a third of the Fund's equity portfolio in each of the three funds, the Fund's actual return would have been about 0.16 percentage point lower than the benchmark index before fees to managers (management costs). For comparison, actual excess return on the GPFG's equity portfolio was 0.45 percentage point during the same period.

Table 2.2 Average gross excess return and realised tracking error of the highest ranking passive equity managers in the period 2005-2009. Excess return measured against MSCI World Free, before management fees. Percentage points

	Average gross excess return per year	Annual realised tracking error	Realised tracking error in 2009
Legal & General – World Equity Index Fund	0.09	0.13	0.04
State Street Global Advisors – MSCI World Index	-0.21	0.14	0.19
BlackRock – World Index Fund	-0.36	0.13	0.22
<i>Average</i>	<i>-0.16</i>		

Source: Mercer



## Box 2.2 (cont.)

*Indexed bond funds*

The GPFG's fixed income index is based on Barclays Capital Global Aggregate Bond Index. This includes both government-guaranteed and non-government guaranteed bonds. Many bonds are not traded on a stock exchange, a portion of the bonds in the index are traded infrequently and some are held by other investors during the entire lifetime of the bond. It is therefore difficult for passive bond managers to mirror the index. The transaction costs vary and affect the manager's ability to deliver an affordable index product.

Mercer has therefore not been able to give examples of funds that are managed passively based on an index that corresponds to the GPFG's benchmark for bonds. Instead, Mercer has given return figures for funds managed passively on the basis of a global government bond index. Like the best-ranked passive equity managers, the best-ranked passive fixed income managers also delivered a return in recent years that is lower than the benchmark.

In the last three years, which is the period where data are available for all three managers, the return averaged 0.03 percentage point lower than the benchmark.

The variations between funds are significant. The best fund had an excess return of 0.04 percentage point and the worst a negative excess return of 0.12 percentage point.

The return figures in Mercer's study are gross excess return figures before fees to the manager.

Mercer's annual study of management costs (Mercer's asset manager fee survey in 2008) shows the management fees for amounts up to three billion kroner. It is difficult to compare these cost figures with the GPFG because of major differences in the size of managed assets.

The cost figures in the analysis from CEM Benchmarking, which is discussed elsewhere in section 2.3.5, provide a better basis for estimating the costs of passive management.

tise in active management. To a certain degree it is therefore more reasonable to count lending income as additional income from active management. This adjustment has, therefore, been marked by a broken line in Figure 2.4.

Based on the bank's estimates for the transaction costs and income from security lending, it appears that the benchmark's return less 0.10 – 0.15 percentage points would be a reasonable estimate of the return from a passive indexing of the portfolio.

While the security lending income follows from the bank's accounts, the transaction costs since 1998 have been based on estimates. The Ministry has asked the consulting firm Mercer to obtain return data for passive global equity and bond funds. Even though the results from the passively managed funds in Box 2.2 are not directly comparable with the GPFG, they do support the bank's estimates for the results from hypothetical passive management in the opinion of the Ministry.

As is illustrated in Figure 2.4, adjusting the gross excess return to represent the net value added from active management also requires that an estimate is made for how much higher the

management costs would have been as a result of active management. Norges Bank has estimated on an uncertain basis that on average around half of the average annual management costs of 0.10 per cent are related to active management.

The Ministry of Finance uses the Canadian company CEM Benchmarking Inc (CEM) to prepare the comparisons of the GPFG with other major funds throughout the world, see discussion in Chapter 13. CEM's study also makes it possible to compare the management costs from active and passive management in other major funds throughout the world. CEM divides the management costs into costs that are necessary to support functions and management costs that are directly linked to payments for investment activities. Costs of support functions include various overhead costs, fees for custodial services, book keeping, etc.

Norges Bank's costs for support functions totalled 0.03 per cent in 2008. These are costs that will be incurred in general even if the bank chooses to assign the actual investment task to external passive managers. In 2008 Norges Bank's costs for support functions were higher than the medi-

Table 2.3 Direct management costs of passive management in 2008. Costs in GPFG peer group. Basis points (one hundredth of a per cent)

	Equities		Bonds	
	Internal	External	Internal	External
Median cost	0.6	3.7	0.9	3.2

Source: CEM Benchmarking Inc.

an costs in other funds, which was just under 0.02 per cent.

Costs directly related to investment activities in the Fund totalled 0.08 per cent of the value of the GPFG in 2008. The median values for costs directly related to investment activities in other funds are illustrated in Table 2.3. The median value for direct management costs for external passive management is just under 0.04 per cent, while the median costs for internal passive equity management is under 0.01 per cent. The median costs for the passive management of bonds are about the same.

Based on CEM's figures for 2008, it appears, therefore, that overall management costs, which include costs related to necessary support functions and the direct costs related to investment activities, in the range of 0.03-0.06 per cent are a reasonable estimate for a hypothetical passive management. Based on this approach, it appears in other words that Norges Bank's estimate for the additional cost of active management since 1998 of around 0.05 per cent is reasonable.

In its annual report on the management of the GPFG in 2010, Norges Bank makes reference to the fact that their estimate for the net value added from active management is around the same as, or somewhat higher than, the reported gross excess return of 0.25 percentage points. This is based on an actual rate of return that is 0.15 percentage points higher than the benchmark after all the costs have been deducted, and an estimated net return from hypothetical passive management that is at least 0.10 percentage points lower than the benchmark.

Norges Bank reports gross excess return as a measure of the results from active management. This is supplemented by estimates of the net value added from active management. Even though the gross excess return is only an estimated measure of the results from active management, the Ministry will emphasise this figure in the future. There are several reasons for this.

- The gross excess return is well-defined, reasonably easy to measure and based on the Fund's accounts. Net value added will be based on hypothetical passive management and will, therefore, necessarily encompass discretionary estimates.
- Gross excess return is an ordinary measure of excess return that is also used by other funds throughout the world. It is therefore a good point of departure for comparison of the results with other funds.
- The calculation of Norges Bank's net value added so far does not give any reason to believe that there have been major or systematic differences between the two methods for measuring the Fund's excess return.

In the future the Ministry will continue to emphasise keeping both the transaction and management costs at an acceptable level. Accordingly, the Fund's management costs will still be measured and compared with other funds and reported to the Storting. Up to now these comparisons have shown that the Fund has lower costs than other funds. Since the benchmark's return is not adjusted for actual transaction costs, this also gives Norge Bank an incentive to minimise the Fund's transaction costs.

#### *An expectation of excess return over time*

In the regulations concerning Norges Bank's management of the GPFG, the Ministry of Finance has formulated a goal of achieving excess return. It is stated in Section 2 of the regulations:

«Norges Bank shall seek to achieve the highest possible return on the investments in foreign currency within the investment limits set out in the regulations and guidelines issued under these regulations.»

The Ministry has evaluated whether the ambitions of the results from the active management should be quantified. Norges Bank has pointed out that an expressed goal for the highest possible return within a limit for active management can improve the quality of several aspects of their activities. This includes the bank's task to invest new capital in the market, maintenance of the portfolio, active management, active ownership and the provision of advice to the Ministry of Finance concerning the Fund's long-term investment strategy. When this goal is formulated as expectations for all employees, it means that every-

one must contribute to improving the quality of the management.

Professors Ang, Goetzmann and Schaefer write that the current constraints, which entail a maximum limit for the expected relative volatility, do not encourage Norges Bank to exercise active management to any great extent. They believe that this may have contributed to a underutilization of the banks capacity for active management. The professors recommend that a target be defined, rather than a maximum tracking error limit.

The Ministry has evaluated whether such a target or an interval should be set for tracking error. Such an interval would have both a maximum and minimum limit. This will therefore encourage stable utilisation of the limit for the tracking error. As discussed above, it may have unfortunate effects if the manager is encouraged to avoid a tracking error that is too low. Experience shows that the financial market alternated between periods of large and small fluctuations. If periods with low volatility also result in a low expected return, it may be unfortunate to encourage a greater divergence from the benchmark to maintain a level of relative volatility when the return opportunities appear to be limited. A narrow range may mean that more risk is taken systematically when the compensation for adding risk is at its lowest level. The problem is worsened if significant portions of the divergence from the benchmark entail exposure to systematic risk factors that are not taken into account in the expected tracking error alone, because negative outcomes rarely occur.

In the opinion of the Ministry, it is more appropriate to express the ambitions for the active management of the Fund by quantifying an expectation for the net value added from active management over time. The Fund's net value added from active management should also be viewed in relation to the limit for divergence from the benchmark.

Norges Bank's ambition to achieve an annual net value added of 0.25 per cent from active management on average was originally based on a maximum limit for tracking error of 1.5 per cent. Now that tighter constraints are being proposed for the active management, it is natural to evaluate whether the Ministry should quantify the expectation for the annual net value added to less than ¼ per cent.

There is no easy answer to what a reasonable ratio would be between risk and return in the active management. Some facts that can be mentioned nevertheless include:

- Norges Bank's own goal: Norges Bank writes in a letter that they have a target for the net annual value added from active management of 0.25 percentage points. In the current guidelines from the Executive Board to the Chief Executive Officer of NBIM, a limit of 75 per cent of the maximum limit has been set for the utilisation of the tracking error limit. In reality this means that NBIM expects a net value added of 0.25 per cent with a maximum limit for expected tracking error of 1.1 per cent.
- Experience from active management at other managers: With risk in the active management corresponding to a tracking error of 1 per cent, a gross excess return of 0.25 annually will normally be considered a good result, but this must be evaluated over a relative horizon and viewed in the context of whether tracking error is a good expression of risk.
- Results achieved: Norges Bank has achieved annual an annual gross excess return of 0.25 per cent on average since 1998. The supplemental limits for active management risk that have been proposed now will in particular limit the Fund from some of the strategies that were previously used for the management of the Fund's bond portfolio. Overall, these strategies have not contributed to any excess return since 1998.

On the basis of an overall assessment, the Ministry has decided that an annual net value added from active management of around ¼ per cent on average should be expected over time. At the same time the excess return must be evaluated based on the risk that is associated with this activity. If Norges Bank only uses part of the active management limit, then a somewhat lower result should be regarded as satisfactory. As described above, as an approximation it will be measured as gross excess return, i.e. the difference in the return between the actual portfolio and the benchmark.

When calculated over long periods of time, an excess return of around 1/4 percentage points annually will represent a significant contribution to the overall return on the Fund. With the current size of the Fund, this corresponds to NOK 5-6 billion annually.

Active management is expected to only provide a moderate increase in the Fund's overall risk over time. Measured by the Fund's standard deviation, which is a normal measure of risk, active management has only increased the Fund's risk since 1998 to a limited extent. The volatility in the actual port-

folio for the entire period from 1998 to 2009 was 7.6 per cent, compared with 7.1 per cent for the benchmark. This is illustrated in Figure 3.8, which shows small deviations in the risk as measured by the standard deviation of the benchmark and actual portfolio, also over shorter periods of time, with the exception of the last two years. Our experience from the last 12 years shows that the reported excess return was high and stable for many years, but with huge fluctuations in 2008 and 2009. This must be seen in light of the special market conditions during the financial crisis. Exposure to systematic risk factors is characterised in many cases by such a skewed profile for the results achieved over time. Even if positive excess return is assumed over time, periods of negative excess returns must still be expected.

#### *Regular review of the active management*

The estimates for the return from active management in the future are uncertain. Over time the active management must be assessed overall based on the results achieved. Regular and broad reviews of the active management are prerequisites for maintaining a certain element of active management. Such reviews may result in an upward or downward adjustment of the degree of active management. In connection with these reviews it will also be natural to assess whether the gross excess return still appears to be representative of the creation of value from the active management. Other circumstances that should be illustrated are whether Norges Bank utilises the potential reciprocal impact between active ownership and active management.

The Ministry will plan regular reviews of the active management in the beginning of each Storting period. An interval of four years seems reasonable in light of the fact that the results must be assessed over time. A scheme that entails regular reviews will reduce the need for more ad-hoc-like assessments after periods of weak results. This promotes at the same time a better anchoring of this aspect of the Fund's management.

#### **2.3.6 Further work on systematic risk factors**

Professors Ang, Goetzmann and Schaefer recommend that more emphasis is placed on work on the Fund's exposure to systematic risk factors. The professor's point out that the active management of the Fund has given the Fund exposure to systematic risk factors. They believe that this has

improved the Fund's overall results and that a fund like the GPFG should be exposed to such factors, because it is a way of exploiting the Fund's special characteristics.

The Ministry concurs with the assessment that more attention should be paid to systematic risk factors in the management of the Fund. It should be assessed, for example, whether there are any risk factors that the Fund should not be exposed to, or whether there are any factors that the Fund is not currently exposed to, but that should be included in the Fund's investments. The basis for such assessments will be an analysis of the return and risk characteristics of the risk factors. Several risk factors are described in Chapter 7 based on their historical performance. The analysis shows, for example, that some of the factors have historically had a higher probability for a very low return than a very high return, and that some factors yield a negative return when the equity market falls. These are characteristics that may affect the Fund's overall results if the exposure becomes substantial.

The question of whether there are any new factors that the Fund should be exposed to is closely linked with the recommendation from the professors that importance should be attached to the analysis of systematic risk when considering further diversification of risk in the Fund's benchmark.

Professors Ang, Goetzmann and Schaefer believe that the Ministry of Finance should change the Fund's benchmark so that exposure to systematic risk factors is integrated into the benchmark to the greatest possible extent. The role of active management will thereafter consist of overweighting or underweighting the various risk factors and exposure to factors that are not included in the benchmark due to various reasons, as well as a role to some degree for positions based on an analysis of individual companies.

In the opinion of the Ministry of Finance such a reorganisation of the benchmark may have several advantages. Exposure to systematic risk factors may be one way of exploiting the Fund's advantages to achieve a higher return on the Fund's risk. It will, therefore, be consistent with the Ministry's expressed goal of developing the Fund's investment strategy with a view to improving the diversification of risk in the Fund and better exploiting the advantages of the Fund. In such a case the Ministry of Finance will discuss the exposure to such factors and the consequences for the Fund's expected return and risk in reports to the Stort-

ing, in the same manner as the consequences of a higher equity allocation were discussed earlier. An expansion of the benchmark with exposure to systematic risk factors may also make it easier to evaluate the results from the active management.

The Ministry believes at the same time that our interest in the Fund's investment strategy having a firm theoretical foundation suggests that it is too early to make a decision on whether systematic risk factors should be included in the benchmark. There is a need to investigate further what factors should be included, what exposure is then desirable, and how the Fund will achieve exposure to these factors.

In other contexts the Ministry has considered it an advantage that the development of the Fund's investment strategy has benefited from the experience of others. As far as the Ministry is aware, there are no other major funds in the world that have formulated their investment strategy based on the inclusion of systematic risk factors in the benchmark in the manner that is proposed. In the opinion of the Ministry, this supports the need to spend more time on studying the question of an alternative benchmark.

Even though it has been recognised professionally that there are several systematic risk factors in the market, there is uncertainty related to what these factors are and how stable they are. Some of the factors are well documented by historical return data, but lack a recognised theoretical explanation. Other factors have a certain theoretical foundation, but it appears uncertain how lasting the return associated with them actually is.

Professors Ang, Goetzmann and Schaefer believe that it is possible to develop good, investable indices for systematic risk factors. At the same time they write that it is beyond the scope of their assignment to propose a new benchmark for the Fund, and that there is a need to examine a transition to a new benchmark more closely. The Ministry agrees with this.

If the benchmark is to be changed in accordance with the proposal from Professors Ang, Goetzmann and Schaefer, new indices must be established for the relevant risk factors that are suited for investments on a large scale. There are currently no such indices for many of these factors.

Even passive management of the exposure to systematic risk factors will likely involve leveraging the portfolio, the use of derivatives and short positions, and a higher transaction volume compared with a conventional benchmark. This can increase the costs related to following the bench-

mark. It also places high demands on the Fund's risk management and suggests a close evaluation of the operational conditions.

There will also be a need to study the consequences of a more complex benchmark with regard to the division of responsibilities and roles between the Ministry and Norges Bank. Experience from the financial crisis emphasises the need for ensuring that the risk associated with the Fund's investments is well understood and accepted by the public. Therefore it must also be assessed how easy it would be to communicate strategies that are based on systematic exposure to risk factors.

The Ministry will return to the question of a reorganisation of the Fund's benchmark in accordance with the recommendations from the researchers in the annual report on the management of the Fund in the spring of 2011. The Ministry aims to evaluate such an approach in cooperation with other major funds throughout the world.

In light of Norges Bank's letter and the report from Professors Ang, Goetzmann and Schaefer there is nevertheless a need to evaluate alternative benchmark indices for the Fund's bond investments, since both point out weaknesses in the current benchmark.

With a continuation of the current benchmark and constraints on active management, as the Ministry is proposing now, exposure to systematic risk factors should nevertheless be given more attention. Exposure to systematic risk factors in the active management must be measured, managed and communicated. Norges Bank has already included exposure to systematic risk factors in its new framework for the measurement and management of risk. This will also be a requirement in the new guidelines for the management of the Fund that the Ministry has announced.

## **2.4 Active management of the GPFN**

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In the Ministry of Finance's letter to Folketrygdfondet dated 18 December 2009, the Ministry requested an assessment of the relevance to the GPFN of the four reports received in connection with the evaluation of the active management of the GPFG. The Ministry pointed out that it would be natural in this context to look at any differences between the GPFG and the GPFN with regard to special characteristics, investment universes, ownership shares, characteristics of the marketplace, etc. Folketrygdfondet replied to the Minis-

try of Finance in a letter dated 29 January 2010. The letter is enclosed as Appendix 2 to this report. Folketrygdfondet has summarised its assessments as follows:

- «An illiquid and volatile Norwegian capital market creates other challenges than for a major player in a much more liquid global market. This applies, for example, to the consideration of how the market works.
- In order to achieve a portfolio that closely follows an index, active investment choices are required even for passive management. This also requires proper expertise and entails a cost level for passive management that is almost the same as for active management.
- As a major shareholder in Norwegian companies the role as owner is regarded as being safeguarded significantly better through the active management of the portfolio.
- Factor-based benchmarks are regarded as not very suitable for a major investor in the Norwegian market. Based on the fact that there are few observable factors, the establishment of an appropriate benchmark based on known systematic factors is regarded as not very realistic.

We believe that active management of the GPFN will be the best way to create added value also in the future. Through responsible investment activities and a good follow-up of ownership, Folketrygdfondet's investment philosophy will best contribute to safeguard the Fund's financial assets in the long term and in a well-functioning financial market.»

The Ministry will present its assessments related to the active management of the GPFN in the annual report to the Storting on the management of the Fund in the spring of 2011.

## **2.5 Further work on the investment strategy**

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### **2.5.1 Primary organisation**

The GPFG comprises over 95 per cent of the overall Fund capital, and this percentage will increase in the future with the continued inflow of petroleum revenues. It will therefore be natural that work on the development of the Fund's strategy is primarily aimed at the GPFG.

Many important choices have been made with respect to the investment strategy of the GPFG in

recent years. In the opinion of the Ministry the current benchmark reflects an acceptable level of risk for the Fund. The sources from which the return and risk associated with the Fund have originated thus far are primarily linked to the fact that a market return has been achieved through a benchmark consisting of relatively liquid equity and bond markets. The benchmark has been expanded gradually and the diversification of risk has increased.

Future work on the investment strategy will focus in particular on evolving the strategy so as to exploit the special characteristics of the Government Pension Fund in the best possible manner, see discussion above. Further development will seek to diversify the risk further and increase the weight of investments that benefit from the Fund's size, long-term perspective and ability to hold less liquid assets. The decision to invest up to 5 per cent of the Fund in real estate is an example of such a change. The Ministry of Finance published new guidelines for investments in real estate on 1 March 2010. These are discussed in more detail in Section 2.5.2.

A basic premise for developing the strategy is sound management of risks other than market risk, such as operational risk. The strategy development must also take into account the Fund's role as a responsible investor.

In Report no. 20 (2008-2009) to the Storting the Ministry presented the result of an assessment of the Fund's ethical guidelines. The work on the development of the Fund's role as a responsible investor is an integrated part of the work on the Fund's overall investment strategy. Sections 2.5.3 and 2.5.4 discusses the status of the work on assessing the ethical guidelines and new investment programmes.

In its work on developing the Fund's investment strategy, the Ministry of Finance makes use of advice from Norges Bank and others with special expertise. In the National Budget for 2010, the Ministry announced a change in its use of external advisors. More specialised and broader problems related to the Fund's investment strategy suggest use of specialised external expertise. Accordingly, the Ministry will use external evaluation assignments to survey the leading practice among other investors and to form a foundation for key investment decisions based on a study of the results from academic research. Such assignments have also been awarded earlier, most recently in connection with an assessment of the active management. The external studies that were

ordered in connection with our work on investments in real estate are another example. In this connection a review of the results from academic research was ordered from Professors Hoesli and Lizieri and input on the rules for real estate management was ordered from the Partners Group.

In addition, the Ministry aims to arrange public external evaluations of the Ministry's work on the investment strategy on a regular basis in the future. Such a practice will result in increased transparency and debate on the important choices that are made in relation to the Fund's investment strategy. In the National Budget for 2010, the Ministry announced that it would return to the question of how this work should be organised. The Ministry plans for the evaluations to be made by a group consisting of 3-5 persons. The composition of the group should vary over time, and both Norwegian and foreign specialists should be represented. The group will comment on the analyses that have been presented in connection with the Fund's investment strategy in the annual reports on the Fund. They will also be able to discuss other matters related to the Fund's investment strategy and give input on topics that the Ministry can examine in more detail. The evaluation will thus be able to give input to our long-term work on developing the Fund's investment strategy.

The evaluations are limited to the Fund's investment strategy. Other aspects of the management, such as the results from the operative management and risk management of the Fund, are subject to other external evaluations. Reference is made, for example, to Norges Bank's Supervisory Council's work on certification assignments and the discussion of these assignments in Chapter 4, Mercer's evaluation of the operative management in 2003, Ernst & Young's report on the Fund's risk management, which was presented in the annual report on the Fund in 2008 and the analyses of the Fund's results in the report from Professors Ang, Goetzmann and Schaefer, which was presented in Section 2.3.

The first report on the Ministry's work on the investment strategy should be presented in the autumn of 2010, so that it can be used as input for work on the next report to the Storting on the management of the Government Pension Fund in the spring of 2011.

### 2.5.2 Real estate investments

It has previously been decided to invest up to 5 per cent of the GPFG in real estate, see Report no.

16 (2007-2008) to the Storting. Real estate is the third largest asset class globally after equities and bonds. Key reasons for including real estate in the GPFG included further risk diversification in the Fund, harvesting premiums in less liquid assets, and increasing the Fund's investments in real assets, in order to preserve the Fund's international purchasing power in the best way possible.

After the Storting's deliberation of Report no. 16 (2008-2009), the Ministry has continued to work on the establishment of more detailed rules for the real estate investments, see for example the discussion in the National Budget for 2010. Key elements of the new guidelines for real estate investments include required rates of return, risk limits and reporting requirements. In connection with its work on the guidelines, the Ministry has received, for example, advice from the Swiss company Partners Group. The advice from Partners Group is based on the best practice in major funds throughout the world.

The Ministry of Finance stipulated guidelines for investments in real estate on 1 March this year. Parallel to this work, the Ministry will work on rules for the management of the GPFG, see discussion in Section 4.2. The separate rules for real estate that entered into force on 1 March will be incorporated into the combined regulations for the GPFG.

The rules stipulate that Norges Bank shall invest up to 5 per cent of the GPFG in a separate real estate portfolio. When the real estate portfolio approaches 5 per cent, fluctuations in the value of the real estate portfolio in relation to the value of the Fund will make it necessary to stipulate divergence limits. The Ministry will return to this question.

The guidelines for the real estate portfolio permit investment in both listed and unlisted real estate, as well as bonds and derivatives related to real estate. The rules are principle based. Ministry's guidelines cover the key principles. These rules must accordingly be supplemented by Norges Bank through internal guidelines and limits. Thus a great deal of responsibility lies with Norges Bank with respect to the formulation of specific rules and limits. At the same time, extensive reporting requirements are imposed on Norges Bank.

For the equity and bond portfolios in the GPFG, the Ministry of Finance's choice of benchmark indices is a key element of the Ministry's risk management, because guidelines have been given in terms of how much Norges Bank can deviate from the indices in the active management.

The benchmark indices are also an important basis for measuring Norges Bank's results from the active management.

It will, however, not be possible to engage in passive management of unlisted real estate by assembling a portfolio equivalent to the real estate index, because it is not possible as a rule to purchase a share of the properties included in the index in the same manner as shares can be purchased in companies that are included in the equity indices. In addition, real estate indices are not equally representative of the overall market. Thus there is little reason to distinguish between active and passive management, or utilise real estate indices to manage the Fund's risk in the real estate portfolio. Real estate investments will therefore be managed actively.

Even though the real estate indices have weaknesses, the return on a global real estate index will be the best basis available for evaluating how good the return on the Fund's real estate portfolio has been. The Ministry has therefore chosen a specially adapted version of the global real estate index from the English index provider International Property Databank (IPD) as a return target for the GPFG's real estate portfolio.

In the definition of the return target, the Ministry has assumed that the scope of the real estate portfolio's investments in listed real estate companies will be limited over time. If this assumption changes, then the Ministry will consider the use of an index of listed real estate companies as the return target for the listed portion of the portfolio. In accordance with the guidelines issued by the Ministry, Norges Bank shall stipulate a multi-year strategic plan describing how the bank will achieve the highest possible net return (after costs) on the real estate investments in compliance with the regulations.

The rules state that the risk in the real estate portfolio shall be diversified. A general requirement has been stipulated that the investments shall be diversified geographically, across sectors and across types of real estate and the associated financial instruments. Before investments can be made, the Ministry will stipulate a strategic country and sector distribution and the associated exposure deviation limits. In addition, the bank will be required to limit the risk through, for example, limits on investments in emerging markets and real estate under development and limits for the maximum investments that can be made in an individual year. Limits must also be set with respect to leverage.

It is expected that the majority of the real estate investments will be made through unlisted funds and corporate structures. These real estate instruments may have debt elements like companies in the GPFG's equity portfolio. The debt ratio will depend, for example, on economic, regulatory and tax-related circumstances. In cases where Norges Bank participates and establishes a specific instrument, the bank can influence the debt ratio. In the guidelines there is a requirement that the investments must not be leveraged for the purpose of increasing exposure to risky assets. The real estate portfolio may only be leveraged in order to effectively execute the management assignment. This entails, for example, that the bank must have an opportunity to invest in established structures where leverage is the normal practice.

Many international institutional investors, such as pension funds and insurance companies, are exempt from taxation in their home countries in the same manner as the GPFG. Unlisted real estate funds and companies are often incorporated in jurisdictions that offer tax regimes where most of the return is taxable in the investor's home country so that the institutional investors benefit from this, see Report no. 16 (2007-2008) to the Storting. The Ministry's rules for real estate investments set special requirements for what countries unlisted companies and funds can be established in. They must be established in OECD countries, countries that Norway has tax treaties with, or countries from which Norway may demand tax information pursuant to other agreements based on international law.

To limit risk, there is also a requirement that the bank perform a due diligence review of individual investments in which the various types of risk are surveyed and documented.

The guidelines stipulate that the bank must integrate environmental, social and governance considerations in its real estate management. In terms of the environment, the bank is required to emphasise energy efficiency, water consumption, waste manage, etc.

Special phasing-in rules have been established for real estate investments, which stipulate requirements that the bank shall seek to diversify the investments over several years and across the relevant risk factors. It must be expected that capacity limitations will entail that that the portfolio will focus on certain individual real estate markets in the beginning. Access to competent managers with local knowledge is an example of a capacity limitation. It is therefore expected that it will take



many years for the bank to build up a real estate portfolio that represents 5 per cent of the Fund's total capital. The regulations stipulate that the pace of phasing in will be determined by the bank's long-term return and risk expectations in the capital markets. It must be expected that the rules can be adjusted during the phasing in period, as experience is gained within this new investment area. Upon completion of the phasing in period, the Ministry plans to evaluate the bank's real estate management during this period.

### 2.5.3 Work on responsible investments

In 2008, the Ministry of Finance conducted a broad evaluation of the Ethical guidelines for the GPF. The results were presented to the Storting in last year's report. The Ministry has implemented a number of new measures with a view to promoting responsible investment practices. In this context, factors that can have an impact on the long-term return, including good corporate governance and environmental and social issues in all parts of the management of the Fund have been emphasised. Among other measures, the Ministry has initiated a new investment programme aimed at environment-related investment opportunities and is participating in a research project to study in more detail how climate challenges can affect the financial markets. Work linked to active ownership and exclusion has also been strengthened in keeping with the aim of making use of the opportunities we have to contribute to sustainable development. This was defined in the new guidelines for responsible investment practices, which were introduced on 1 March this year and are presented in this report. The new rules replace the Ethical guidelines laid down on 19 November 2004. The Storting gave its approval to the Government's plan, see Section 3.2 of Recommendation no. 277 (2008-2009) to the Storting.

Box 1.1 in Report no. 20 (2008-2009) to the Storting gives an overall summary of the results from the evaluation of the ethical guidelines. The follow-up of the results is described in various sections of this report. The Ministry gives an overall summary of the measures and implementation of measures, as well as references to where they are discussed in the report in Box 2.3.

### 2.5.4 New investment programmes

In Report no. 20 (2008–2009) to the Storting, the Government outlined plans for the establishment

of a new investment programme aimed at environment-related investment opportunities. Whether an investment programme could be established for investment opportunities in sustainable growth in emerging markets was also to be assessed.

A prerequisite for the new investment programmes is the fact that it must be possible to implement them based on the Fund's role as a financial investor, with the associated return and risk requirements. Through such investments, the Fund's special characteristics as a long-term and broadly diversified investor, can be exploited, at the same time as special expertise can be built up in growth areas. These initiatives also fit in well with the Fund's role as a responsible investor, where one of the main goals is to ensure a long-term financial return by contributing to sustainable development in an economic, environmental or social sense.

Plans for the environmental programme include being able to invest in market segments in the area of infrastructure and unlisted equities, and in a selection of listed equities or bonds based on environmental criteria. For the investment programme aimed at sustainable growth in emerging markets, investments in unlisted equities and infrastructure will be considered.

The assumption is that the total amount for these investment programmes may be around NOK 20 billion, invested over a five-year period. In the National Budget for 2010, the Government proposed investments of around NOK 4 billion for 2010 based on environmental criteria. It was pointed out that it is natural that such investments are initially made in instruments and markets that are already permitted, such as listed equities and bonds. These kinds of investments will not be very different from the current investments in terms of operational challenges and will therefore be able to be made relatively quickly.

In the National Budget for 2010 reference was made to the fact that the Ministry has made a preliminary survey of investment opportunities within the environmental programme and found several opportunities with clearly defined environmental criteria in the Fund's existing investment universe. Three opportunities were mentioned:

- *Environmental bonds*. Investments in bonds that exclusively finance eco-friendly projects.
- *Environmental equity indices*. Investments based on an equity index where the individual company weightings are influenced by environmental criteria.

- *Active management with environmental criteria.* Active management that attaches weight to environmental criteria, at the same time as the manager seeks to create an excess return above a given benchmark.

In a letter to Norges Bank dated 25 August 2009, the Ministry of Finance requested a review of matters related to the investment programmes and made specific reference to the three aforementioned alternatives.

With regard to environmental investments within the current investment universe, the bank replied in a letter to the Ministry of Finance dated 18 September 2009 that it could carry out such management assignments and recommended active equity management based on the current ordinary benchmark. The reply letter was discussed and published as an appendix to the National Budget for 2010.

On the basis of this letter, the Ministry sent a letter to Norges Bank dated 24 November 2009, in which the bank was requested to give a more detailed description of how an active management strategy within the environmental programme could be implemented and regulated in the most appropriate manner. The bank was also requested to comment on how investments in bonds that were to finance eco-friendly projects exclusively, such as the World Bank Green Bonds, could be regulated. The bank's reply letter dated 3 February 2010 has been published on the Ministry of Finance's website ([www.regjeringen.no/spf](http://www.regjeringen.no/spf)).

In the fourth quarter of 2009, Norges Bank established several environment-related active equity mandates. The bank currently has around NOK 7 billion under management with such mandates. The mandates are managed both internally by Norges Bank and externally by management organisations with special expertise in specific areas. The environment-related active management mandates include a global mandate that invests in companies that develop clean energy technology and a global water mandate.

The costs associated with Norges Bank's active environment-related equity mandates will be on par with other actively managed mandates. Norges Bank believes that the general environmental objectives are safeguarded through the bank's definition of the investment universe and benchmark for the various mandates. With regard to environmental bonds, the bank writes that it will continuously consider investments in environmental bonds as part of the operative manage-

ment. Norges Bank will seek to invest in these types of bonds if it can achieve market-based terms that essentially correspond to normal bonds issued by the same issuer. The number of environmental bonds available is still very limited, and the market terms, such as the question of earmarking, are regarded as unclear. Norges Bank finds accordingly that it is not very appropriate to establish special regulations, including a minimum limit, for these types of investments.

Norges Bank believes that it will be able to meet the goals of the Ministry of Finance with respect to the environmental programme within the current investment universe and mandate. In the view of the bank, this programme will not have any significant impact on the Fund's overall risk profile, and it will be possible to implement the programme within the current limits for the operative management. In accordance with the bank's input, the Ministry does, therefore, not plan to issue any special rules for active equity management with environmental criteria or investments in environmental bonds. The Ministry sees it as positive that the bank has established several environment-related active equity mandates in line with the intentions of the investment programme, and that they currently have around NOK 7 billion under management with such mandates. The bank intends to increase these investments in 2010. This entails an acceleration of the investments under the environmental programme in relation to what was suggested in the National Budget for 2010.

The Ministry will stipulate special reporting requirements for the environmental programme in the new rules for the management of the GPF. These reporting requirements will be of an overarching nature. It will be difficult to stipulate requirements for detailed reporting based on environmental criteria, due, for example, to the fact that no market standard has been established for such reporting. The general reporting requirements will at the same time not result in any unnecessary limitation of Norges Bank's investment opportunities.

The Ministry will also continue to evaluate the possibility to invest portions of the environmental programme in equity indices that attach weight to environmental factors.

Reference is made in the National Budget for 2010 to the fact that the Ministry will continue to consider unlisted investments within the environmental programme and whether a programme

### Box 2.3 Measures after evaluation of the ethical guidelines

To illustrate the GPFG's role as a responsible investor the Ministry called for the following measures:

- Establishing a new environmental investment programme, and assessing a new investment programme for development in emerging markets.
  - *Implementation:* The environmental investment programme has been established, see further discussion in section 2.5.4.
- Initiation of a broad study to assess how the challenges of climate change can affect the financial markets and how investors ought to act in light of this.
  - *Implementation:* The Ministry has partnered with several large institutional investors and the consulting firm Mercer to study the consequences of different climate scenarios on the capital markets, see discussion in Box 2.1.
- For the Ministry to endorse the UN Principles for Responsible Investments (PRI) and participates directly in other international initiatives.
  - *Implementation:* The Ministry joined the PRI in 2009. The Ministry has participated in various forms of international cooperation, including a working group under the auspices of the UN Global Compact, to create guidelines for companies' activities in areas affected by war and conflict. See the discussion in Section 3.4.1.

The Ministry called for continuing its high ambitions in operational management by:

- Requiring Norges Bank to integrate the consideration of good corporate governance and environmental and social factors in several parts of the management of the Fund, in keeping with the bank's adoption of the PRI,
  - *Implementation:* New guidelines for Norges Bank's work on responsible management and active ownership, see discussion in section 4.6.
- Asking Norges Bank to prepare more documents outlining its expectations within the environmental area and good corporate governance.
  - *Implementation:* In 2009 Norges Bank laid down new expectations documents relating

to companies' water management and climate work, see discussion in section 3.4.2 and the special topic article in chapter 9 on expectations documents.

- Carrying out consultations in the event of major changes in the focus areas for active ownership, and setting new requirements for transparency and reporting about the work on active ownership.
  - *Implementation:* New guidelines for Norges Bank's work on responsible management and active ownership, see discussion in section 4.6.

The Ministry proposed to further develop the exclusion mechanism by:

- Excluding tobacco manufacturers from the Fund's investment universe.
  - *Implementation:* New guidelines for observation and exclusion from the GPFG's investment universe, see discussion in section 4.6. Tobacco producers were excluded at the end of 2009.
- Clarifying which issues the Ministry believes should be given priority when making decisions on exclusion, including the expected impact of such decisions.
  - *Implementation:* New guidelines for observation and exclusion from the GPFG's investment universe, see discussion in section 4.6.
- Making the content of the various criteria for exclusion more accessible to the companies and others,
  - *Implementation:* Improved user friendliness of the Ministry's own website. On 1 March 2010 the Ministry published a strategy brochure on the Fund's responsible investment practices. The brochure provides a brief overview of all the measures and instruments in the field.
- Publishing a description of the principles for selection of companies to be investigated further, and a procedure for handling matters relating to how the excluded companies can be readmitted to the portfolio.
  - *Implementation:* New guidelines for observation and exclusion from the GPFG's investment universe, see discussion in section 4.6.

Box 2.3 (cont.)

To improve the interaction between the instruments the Ministry called for:

- Making sure that any assessment of whether a company should be excluded considers whether there are other instruments better suited to achieving the Fund's main goals as a responsible investor.
- Establishing an observation list of companies as a new instrument, and
- Facilitating a system for interaction and coordination between the Council on Ethics and Norges Bank.
- *Implementation:* New guidelines for observation and exclusion from the GPFG's investment universe, see discussion in section 4.6.

aimed at sustainable growth in emerging markets should be established. Advice from Norges Bank will represent important input in this work. In a letter of 18 September 2009, the bank wrote that the evaluation of investments outside the current investment universe will demand an extensive survey of the investment opportunities and a thorough evaluation of the expected return and risk associated with such investments. Norges Bank

will also evaluate whether the bank can establish an organisation to implement this type of management. Norges Bank will undertake these evaluations and aims to present its conclusions to the Ministry in 2010.

The Ministry will present the status of the work on the new investment programmes in the National Budget for 2011.

## 3 Follow-up of the management

### 3.1 Introduction

This chapter concerns the follow-up of the management of the Government Pension Fund. The Ministry believes that broad reporting on the asset management is important as it helps build confidence in the Fund and its structure.

Section 3.2 provides an account of the results achieved by the Government Pension Fund Global (GPFG) and the Government Pension Fund Norway (GPFN), while section 3.3 presents the work linked to the following up of the asset management framework. Section 3.4 discusses the corporate governance activities of Norges Bank and Folketrygdfondet and the work of the Council on Ethics.

### 3.2 Management performance

#### 3.2.1 Main aspects

The last two years have been very demanding for the Government Pension Fund, with a financial

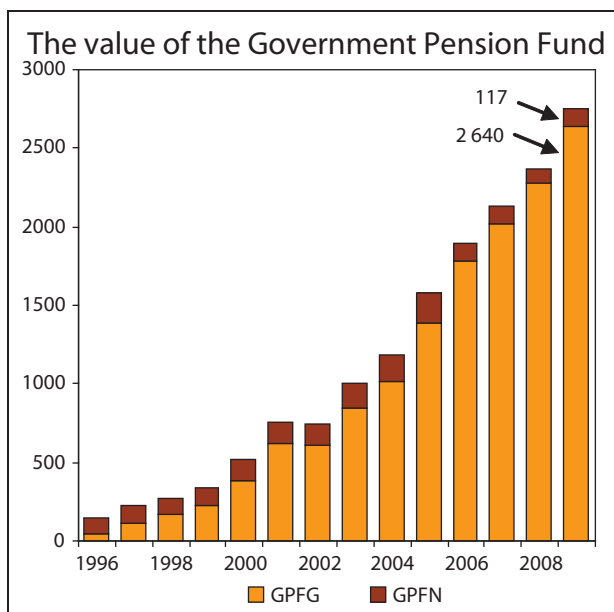


Figure 3.1 The market value of the Government Pension Fund, 1996-2009. NOK billion

Source: Ministry of Finance

crisis of historical proportions in 2008, followed by a strong recovery in 2009.

Comprehensive government packages to stabilise the financial system and dampen the decline in economic activity are two important factors why this financial crisis so far appears to have been shorter than previous crises (see chapter 1). The excellent results from the management of the Government Pension Fund in 2009 means that the losses incurred in 2008 had largely been recovered by year-end 2009.

#### *Developments in the market value of the Fund*

At year-end 2009, the total market value of the Government Pension Fund was NOK 2,757 billion

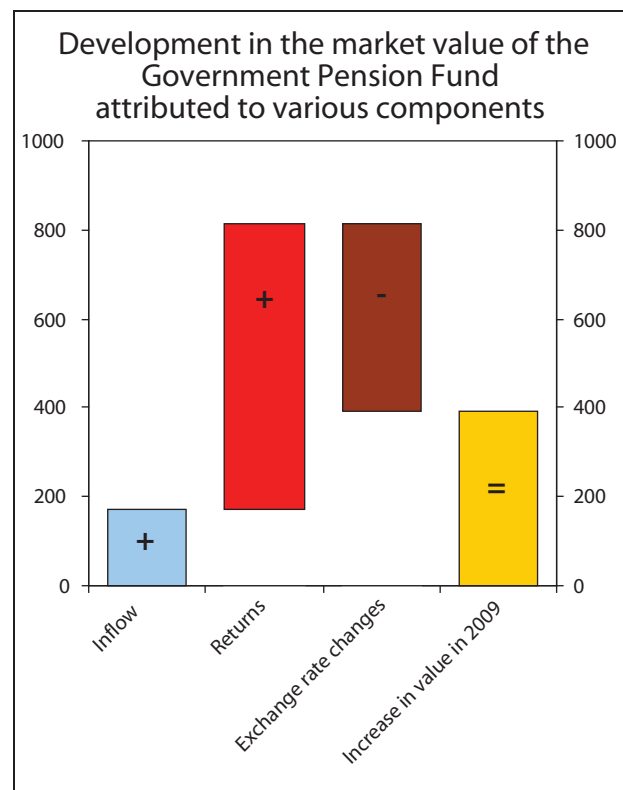


Figure 3.2 Development in the market value of the Government Pension Fund during 2009, as attributed to various components. NOK billion

Source: Ministry of Finance, Norges Bank and Folketrygdfondet

(see figure 3.1). This represents an increase of NOK 394 billion on the previous year. The increase in the Fund capital reflects the injection of new funds (NOK 169 billion) and the high returns on the investments (NOK 642 billion). The appreciation of the Norwegian krone reduced the value of the Fund measured in Norwegian kroner (NOK 418 billion), but the value of the krone does not affect the Fund's international purchasing power. Figure 3.2 shows the increase in the total market value of the Government Pension Fund in 2009 broken down into various components.

At the end of 2009, the market value of the GPFG was NOK 2,640 billion.<sup>1</sup> This constitutes an increase of NOK 365 billion during the year. The equity portfolio was valued at NOK 1,644 billion, while the fixed-income portfolio was valued at NOK 996 billion. The equity portion of the Fund at year-end 2009 was just above 62 per cent (see box 3.1).

Altogether for the period 1996–2009, gross inflow to the GPFG was NOK 2,323 billion before deductions for management costs. The total return on the GPFG in the same period is NOK 482 billion before management costs, and measured in the Fund's currency basket, while a stronger krone exchange rate reduced the NOK value of the Fund by NOK 151 billion. Total management costs for the period are NOK 13 billion.

At year-end 2009, the market value of the GPFN was NOK 117 billion, up NOK 29 billion from the beginning of the year. The value of the equity and fixed-income portfolios was NOK 73 and 44 billion respectively, and the equity portion was just below 63 per cent at year-end.

#### *Developments in the real return on the Fund*

It is the real return on the Government Pension Fund that is relevant for measuring developments

<sup>1</sup> This report refers to the value of the GPFG in 2009 as presented in Norges Bank's annual report on the management of the GPFG. The value of the Fund in previous years is based on figures from the central government accounts.

in the purchasing power of the Fund over time. Table 3.1 shows that net real return on the GPFG in 2009 was 23.5 per cent, measured in the Fund's currency basket. This is the highest annual return since the Fund was established. Since 1997 the average annual net real return has been slightly above 3 per cent.

The investments in the GPFN achieved a real return of 29.9 per cent in 2009 – again the highest return achieved since 1997. Average annual net real return in the same period is 4.0 per cent.

The discussion below uses nominal return data, since the goal is to compare the return achieved on the actual investments with the return on the Fund's benchmark. Little information would have been added by adjusting the return data for inflation.

The report below is also based on gross nominal return, i.e. before deductions of management costs. As stated in chapter 12, this reporting principle is in keeping with international standards, such as the Global Investment Performance Standards (GIPS). Management costs are discussed in more detail in section 3.2.4.

#### *Market developments*

After several years of strong growth in the world economy, major difficulties in the financial markets led to a sharp decline and deterioration of the economic outlook internationally. The first signs of turmoil in the international financial markets were seen in summer 2007 and culminated in huge losses on securities and loans among many banks and financial institutions which led to a severe undermining of confidence among banks and financial institutions. The bankruptcy of the U.S. investment bank Lehman Brothers in mid-September 2008 marked a critical phase in the financial crisis. Liquidity in the money and credit markets dried up, and many banks faced problems with refinancing. The situation was so difficult for many financial institutions in the USA and Europe

Table 3.1 Annual real returns on the GPFG1 and the GPFN2, less management costs. 1997–2009. Per cent

Net real returns	Entire period	Last ten years	Last five years	Last three years	2009
GPFG	3,04	1,38	1,54	-1,95	23,45
GPFN	4,03	4,31	3,16	0,10	29,86

<sup>1</sup> Geometric real return in international currency calculated on the basis of a weighted average of consumer price growth in the countries included in the benchmark of the Fund.

<sup>2</sup> Geometric real return in Norwegian kroner.

### Box 3.1 The equity portion of the GPFG benchmark

The investment strategy for the GPFG is expressed through a strategic benchmark. This benchmark defines a particular distribution of the Fund capital among different asset classes (equities, bonds and real estate) and different geographical regions. The Ministry defines the composition of portfolio, which has fixed weights.

The strategic benchmark currently consists of 60 per cent equities and 40 per cent bonds. A real estate portfolio representing 5 per cent of the Fund is gradually going to be built up, entailing a corresponding reduction in the bond portion. The portfolio is also divided into three geographical regions, with Europe weighted heaviest. The equity portion was previously 40 per cent, but in summer 2007 it was decided to increase it to 60 per cent. The equity portion was gradually increased until it reached 60 per cent at the end of the second quarter 2009 (see the presentation in the National Budget 2010).

The benchmark includes several thousand limited companies and bond loans, selected on the basis of the criteria the index providers use for inclusion of securities in the benchmark. The Ministry has chosen FTSE as provider of the benchmark for equities, which consists of equities included in the FTSE Global Equity Index Series All Cap. A modified version of this index is used for the management of the GPFG, encompassing 46 countries. The index consists of a given number of national indices weighted according to market value. The Ministry has chosen Barclays Capital as provider of the benchmark for bonds, which consists of the bonds included in the Barclays Global Aggregate and Barclays Global Real indices. These two indices encompass the currencies of 21 countries. The benchmark consists of a fixed number of sub-indices based on currencies and sectors with weights based on nominal outstanding amount.

The composition of the actual benchmark is based on the strategic benchmark. Variations in developments in equity values between countries and variations in developments in stock prices and bond yields will entail that the equity portion of the actual benchmark will deviate from the strategic weights over time. For this reason, a rebalancing regime has been established for the GPFG that entails that in certain circumstances attempts are made to bring the weights in the actual benchmark back into line with the weights in the strategic benchmark. In connection with the development of the rebalancing regime, the desire for minimum deviation from the strategic benchmark was weighed up against the transaction costs incurred as a result of frequent rebalancings. The developments in the equity portion of the actual benchmark are shown in figure 3.3.

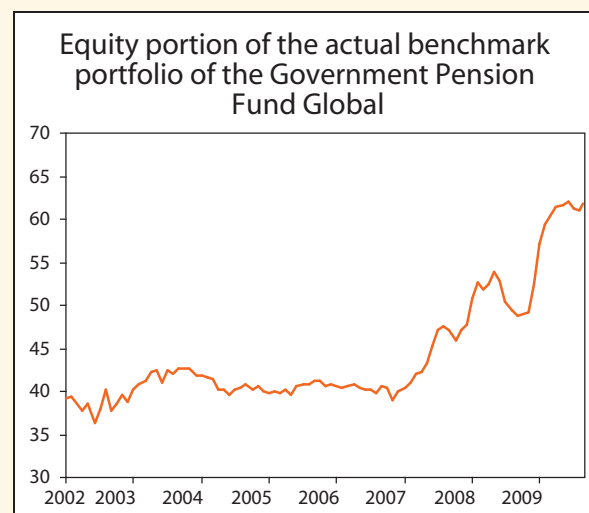


Figure 3.3 The equity portion of the actual benchmark of the GPFG in the period April 2002 to December 2009. Per cent

Source: Ministry of Finance

that the authorities implemented rescue plans to ensure their continued operation. In many countries, comprehensive government packages were introduced in an attempt to stabilise the financial markets and dampen the impact of the financial crisis on the economy. Despite significant monetary- and fiscal stimulies, growth in the world econ-

omy in 2009 was weaker than for many decades and inflation fell (see figure 3.4a). The second half of 2009 saw a slight pick-up in economic growth. Forecasts for 2010 predict modest growth.

The financial crisis had huge repercussions in all parts of the financial markets. After several years' upturn in the stock markets, prices

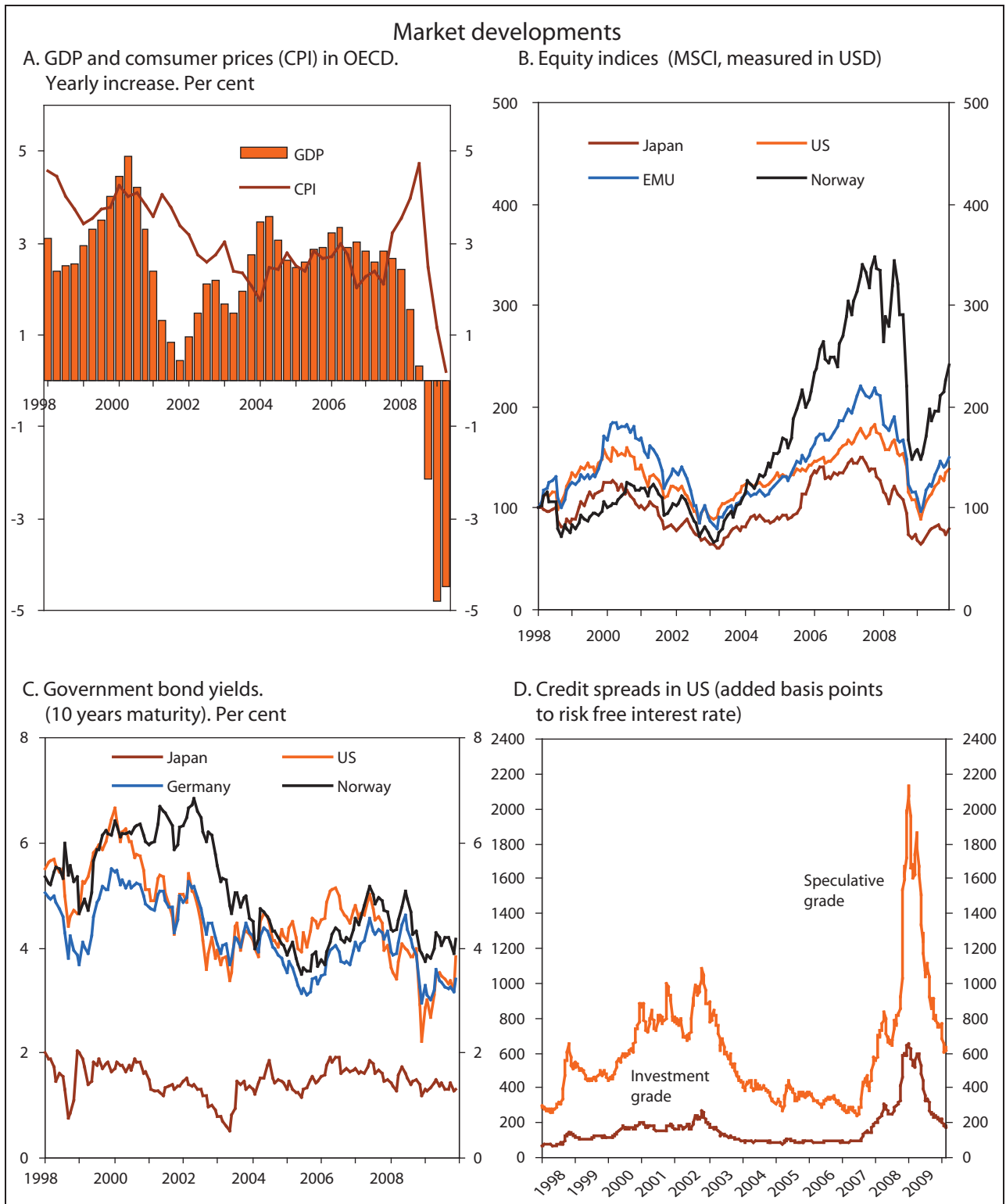


Figure 3.4 Market developments  
Source: Ecowin

dropped sharply throughout 2008 and into the first quarter of 2009 (see figure 3.4b). However, the government packages helped stabilise finan-

cial markets, and growth resumed through the rest of the year.

Throughout 2007 and 2008, the central banks reduced interest rates in the USA and the euro-



zone, and bond yields fell significantly. Expectations about international economic growth increased throughout 2009, with a slight rise in bond yields (see figure 3.4c). The risk premiums in the international money markets also rose steeply towards the end of 2008 as a result of a lack of confidence in the financial system, and it became much more expensive for banks and other enterprises to get long-term funding. As confidence returned through 2009, the risk premiums were gradually reduced, but at the start of 2010 they were still slightly higher than before the financial crisis (see figure 3.4d).

Both internationally and nationally there is much debate about the causes of the financial crisis, what lessons can be learnt, and what steps should be taken to prevent future crises. A number of processes have been initiated internationally, by the EU, IMF and G20 group and others, to look at the international regulations concerning capital requirements, the pro-cyclicality in the current regulatory framework, executive remuneration, international collaboration, etc. On 19 June 2009, the Government established the Financial Crisis Committee. This committee's mandate is to analyze incentive structures in the financial sector and the impact these schemes may have had on the sales of different types of financial products, the capital allocation, and the creation of imbalance in the markets. It has also been asked to provide a description of the various international initiatives that have been implemented in the wake of the financial crisis and an assessment of what ought to be done on the national, European and global levels to prevent similar crises in the future. The Committee is due to submit its report by 31 December 2010. Once the Financial Crisis Committee has made its recommendations, it will be natural to assess whether the committee's findings and assessments are relevant for the management of the Government Pension Fund. The Ministry will return to this in its annual report on the Fund to be presented in spring 2011.

### 3.2.2 Developments in the performance of the GPFG

The discussion below distinguishes between the return and risk resulting from general market developments in areas where the Fund is invested and the return and risk caused by the investment choices made by Norges Bank in its active management.

The return on the GPFG can be measured both in Norwegian kroner and in the currency

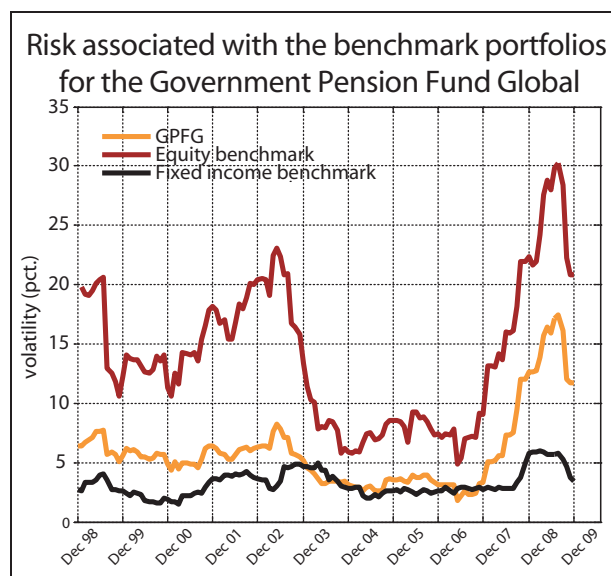


Figure 3.5 Risk associated with the benchmark for the GPFG, measured by a rolling twelve-month standard deviation (volatility). Monthly return figures 1998–2009 measured in the currency basket of the benchmark. Per cent

Source: Ministry of Finance and Norges Bank

basket of the benchmark.<sup>2</sup> When measuring in Norwegian kroner, the return will be influenced by developments in the Norwegian krone exchange rate relative to the currencies in which the Fund is invested. Since the international purchasing power of the Fund is unaffected by fluctuations in the Norwegian krone, the discussion below reports the return as measured in the Fund's currency basket.

In the presentation below, the risk associated with the Fund is based on the standard deviation of the returns and is a measure of the fluctuations in the return figures (volatility).<sup>3</sup>

#### *Developments in the benchmark for the GPFG*

The benchmark for the GPFG consists of equities and bonds that are spread across many geographical regions, countries and sectors. Consequently, the return on the benchmark for the Fund reflects

<sup>2</sup> When return on the Fund is measured in the currency basket, the rate of return in the individual currencies is weighted in accordance with the distribution of the different currencies in the Fund's benchmark.

<sup>3</sup> Standard deviation is calculated on the basis of monthly return data measured in the Fund's currency basket and in keeping with common practice translated into annual rates using the square root formula.

Table 3.2 GPFG's average yearly gross nominal return (geometric) and its annual standard deviation measured in the currency basket of the benchmark, 1998–2009. Per cent and percentage points

	Entire period	Last five years	Last three years	2009
<b>Benchmark</b>				
<i>GPFG</i>				
Average rate of return per year	4.41	3.82	0.56	21.52
Standard deviation	7.09	8.81	11.03	11.74
<i>Equity benchmark</i>				
Average rate of return per year	3.25	3.58	-5.41	32.46
Standard deviation	16.02	16.57	20.18	20.81
<i>Fixed income benchmark</i>				
Average rate of return per year	5.12	4.11	5.15	5.13
Standard deviation	3.37	3.54	4.06	3.42
<b>Actual portfolio</b>				
<i>GPFG</i>				
Average rate of return per year	4.66	3.79	0.15	25.62
Standard deviation	7.63	9.77	12.27	12.57
<i>Equity portfolio</i>				
Average rate of return per year	3.81	4.05	-5.25	34.27
Standard deviation	16.37	17.16	20.85	20.97
<i>Fixed income portfolio</i>				
Average rate of return per year	5.23	4.04	4.83	12.49
Standard deviation	3.67	4.19	5.01	4.90
<b>Excess return</b>				
<i>GPFG</i>				
Average excess return per year	0.25	-0.03	-0.41	4.10
Standard deviation	0.84	1.23	1.55	1.13
<i>Equity portfolio</i>				
Average excess return per year	0.56	0.46	0.16	1.80
Standard deviation	0.96	1.05	1.13	0.37
<i>Fixed income portfolio</i>				
Average excess return per year	0.11	-0.06	-0.32	7.36
Standard deviation	1.27	1.95	2.53	2.41

Source: Ministry of Finance and Norges Bank

the general price performance of the international securities markets (see box 3.1).

In 2009, the return on the benchmark was 21.5 per cent (see table 3.2). This is primarily due to a sharp rise in equity markets around the world. The return on the benchmark for equity investments was 32.5 per cent last year, while the benchmark for fixed income investments yielded a return of 5.1 per cent. However, the sharp fall in the international stock markets in 2008 has resulted

in moderate average annual return on the equity benchmark over the last five years.

At the same time as the return on the benchmark in the last five years has been below the average return for the entire period 1998–2009, fluctuations in returns have increased (see figure 3.5). The average annual standard deviation of the returns on the benchmark for the last five years was 8.8 per cent. The increased fluctuations reflect the substantial fluctuations in returns during the last

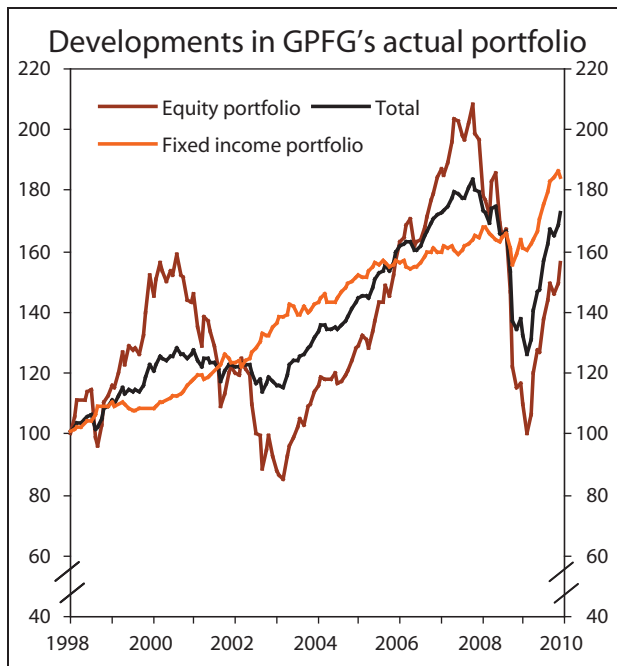


Figure 3.6 Accumulated gross nominal returns of the GPF and the equity and fixed income portfolio, measured in the currency basket of the benchmark. 1997=100.

Source: Ministry of Finance and Norges Bank

two years in particular, but must also be seen in the context of the increase in the equity portion of the benchmark. A larger percentage of equities would

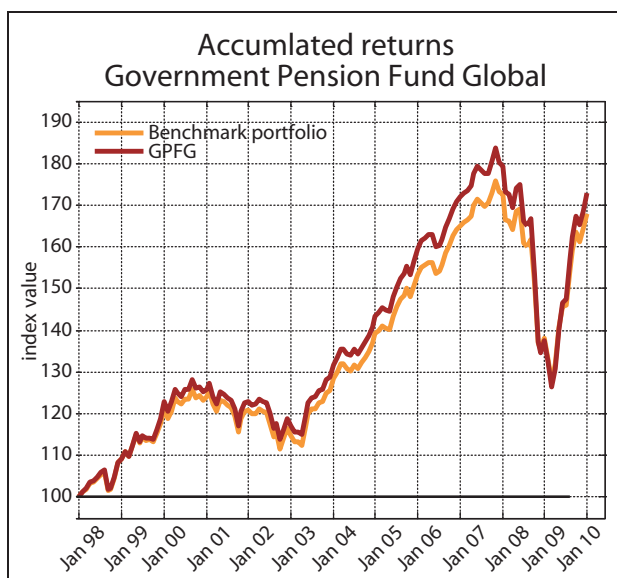


Figure 3.7 Accumulated gross nominal returns of the GPF's actual portfolio and benchmark, measured in the currency basket of the benchmark. 1997 = 100.

Source: Ministry of Finance and Norges Bank

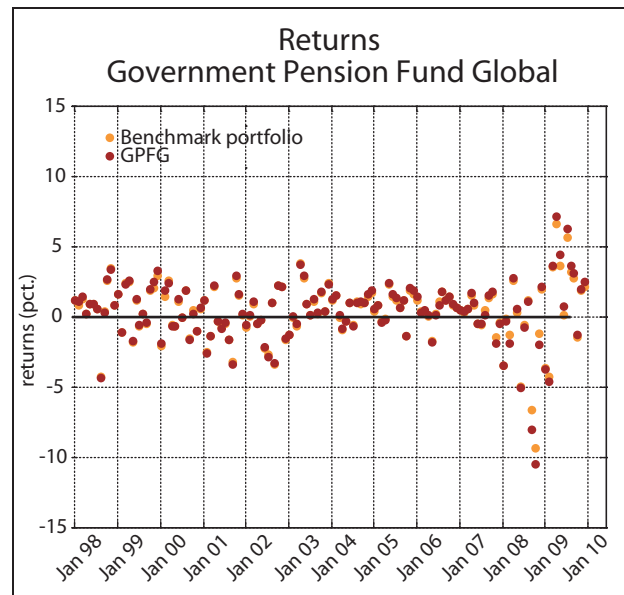


Figure 3.8 Return of the GPF's actual portfolio and benchmark. Nominal monthly return data 1998-2009, measured in the currency basket of the benchmark. Per cent

Source: Ministry of Finance and Norges Bank

normally contribute to greater fluctuations in the return of the benchmark, because equity prices tend to fluctuate more than bond prices.

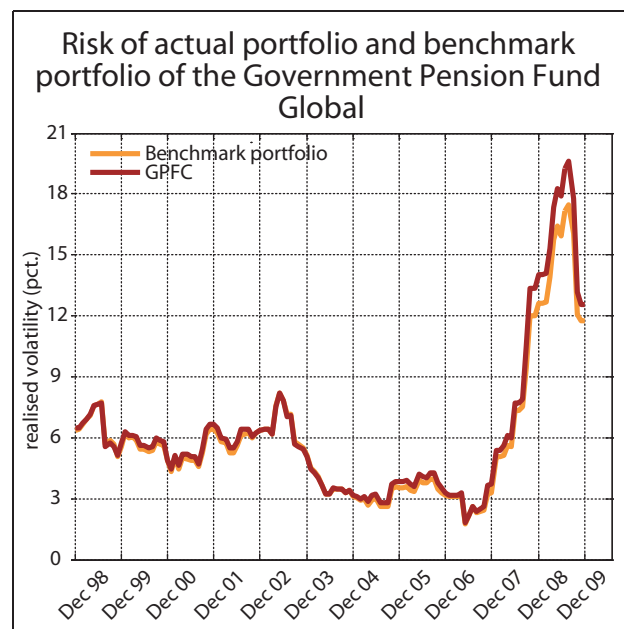


Figure 3.9 The risk associated with the GPF's actual portfolio and benchmark measured by rolling twelve-month standard deviations. Monthly return data 1998-2009, measured in the currency basket of the benchmark. Per cent

Source: Ministry of Finance and Norges Bank

### *Developments in the actual portfolio of the GPFG*

The actual investments will deviate somewhat from the benchmark set by the Ministry. The deviations reflect active investment decisions by Norges Bank. The purpose of these deviations is to achieve a higher return on the actual investments than the return on the benchmark, within the predefined limit for deviations (see the more detailed discussion in section 2.3). The risk and return in the actual portfolio will therefore deviate somewhat from the risk and return on the benchmark.

According to table 3.2, gross nominal return on the actual portfolio in 2009 was 25.6 per cent, measured in the currency basket. This is the best performance achieved since the Fund was established.

The Fund's equity portfolio performed strongly in 2009, with an overall return of 34.3 per cent, while the fixed income portfolio yielded a return of 12.5 per cent. The good results achieved by the fixed income portfolio reflect the gradual normalisation of the bond markets throughout the year and a decrease in the risk premiums. In the last five years, both the equity portfolio and the fixed income portfolio have yielded an average annual nominal rate of return in excess of 4 per cent.

The developments in the nominal return on the equity- and fixed income portfolios in the GPFG are illustrated in figure 3.6, while figure 3.7 shows the developments in the returns on the actual portfolio and the benchmark.

### *Developments in the excess return on the GPFG*

Deviation from the benchmark set by the Ministry leads to differences between the return on the Fund's actual portfolio and the return on the benchmark. This is called the excess return and is a measure of the contribution made by Norges Bank's active management to the Fund's total return.

It is not obvious that the Fund would have achieved the same return as the benchmark if the Fund had only been managed passively, i.e. had followed the benchmark closely. This is because of the transaction costs that are incurred whenever the benchmark is changed, there is an inflow of capital to the Fund, or changes are made to the Fund's investment strategy. Index management may also generate income from security lending. The GPFG has a very large inflow of capital compared with other funds, both in absolute terms and as a share of the value of the Fund. Moreover,

in recent years, the Fund has gradually moved into markets with higher transaction costs, such as emerging equity markets. There is therefore reason to assume that it would not have been possible to achieve the benchmark return in the period by passive management alone (i.e. by following the index closely). Section 2.3 provides a more detailed discussion of how gross excess return is adjusted for different cost and income components.

In 2009, the GPFG had a gross excess return of 4.1 percentage points, measured in the Fund's currency basket.<sup>4</sup> This corresponds roughly to more than NOK 80 billion. The Fund's active management achieved its best result since the Fund was established, mainly due to the strong performance in the management of the fixed income portfolio. From 1998 until the end of 2009, Norges Bank has achieved an annual average gross excess return of 0.25 percentage points. This is in line with the Bank's own objectives (see the more detailed discussion in section 2.3).

Norges Bank's active management is performed using a large number of external fund managers with specialist competencies, in addition to the Bank's internal managers. Norges Bank awards external management mandates in markets and segments where it is either not practical or not realistic to build up internal competencies. A relatively large share of the external mandates, are in emerging markets. Externally managed assets constituted NOK 316 billion at year-end 2009, corresponding to 12 per cent of the Fund. Most of the mandates are equity mandates. External management was responsible for approx. 16 per cent of the Fund's total excess return in 2009.

Equity management achieved an excess return of 1.8 percentage points in 2009, whereas fixed income management had an excess return of 7.4 percentage points. The excellent results from the active management of fixed income portfolio stemmed mainly from illiquid positions established before the financial turbulence started two years ago. In its report on the management of the GPFG in 2009, Norges Bank writes that roughly a quarter of the total excess return in the fixed-income portfolio in 2009 was from U.S. mortgage-backed bonds while roughly one-third was from investments issued by European banks. Ten per cent of the total excess return of the fixed income portfolio last year was from money market investments, and around 5 per cent was from

<sup>4</sup> Measured in Norwegian kroner, excess return was 3.5 per cent (see box 3.3).

### Box 3.2 Correlation between the return on the benchmark for the GPFG and the actual portfolio

Figure 3.10 shows the correlation between the return on the actual portfolio of the GPFG and its benchmark. Each individual point in the figure represents the return in a particular month, where the return on the Fund's actual portfolio can be read on the vertical axis, while the return on the benchmark can be read on the horizontal axis. The black line indicates where the two returns would have been identical. The orange line is the regression line, i.e. the line that fits the observed returns best. As illustrated in the figure, there is close correlation between the two return series, not only as an average over time, but also in the monthly observations. If the Fund had been managed passively, all the brown points in the figure would have been on the diagonal black line. In practice, the points are quite close to this line. This reflects the moderate degree of active management (see the discussion in section 2.3).

The fact that the orange line is slightly steeper than the black line indicates that the actual portfolio has had a tendency to achieve a higher return than the benchmark in periods with strong price developments and a lower return in periods with weak market developments.

As explained in section 2.3 and chapter 14, the results achieved by active management can be partially explained by exposure to systematic risk factors, especially liquidity and credit risk. Several of these risk factors have correlated significantly with general market developments, especially in 2008 and 2009.

The Fund's risk in 2009, measured as the standard deviation of the returns, was 12.6 per cent (see table 3.2). This is higher than the av-

erage over the last five years and for the entire period 1998–2009. Figures 3.8 and 3.9 show that there has been a close correlation between the risk and returns in the actual portfolio and the risk (measured as the standard deviation of the rate of return) and returns in the benchmark for the Fund.

The figures indicate that the decisions relating to establishment of the Fund's general investment strategy are the primary determinants of both the Fund's return and the level of risk (see box 3.1 and the article on systematic risk factors in the GPFG in chapter 14).

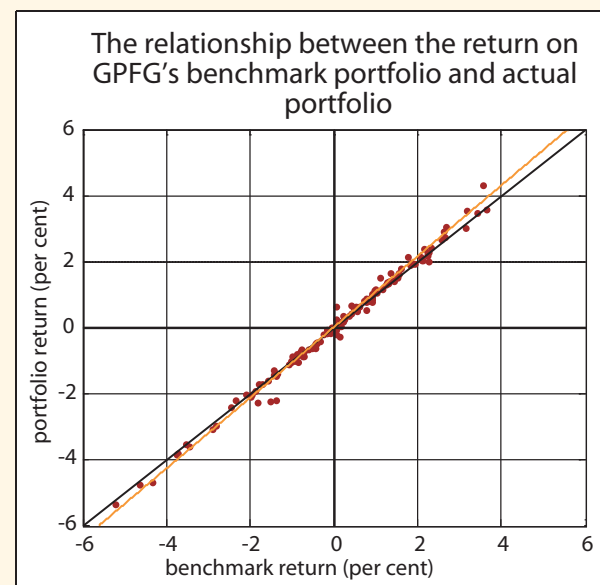


Figure 3.10 The relationship between the return on GPFG's benchmark and actual portfolio. Monthly return data 1998–2009, measured in the currency basket of the benchmark. Per cent

Source: Ministry of Finance and Norges Bank

inflation-linked bonds. The excess return from fixed income management last year must however be considered in the context of the negative excess return of 6.6 percentage points in 2008.

Since 1998 an annual average gross excess return of 0.56 percentage points has been achieved in equity management, while fixed income management achieved an annual average gross excess return of 0.11 percentage points in the same period.

Actual tracking error measured as the standard deviation of the excess return is a measure of the fluctuations in the excess return (see figure 3.13). Since summer 2007, there has been a marked increase in actual tracking error, especially in the fixed income management.

The actual portfolio of the GPFG can be regarded as consisting of two portfolios: the benchmark and the deviation portfolio – the latter a portfolio consisting of the deviations between the

### Box 3.3 Measuring the excess return in the currency basket of the Fund and in Norwegian kroner

In previous reports on the management of the Government Pension Fund, the Ministry has reported the excess return measured in Norwegian kroner. In last year's report, the excess return was reported both in foreign currency and in Norwegian kroner, and at the same time the Ministry announced that it would be assessing whether the principle for reporting the excess return ought to be changed in the future.

The return on the actual portfolio and the return on the benchmark measured in foreign currency will generally differ from a calculation of the return measured in Norwegian kroner, if the krone exchange rate changes relative to the currency basket. This of course also applies to the excess return. There is no reason to expect any significant differences between excess return measured in foreign currency and excess return measured in Norwegian kroner in the long term.

The relationship between excess return measured in Norwegian kroner and excess return measured in foreign currency can thus be expressed:

(1) excess return in Norwegian kroner = excess return in currency x (1 + change in exchange rate)

If the changes in the exchange rate are relatively small and the excess return is small, then the difference between the excess return measured in Norwegian kroner and the excess return measured in foreign currency will be small. The sign of the figures on which excess return

is calculated will always be the same, whether they are measured in Norwegian kroner or foreign currency, but the absolute value will vary according to changes in exchange rates. At times when the excess return is positive and the krone appreciates (as was the case in 2009) or when the excess return is negative and the krone depreciates (as was the case in 2008), excess return measured in Norwegian kroner will be lower in absolute terms than excess return measured in foreign currency (see figure 3.11). Inversely, excess return measured in Norwegian kroner will be higher in absolute terms, than excess return measured in foreign currency, when the excess return is positive and the krone is depreciating or when the excess return is negative and the krone appreciates.

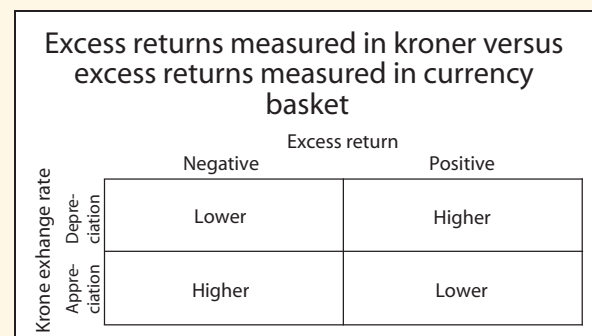


Figure 3.11 Difference between the excess return measured in Norwegian kroner and in the currency basket of the benchmark

Source: Ministry of Finance

Table 3.3 Excess returns on GPFG measured in Norwegian kroner and in the currency basket of the benchmark, and real exchange changes

Excess returns GPFG	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Measured in currency basket	0.18	1.23	0.27	0.15	0.3	0.55	0.55	1.07	0.14	-0.24	-3.37	4.03
Measured in kroner	0.20	1.24	0.28	0.15	0.25	0.59	0.53	1.10	0.14	-0.22	-4.10	3.47
Difference (percentage points)	0.02	0.02	0.01	0.00	-0.04	0.04	-0.03	0.03	0.00	0.02	-0.73	-0.57
Exchange rate change	9.60	1.25	3.94	-2.94	-15.06	6.54	-4.60	2.87	-1.88	-7.82	21.69	-14.11

<sup>1</sup> Excess return is calculated as the arithmetic difference between the return on the Fund and the return on the benchmark, calculated geometrically.

<sup>2</sup> Positive figures for the change in exchange rate mean that the Norwegian krone has weakened, while negative figures mean that the krone has grown stronger.

Source: Ministry of Finance and Norges Bank

### Box 3.3 (cont.)

The analysis of the manager's performance ought to be based on the currency the manager uses as his base currency. The currency basket of the benchmark is Norges Bank's base currency. As owner, the Ministry of Finance attaches importance to the overall returns measured in foreign currency, since it is developments in the international purchasing power of the Fund that are relevant in the long term, and

this can be regarded as the sum of the return on the benchmark and the excess return from active management measured in foreign currency. In light of these considerations, the Ministry has chosen to change the principle for reporting the excess return. Henceforth, excess return will be reported in the currency basket of the Fund.

invested portfolio and the benchmark. Consequently, the risk associated with the Fund will depend on the risk associated with the benchmark, the risk associated with the deviation portfolio, and the correlation between the returns on the benchmark and deviation portfolio.

Looking at the entire period as a whole, the difference between the overall risk associated with the Fund and the benchmark is small (see figure 3.9). This is partly because Norges Bank has only relatively moderate room to deviate from the index, and only parts of the deviation limit have been utilised.

The performance of Norges Bank's active fixed income management is illustrated in figure 3.14a, which shows a substantial drop in the accu-

mulated excess return from the second half of 2007 and into the first quarter of 2009, and a corresponding strong upturn in the last three quarters of 2009. Figure 3.14c also illustrates that the accumulated gross excess return for the fixed income management, measured in Norwegian kroner, is negative for the entire period as a whole by approx. NOK 3 billion. Correspondingly, figures 3.14b and 3.14c illustrate the performance of the equity management. The figure illustrates that the events after summer 2007 had less impact for the accumulated excess return of the equity management. The total accumulated gross excess return for equity management, measured in Norwegian kroner<sup>5</sup>, is positive for the entire period as a whole by approx. NOK 25 billion, meaning that ac-

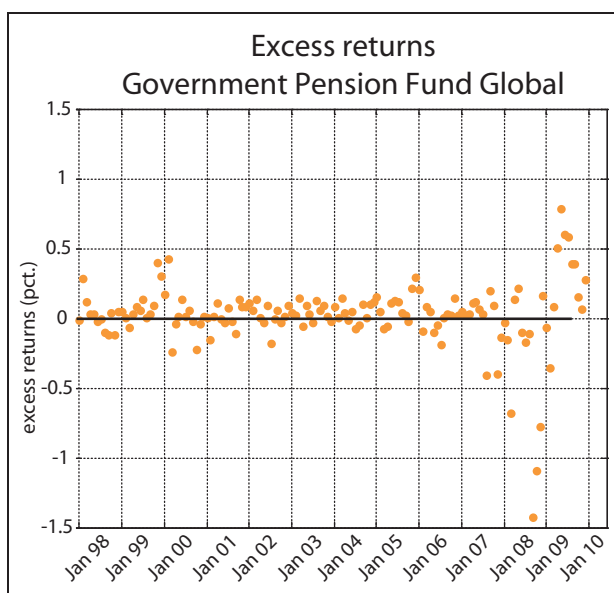


Figure 3.12 Gross excess return of the GPF Global. Monthly return data 1998-2009 measured in the currency basket of the benchmark. Percentage points

Source: Ministry of Finance and Norges Bank

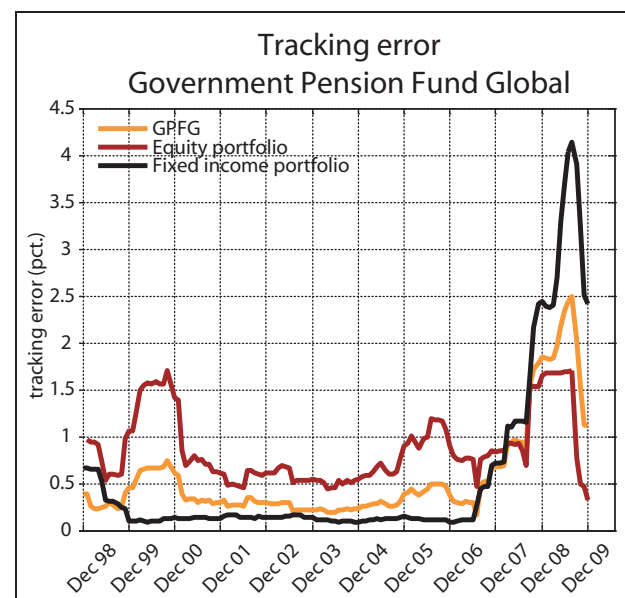


Figure 3.13 Tracking error of the GPF Global. Rolling twelve-months standard deviation of gross excess returns. Monthly return data 1998-2009 measured in the currency basket of the benchmark. Per cent

Source: Ministry of Finance and Norges Bank

accumulated gross excess return for the Fund as a whole is NOK 22 billion. This is also a reasonable estimate of the total value creation through active management in the period (see the more detailed discussion in section 2.3).

The analysis by professors Ang, Goetzmann and Schaefer<sup>5</sup> shows that a substantial share of the excess return achieved in the period January 1998 to September 2009 can be explained by systematic risk factors. This applies to the fixed income management in particular, but also to the equity management (see the discussion in chapter 14 of this report).

The Ministry's assessment in last year's report, which concluded that the results achieved by active management in 2008 were not satisfactory, must be considered in light of the fact that the risk factors in the fixed income management had not been sufficiently identified and communicated. However, the Ministry is very satisfied with Norges Bank's management of the Fund once the financial crisis had started. Particularly important in this respect was the Bank's handling of the holdings of illiquid bonds. This paved the way for a considerable excess return in 2009. The Ministry is satisfied with the fact that the value that has been generated through 12 years' active management is in line with the Bank's own goals (see section 2.3).

The Ministry is also satisfied that Norges Bank, on the basis of experiences from the last few years, has implemented comprehensive measures to limit the risk entailed by active management. Among other things, there have been changes in the management of the fixed income portfolio, external management mandates have been terminated, and the investment strategies for bonds that were used prior to the financial crisis have largely been discontinued. See section 3.3 for a more detailed discussion.

### 3.2.3 Developments in the performance of the GPFN

#### *Developments in the benchmark for the GPFN*

The return on the benchmark for the GPFN is closely linked to developments in the Norwegian and Nordic securities markets. In 2009, the return on the Fund's benchmark was 35.7 per cent (see

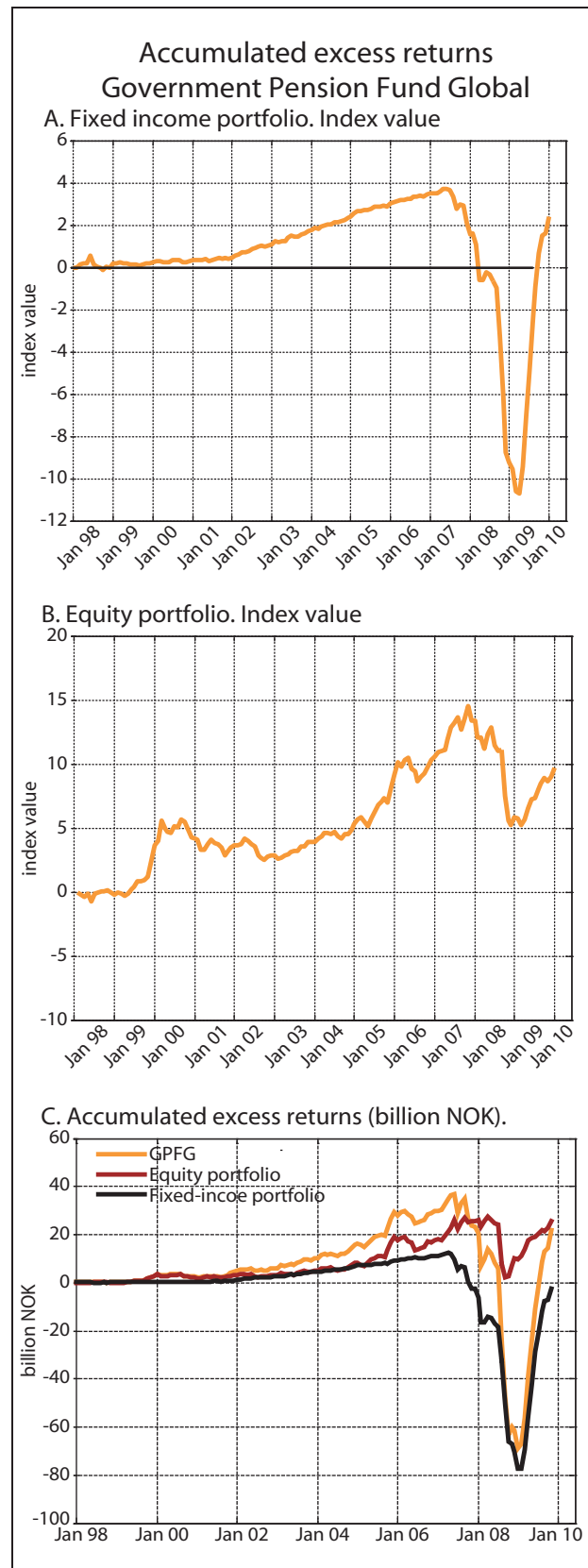


Figure 3.14 Accumulated gross excess return of the GPFN

Source: Ministry of Finance and Norges Bank

<sup>5</sup> Accumulated excess return measured in Norwegian kroner is calculated by multiplying the monthly excess return measured in foreign currency by the market value of the portfolio at the beginning of the month, and then accumulating.

<sup>6</sup> "Evaluation of Active Management of the Norwegian Government Pension Fund – Global".



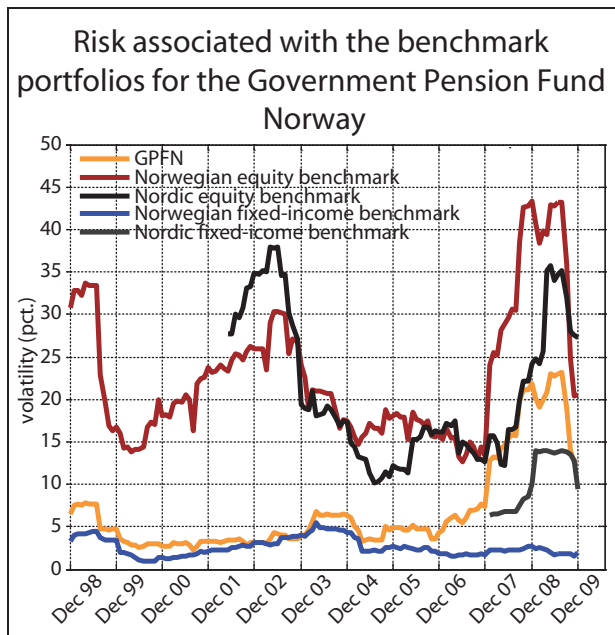


Figure 3.15 Risk associated with the GPFN's benchmarks. Twelve-months rolling standard deviations. Monthly return data 1998–2009, measured nominally in kroner. Per cent

Source: Ministry of Finance and Folketrygdfondet

table 3.4). This is the highest return since 1998 and is primarily due to a sharp rise in the Norwegian and Nordic equity markets. The average annual rate of return on the Fund's benchmark over the last five years was 4.8 per cent.

The benchmark for the GPFN is made up of four sub-benchmarks.<sup>7</sup> The return on the Norwegian equity benchmark has been significantly higher than the return on the Nordic equity benchmark. The mean difference for the last five years is 5.9 percentage points, partly as a result of the appreciation of the Norwegian krone against the other Nordic currencies in this period. The Norwegian equity benchmark has also yielded returns that are on average 4.7 percentage points

<sup>7</sup> The benchmark for equities consists of indices from the providers Oslo Børs VPS for Norway and VINX for the rest of the Nordic region (Denmark, Finland and Sweden). They consist of the equities included in the Oslo Børs Benchmark Index (OSEBX) and VINX Benchmark (CMVINXBXINN). The Nordic equity benchmark was established in 2007. In 2008, the benchmark for Norwegian fixed-income investments was changed to consist of the fixed-income instruments included in the Barclays Capital Global Aggregate Norway index. The benchmark for investments in Nordic fixed-income instruments consists of the bonds included in the Barclays Capital Global Aggregate Scandinavia index. Investments in Nordic fixed-income securities started in February 2007.

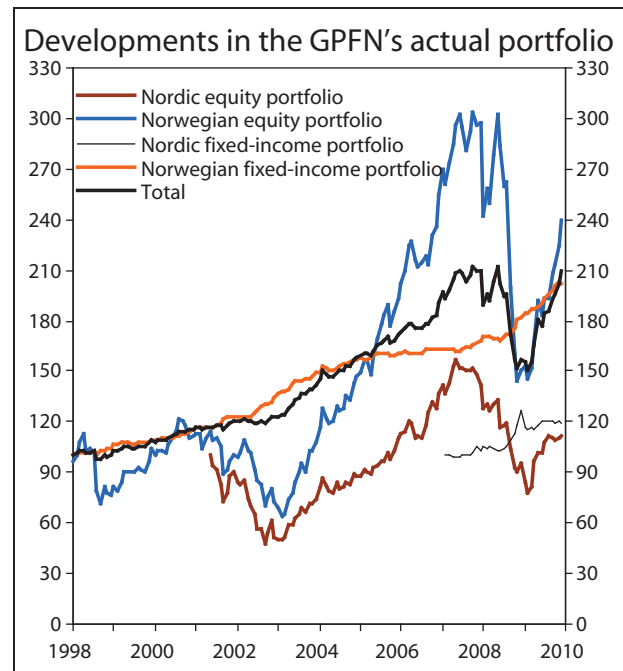


Figure 3.16 Accumulated nominal return on the GPFN's actual portfolios measured in Norwegian kroner. 1997=100

Source: Ministry of Finance and Folketrygdfondet

higher than the return on the Norwegian fixed-income benchmark in the same period.

There has been a significant increase in the measured risk of the Fund's benchmark in the last few years (see figure 3.15). In the last five-year period, the standard deviation was 13.1 per cent, measured as an annual average. This is almost 4 percentage points higher than the level for the entire period 1998–2009. The fluctuations in the benchmark's return have primarily been driven by considerable fluctuations in equities.

The increased risk associated with the GPFN in recent years is partly the result of increased market volatility as a consequence of the financial crisis, but is also due to the significant changes in the Fund's asset allocation in December 2006 as the sight deposit arrangement was terminated. This increased the share of the equity portfolio, and Report no. 24 (2006–2007) to the Storting underlined that greater annual fluctuations in the GPFN's returns thus were to be expected.

Considering the entire period since 1998, the fluctuations in the Norwegian equity benchmark have been greater than in the Nordic equity benchmark, and the gap has widened in recent years. The risk associated with the Norwegian

Table 3.4 The GPFN's average annual gross nominal return (geometric) measured in Norwegian kroner and its annual standard deviation 1998-2009. Per cent

	Entire period	Last five years	Last three years	2009
<b>Benchmark</b>				
<i>GPFN</i>				
Average rate of return per year	5.90	4.80	1.21	35.75
Standard deviation	9.16	13.08	16.53	12.61
<i>Norwegian equity benchmark</i>				
Average rate of return per year	5.80	9.44	-5.51	64.78
Standard deviation	24.94	26.74	31.39	20.50
<i>Nordic equity benchmark</i>				
Average rate of return per year <sup>1</sup>	2.08	3.58	-8.58	21.68
Standard deviation	23.35	20.26	23.07	27.28
<i>Norwegian fixed-income benchmark</i>				
Average rate of return per year	6.05	4.72	6.44	8.33
Standard deviation	2.85	2.30	2.21	1.93
<i>Nordic fixed-income benchmark</i>				
Average rate of return per year <sup>2</sup>			5.38	-8.53
Standard deviation			9.41	9.50
<b>Actual portfolio</b>				
<i>GPFN</i>				
Average rate of return per year	6.35	5.86	3.15	33.51
Standard deviation	8.47	12.20	15.39	11.66
<i>Norwegian equity portfolio</i>				
Average rate of return per year	7.58	10.38	-2.01	58.96
Standard deviation	23.29	24.63	29.29	19.45
<i>Nordic equity portfolio</i>				
Average rate of return per year <sup>1</sup>	2.65	4.82	-6.60	17.62
Standard deviation	22.56	18.94	21.24	25.45
<i>Norwegian fixed-income portfolio</i>				
Average rate of return per year	5.99	5.13	7.23	10.38
Standard deviation	2.53	2.39	2.67	2.26
<i>Nordic fixed-income portfolio</i>				
Average rate of return per year <sup>2</sup>			5.85	-6.33
Standard deviation			9.24	9.86
<b>Excess returns</b>				
<i>GPFN</i>				
Average excess return per year	0.45	1.07	1.94	-2.24
Standard deviation	1.47	1.70	1.96	1.59
<i>Norwegian equity portfolio</i>				
Average excess return per year	1.77	0.95	3.50	-5.80
Standard deviation	4.45	4.12	3.67	2.85
<i>Nordic equity portfolio</i>				
Average excess return per year <sup>1</sup>	0.57	1.24	1.98	-4.06
Standard deviation	1.46	1.86	2.34	2.20
<i>Norwegian fixed-income portfolio</i>				
Average excess return per year	-0.06	0.41	0.79	2.05
Standard deviation	0.91	0.96	1.07	0.92
<i>Nordic fixed-income portfolio</i>				
Average excess return per year <sup>2</sup>			0.47	2.20
Standard deviation			0.87	1.19

<sup>1</sup> The Nordic equity investments started in May 2001.

<sup>2</sup> The Nordic fixed-income investments started in February 2007.

fixed-income benchmark has been relatively low throughout the same period.

*Developments in the actual portfolio of the GPFN*

The actual portfolio of the GPFN deviates somewhat from the benchmark, mainly due to active investment decisions on the part of Folketrygdfondet. The objective of these decisions is to achieve a higher rate of return on the actual portfolio than on the benchmark. The rate of return on and the risk associated with the actual portfolio will therefore deviate somewhat from the rate of return on and the risk associated with the benchmark.

The return on the GPFN in 2009 was 33.5 per cent measured in Norwegian kroner (see table 3.4). This is the best result achieved since 1998 and is primarily due to a sharp increase in the Norwegian and Nordic equity markets throughout 2009. Figure 3.16 illustrates the developments in the nominal return on the GPFN.

The Fund’s risk in 2009 was 11.7 per cent measured as the standard deviation of the rate of return. This is at roughly the same level as it has been for the last five years. Figures 3.18 and 3.19 show that there has been a high degree of correlation between the actual portfolio and the benchmark.

The figures indicate that the decisions embedded in the Fund’s general investment strategy, operationalised through the determination of the benchmark, are the primary determinants of both the rate of return and the variation in the Fund’s return (see box 3.4). The Ministry’s computations

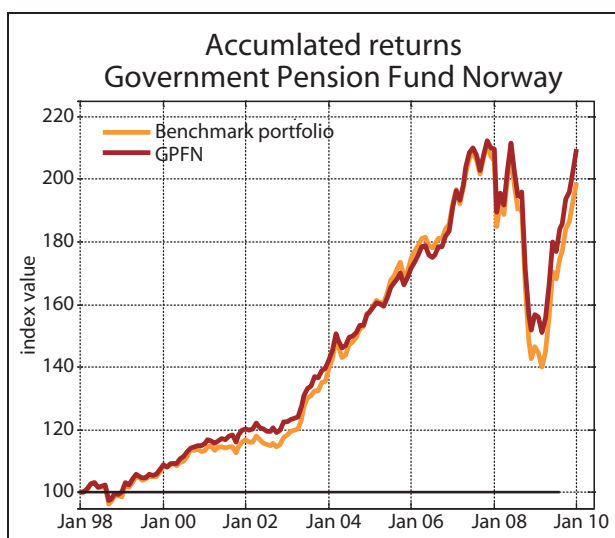


Figure 3.17 Accumulated gross nominal return of the GPFN’s actual portfolio and the benchmark measured in Norwegian kroner. 1997=100  
Source: Ministry of Finance and Folketrygdfondet

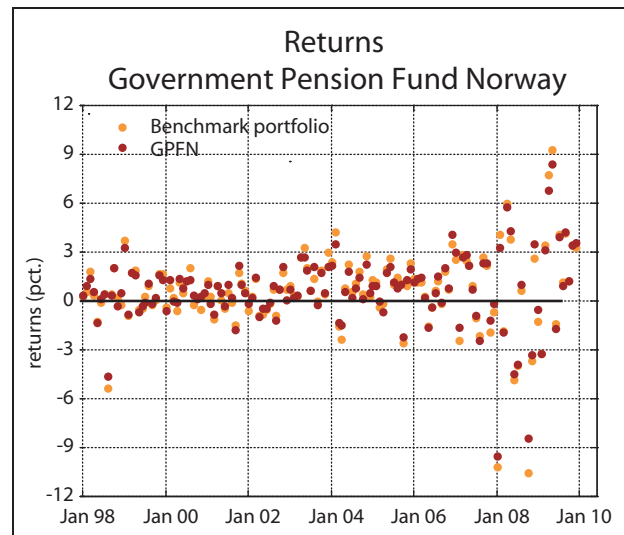


Figure 3.18 Actual return of the GPFN and its benchmark. Monthly nominal return measured in Norwegian kroner 1998-2009. Per cent  
Source: Ministry of Finance and Folketrygdfondet

show that approximately 93 per cent of the return on the Fund can be attributed to the the general investment framework for the Fund, while the remainder can be attributed to the investment choices made by Folketrygdfondet within the guidelines laid down by the Ministry.

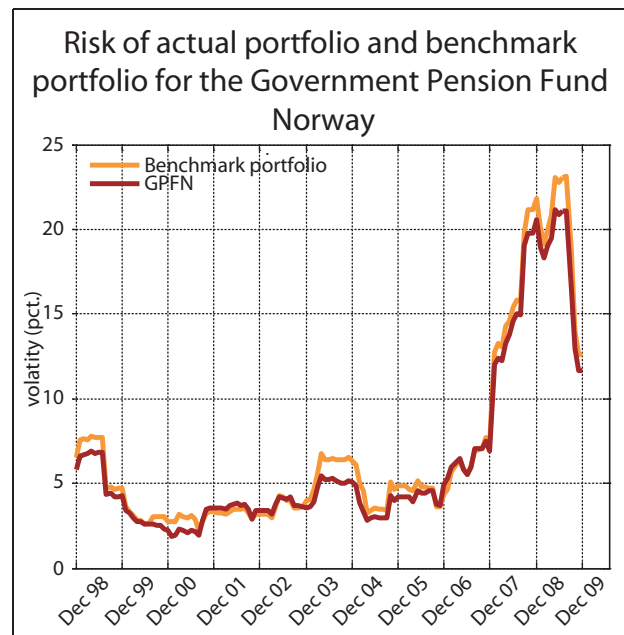


Figure 3.19 Rolling twelve-month standard deviation of the return of the GPFN’s actual portfolio and its benchmark measured nominally in Norwegian kroner 1998-2009. Per cent  
Source: Ministry of Finance and Folketrygdfondet

### Box 3.4 Relationship between the return on the benchmark for the GPFN and the actual portfolio

Figure 3.20 shows the correlation between the return on the actual portfolio of the GPFN and the return on the benchmark (see box 3.2). The figure indicates a close connection between the two, similar to that for the GPFG.

The slope of the orange curve in the figure is less steep than that of the black curve, indicating that the actual portfolio has tended to yield lower returns than the benchmark in periods with strong price developments and higher returns in periods with relatively weak market developments. This is consistent with Folketrygdfondet's long-term investment profile, which has tended to yield lower returns on their equity portfolios relative to their benchmarks in periods with rapidly rising prices, and is also an important factor in explaining why Folketrygdfondet achieved a substantial positive excess return in 2008 and a negative excess return in 2009.

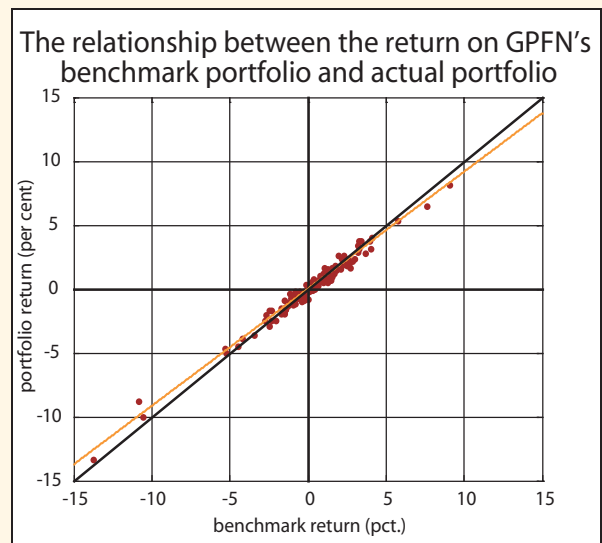


Figure 3.20 Relationship between the return on the GPFN's actual portfolio and its benchmark. Monthly return data 1998–2009 measured in Norwegian kroner. Per cent

Source: Ministry of Finance and Folketrygdfondet

#### Developments in the excess return on the GPFN

Table 3.4 shows the average excess return and the standard deviation of the excess return (actual tracking error) for the Fund as a whole and for the four sub-portfolios (Norwegian and Nordic equities, and Norwegian and Nordic fixed income).

In 2009, gross excess return was -2.2 per cent. Folketrygdfondet's active management thus entails that the return on the Fund's investments last year was 2.2 percentage points below the return on the benchmark. This is one of the weakest performances achieved since 1998. The poor result was mainly due to negative excess return in the management of Norwegian equities, while the management of the fixed-income portfolio achieved record results. The Norwegian fixed-income management achieved an excess return of 2.1 per cent.

There have been significant fluctuations in the excess return achieved over time (see figure 3.21). Although the GPFN achieved a gross negative excess return in 2009, the average annual gross excess return for the last five years is 1.1 percentage points, and 0.5 percentage points for the entire period 1998–2009.

The developments in active management risk (tracking error) for the GPFN as a whole are illustrated in figure 3.22. The fluctuations in the excess return for the Fund as a whole have varied between 0.8 per cent and 3.0 per cent in the period 1998–2009. The highest risk level was seen in the

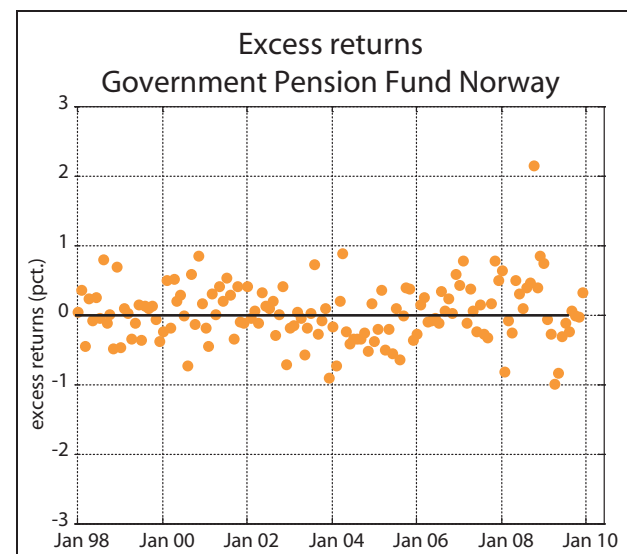


Figure 3.21 GPFN's gross excess return. Per cent

Source: Ministry of Finance and Folketrygdfondet

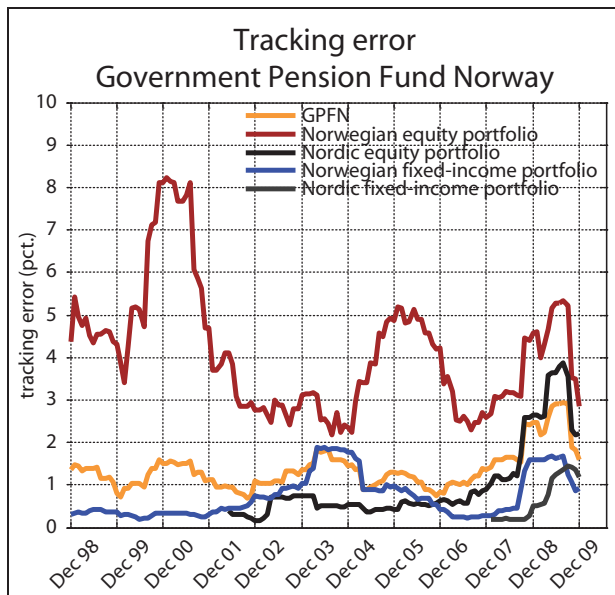


Figure 3.22 The development in the tracking error of the GPFN. Rolling twelve-month standard deviation of the excess return measured in Norwegian kroner 1998–2009. Per cent

Source: Ministry of Finance and Folketrygdfondet

12 month period after the bankruptcy of the U.S. investment bank Lehman Brothers in autumn 2008. Actual tracking error since 1998 is 1.5 per cent. Figure 3.22 shows that actual tracking error has clearly been highest for the Norwegian and Nordic equity portfolios.

The developments in the Norwegian fixed income portfolio are illustrated in figure 3.23a, which shows a decline in the accumulated excess return in the period from 1998 up until autumn 2008. This decline is primarily attributable to poor results from the management of fixed-income assets in the period between summer 2003 and summer 2005.<sup>8</sup> From the second half of 2008 until the end of 2009 there has been a corresponding substantial upturn in accumulated excess returns. Figure 3.23b illustrates that there have been substantial fluctuations in accumulated excess return for the Norwegian equities portfolio (see box 3.4). Total accumulated gross excess return for the Norwegian equity management, measured in Norwegian kroner, is positive for the period as a whole by more than NOK 4 billion, while accumulated gross excess return for the entire Fund is roughly NOK 3 billion (see figure 3.23c).

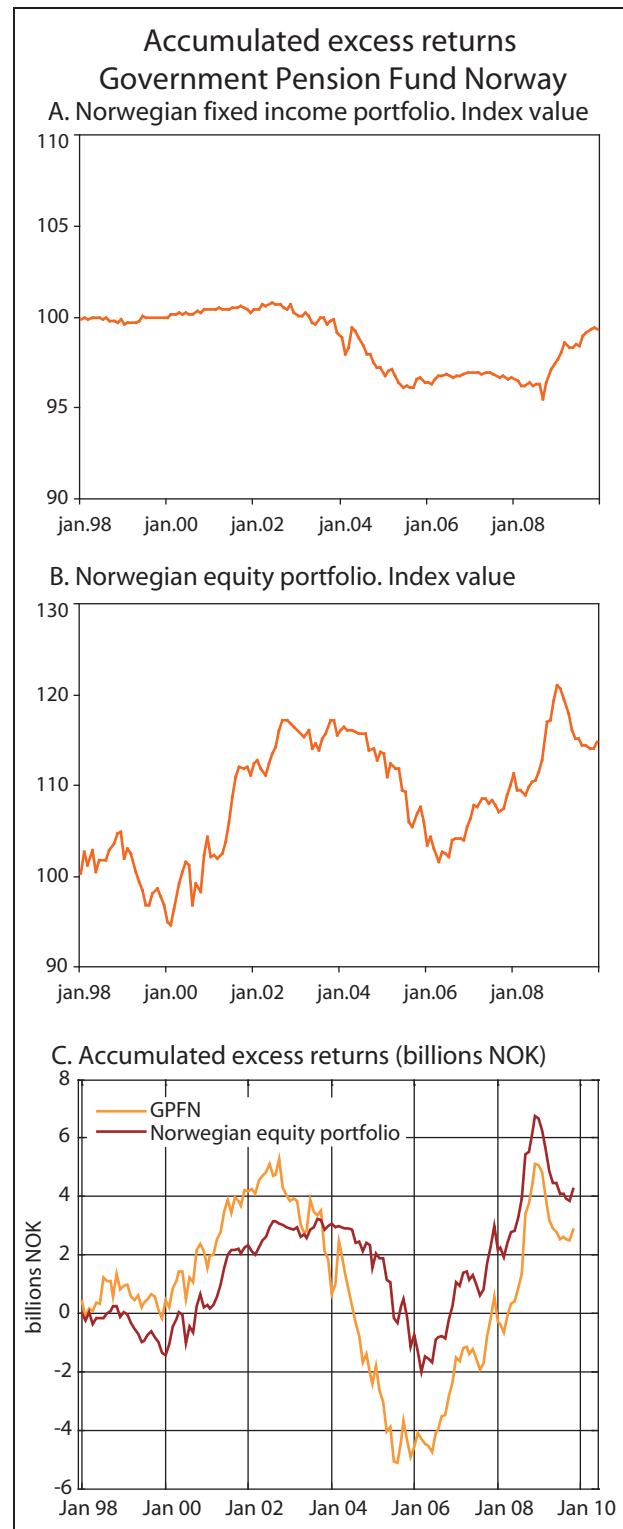


Figure 3.23 Accumulated gross excess return of the GPFN

Source: Ministry of Finance and Folketrygdfondet

<sup>8</sup> As of 2008, the benchmark for the GPFN is defined by the Ministry of Finance. Previously it was defined by the Board of Directors of Folketrygdfondet.

The results achieved by Folketrygdfondet's active management must be evaluated over a long period. The Ministry of Finance notes that the Fund's overall excess return in 2009 was negative,

but is satisfied with the good results achieved in the management of the fixed-income portfolio. The Ministry is also satisfied with the fact that Folketrygdfondet since 1998 has achieved an average gross excess return of 0.5 percentage points per year.

### 3.2.4 Management costs

According to management agreement between the Ministry of Finance and Norges Bank regarding the management of the GPFG, Norges Bank is compensated for actual management costs up to an upper limit, in 2009 fixed at 0.10 per cent (10 basis points) of the average market value of the Fund. The maximum compensation limit is determined on the basis of several factors, including information on costs associated with this type of management in funds of similar size. The Ministry of Finance commissions the Canadian company CEM Benchmarking Inc. to prepare the analyses on which these cost comparisons are based (a more detailed discussion is provided in the special topic article in chapter 13 of this report). In addition to the reimbursement of costs up to the upper limit, Norges Bank is compensated for the fees of external managers incurred as a result of achieved excess return (performance-related fees).

Management costs for 2009, exclusive of performance-related fees for external managers, were NOK 1.826 million, an increase of close to 9 per cent from 2008. Over the same period, the average size of the Fund increased by more than 14 per cent, implying that costs measured as a share of the average portfolio dropped from 0.082 per cent (8.2 basis points) in 2008 to 0.078 per cent (7.8 basis points) in 2009. Consequently, management costs exclusive of performance-related fees are well below the upper limit. Including performance-related fees paid to external managers, costs amounted to NOK 3.228 million, which represents 0.14 per cent (14 basis points) of the average portfolio size. This constitutes an increase of 3 basis points compared with 2008, largely due to the excellent results achieved by the external managers.

In addition to management costs, costs are also incurred in connection with the completion of individual transactions. Norges Bank submits regular reports on transaction costs linked to the management of the GPFG (see the more detailed discussion in section 2.3).

The management costs associated with the GPFN are not entirely comparable to the costs associated with the management of the GPFG.

Norges Bank uses external managers, a practice in general more costly than internal management. Furthermore, the asset management carried out by Norges Bank is more extensive, partly because the assets in the GPFG are spread across many more countries and companies than those in the GPFN. On the other hand, Norges Bank benefits from economies of scale in asset management.

Folketrygdfondet has made significant investments in new management systems in the last two years, in part because the new management framework for the GPFN entailed stricter requirements regarding risk management, control and reporting (see Report no. 16 (2007–2008) to the Storting). These investments have increased the management costs in recent years. Some of this increase in costs was one-off outlays, but one must nevertheless expect that the costs of managing the GPFN will be higher in the future than they have been in the past.

The management costs for the GPFN in 2009 were just over NOK 91 million. In 2008 the management costs were NOK 89 million, plus a one-off cost of NOK 15 million in pension liabilities related to the Folketrygdfondet's conversion to a company by special statute, resulting in total costs of NOK 104 million. The average size of the Fund decreased by almost 8 per cent from 2008 to 2009, implying that costs measured as a share of the average portfolio dropped from 0.098 per cent (9.8 basis points) in 2008 to 0.093 per cent (9.3 basis points) in 2009.

The Ministry attaches importance to the management costs of the GPFN being kept at a low level. Analyses carried out by CEM Benchmarking Inc. show that Folketrygdfondet's total management costs are relatively low, compared with other large funds internationally.

## 3.3 Follow-up of the management framework

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### 3.3.1 Introduction

A central aspect of the Ministry's work on the Government Pension Fund is continuous improvement of the Fund's management framework. Ensuring that the framework evolves in keeping with the investment strategy, the Fund's asset growth and international developments in the framework and supervision methods for major asset managers is demanding.

Last year's report on the Fund pointed out that opinions concerning what constitutes best prac-

tice for risk management in asset management are changing. Some of the institutions generally regarded as leading in risk management encountered serious problems during the financial crisis and were forced to seek help from the authorities. The Ministry stated that it thus seems likely that the international norms for risk management will change. This will also affect the Ministry's further development of the regulations for the management of the Government Pension Fund.

As stated in chapter 6 of last year's report, a process consisting of several steps has been chosen to further develop both the framework and the follow-up regime for the Fund. Important measures implemented in the last couple of years in the Ministry, in Norges Bank and in Folketrygdfondet to improve the monitoring and supervision of the management of the Fund include:

- bolstering the Ministry of Finance's capacity within asset management (a separate division was established in 2006),
- more extensive reporting to the Storting from 2007 (in a special report on the management of the Fund, submitted each spring),
- clarification of roles between the Executive Board and the Supervisory Council of Norges Bank (from 2010 stipulated in the Norges Bank Act),
- a new auditing system for Norges Bank (from 2010) including use of an external auditor appointed by the Supervisory Council, introduction of statutory internal auditing in Norges Bank, and introduction of a system of certification assignments whereby an external auditor reviews the Bank's internal control systems and other guidelines for asset management and assesses whether they comply with the recognised guidelines and international standards,
- strengthening of the Supervisory Council's supervisory function through a separate secretariat,
- new regulations on risk management and internal control in Norges Bank (from 2010),
- new accounting rules in keeping with international accounting standards (from 2011),
- strengthening of the Bank's governance structure in asset management, with clearer distribution of roles both between the Executive Board and NBIM, and within NBIM (from 2009),
- strengthening the Executive Board's follow-up of NBIM, for example through a new invest-

ment mandate for the Chief Executive Officer of NBIM containing more detailed rules about what the Fund can invest in and the degree of active management risk and new principles for risk management in asset management (see box 3.5), and

- reorganisation of Folketrygdfondet as a company by special statute, establishment of new auditing arrangements and introduction of new management guidelines with significantly stricter requirements concerning measurement, management and control of risk and reporting than previously.

In addition to these measures, the Ministry has also announced that it will be introducing new rules for the management of the GPFG (see the more detailed discussion in section 4.2).

### **3.3.2 Status of risk management in the GPFG**

In Report no. 20 (2008–2009) to the Storting, the Ministry stated that a new external review of the risk management in the GPFG would be conducted, with the assistance of external consultants with specialist expertise. The Ministry of Finance pointed out in the National Budget for 2010 that the most pertinent way of conducting an external review of this nature would be as an assurance review given to the bank's external auditor by the Supervisory Council of Norges Bank. In a letter to the Ministry of Finance dated 17 September 2009, the Supervisory Council of Norges Bank agreed to such an arrangement, stating that six sub-projects will be considered for assessment by assurance reviews over a two-year period, of which the first two sub-projects comprise a review of the design and implementation of the organisational structural and framework for the management of operational risk.

In a letter to the Ministry of Finance dated 4 March 2010, the Supervisory Council of Norges Bank submitted a report from the Bank's external auditor (Deloitte) on the assurance review concerning risk management in NBIM. The report reviews the design and implementation of the organisational structure and framework for the management of operational risk. The assurance review provides an independent status assessment of the Bank's risk management, including whether the risk management has been designed and implemented in accordance with the relevant guidelines and standards.

### Box 3.5 New rules for asset management in Norges Bank

Overlap between the benchmark portfolio and the actual portfolio of the GPFG

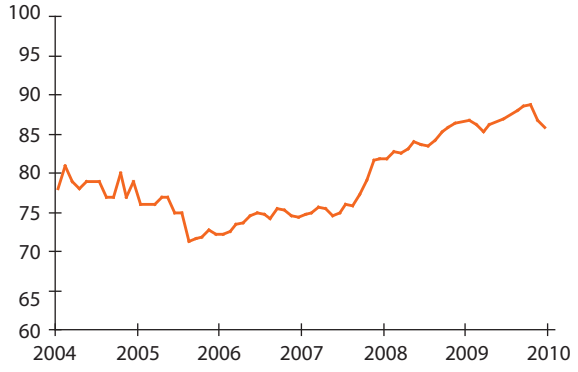


Figure 3.24 Overlap between the GPFG's equity portfolio and its benchmark 2004–2009. Per cent

Source: Norges Bank

The Ministry of Finance has issued guidelines for the management of the GPFG. The Executive Board of Norges Bank set more detailed rules based on the Ministry's rules. In 2009, the Executive Board of the bank introduced a new investment mandate for the CEO of the asset management unit (NBIM) and set new principles for risk management.

The new investment mandate for the Executive Director of NBIM provides detailed rules about what the Fund can invest in and how great a risk may be taken in the active management. The delimitation of the risk entailed by active management is based on quantitative and qualitative factors. In addition to restrictions on utilisation of the limit on tracking error, supplementary risk limits have been set for deviations from the benchmark along several other dimensions (such as liquidity risk and credit risk), and minimum requirements concerning overlap between

the actual portfolio and the benchmark (see figure 3.24) have been imposed. Upper limits to leverage have also been set. As can be seen from figure 3.25, there has been a marked reduction in the use of leverage in the GPFG. This must be seen in the context of the extensive reorganisation of the management of fixed-income assets, among others, with less emphasis on strategies entailing leverage and use of derivatives.

Security lending appears in the accounting balance of the GPFG, in that the gross value of the Fund's investments in bonds and short-term investments is greater than the net value of the fixed-income portfolio. The balance of the GPFG is included in Norges Bank's annual accounts, as approved by the Supervisory Council. The balance of the GPFG is also reported to the Storting in the report on the central government accounts.

Gross and net leverage of the GPFG

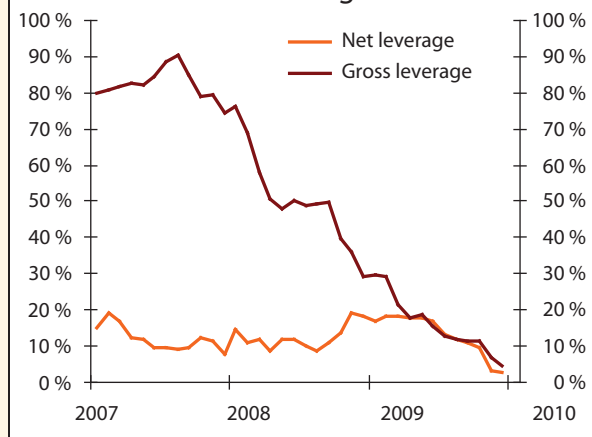


Figure 3.25 Gross and net leverage as a share of the market value of the GPFG 2007–2009. Per cent

Source: Norges Bank

The report from Deloitte includes:

- a review of whether NBIM has designed and implemented an organisational structure and a framework for operational risk management in line with the applicable guidelines and relevant standards, and
- a review of whether NBIM has followed up the recommendations in Ernst & Young's report from 2007, as reported in Norges Bank's let-

ters to the Ministry of Finance dated 19 December 2007 and 12 February 2009 (for the recommendations concerning organisational structure and operational risk).

Regarding the first point, Deloitte finds that the Bank's organisational structure and framework for operational risk management in all material respects have been designed in accordance with the



principles of the Financial Services Authority's regulations on risk management and internal control. It also concludes that the organisational structure in all material aspects has been designed in accordance with the principles laid down in the internationally recognised standard COSO ERM. Deloitte also finds that the framework for managing operational risk in all material respects has been designed in accordance with the principles of the COSO ERM, with the exception of two aspects. The first non-compliant aspect identified by the auditors pertains to weaknesses related to the system for assessing the link between individual risk factors, and the second non-compliance is linked to the fact that risk assessments are based on residual risk after control measures have been implemented, and not on a systematic assessment of the inherent risk (before control measures). Deloitte also finds that the organisational structure and framework for the operational risk management in all material aspects have been implemented as designed.

Regarding the Bank's follow-up of the recommendations in Ernst & Young's report concerning organisational structure and framework for managing operational risk, Deloitte finds that Norges Bank in all material respects has responded to the recommendations, as described in the Bank's letters to the Ministry dated 19 December 2007 and 12 February 2009, with two exceptions: inadequate linking of the risk tolerance limits (for operational risk) with stress scenarios, and the fact that key risk indicators have not been established as part of the system for monitoring operational risk exposure.

The Ministry is satisfied that a system has now been established in collaboration with the Supervisory Council of the Bank for regular, independent review of the Fund's risk management. The auditor's review shows that the Bank has basically designed and implemented an organisational structure and a framework for the management of operational risk that are in accordance with recognised standards. The Ministry is also satisfied that the auditor finds that the Bank has largely followed up the recommendations made in the previous review of risk management concerning organisational structure and the framework for managing operational risk.

The management of the Fund is subject to ongoing development and improvement. The Ministry believes that it will always be possible to identify some areas for improvement in a large and complex enterprise. In recent years, significant

changes have been made to the management of the Fund, which together will contribute to a substantial strengthening of the management. The Ministry expects that this work will continue, partly on the basis of the independent review conducted by the Bank's auditor.

### **3.4 Active ownership in the GPFG and GPFN and the work on the exclusion mechanism**

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#### **3.4.1 Introduction**

The GPFG and the GPFN have been subject to ethical guidelines since 2004. The Ministry of Finance conducted an evaluation of the ethical guidelines for the GPFG in 2008. As an outcome of this evaluation process, new guidelines for responsible investment were introduced on 1 March 2010. The new guidelines are discussed in more detail in section 4.6. The ownership activities of the GPFN and the GPFG are based on a common platform of internationally recognised principles. However, the tools deployed in this work are somewhat different because of the differences in terms of the size and investment strategies of the two funds.

The GPFG only invests in foreign assets. The Fund's investment strategy is reflected by a benchmark comprising broad equity and fixed income indices. At year-end 2009, the Fund had equity investments in more than 8.300 companies. Norges Bank's average ownership stake in these companies is 1 per cent. The work on responsible investment is adapted to this strategy, a main goal of which is to contribute to good corporate governance and responsible social and environmental corporate practices. The Fund shall avoid investments in companies involved in grossly unethical production or behaviour.

The GPFN is primarily invested domestically. At year-end 2009, the Fund had holdings in a total of 53 companies listed on the Oslo Stock Exchange and 116 companies in Denmark, Finland and Sweden. Folketrygdfondet's average stake in the Norwegian companies included in the portfolio of the GPFN is 5.1 per cent. Its stake in other Nordic companies is 0.2 per cent. In its management of the GPFN, Folketrygdfondet emphasises positive selection of companies and active ownership of these companies. This strategy is suited to an investment universe that is well-defined and comprised of a relatively limited number of companies.

In this chapter, the Ministry reports on the main aspects of the active ownership carried out

by Norges Bank and Folketrygdfondet. It also reports on the work of the Council on Ethics in 2009.

#### *Active ownership*

The basic principles for active ownership are the same for the GPFG and the GPFN (see box 3.6). Norges Bank and Folketrygdfondet have formulated their own principles for active ownership, based on these basic principles. The ownership activities of Norges Bank and Folketrygdfondet are discussed in more detail in sections 3.4.2 and 3.4.3 respectively.

#### *Exclusion of companies*

According to the Fund's 2004 ethical guidelines, companies will be excluded from the investment universe of the GPFG if they are involved in production or undertakings that imply an unacceptably high risk of the Fund contributing to grossly unethical activities. Since 2002, the Ministry of Finance has excluded 48 companies, based on recommendations from the Council on Ethics for the GPFG. The 2004 ethical guidelines were replaced on 1 March 2010 when new guidelines for responsible investment practice were introduced, including guidelines for observation and exclusion from the GPFG. See section 4.6 for a more detailed discussion. The new guidelines continue the exclusion mechanism for companies that produce specific products and companies that are responsible for or contribute to grossly unethical behaviour.

The Ministry of Finance has adopted the principle that a Nordic company owned by both the GPFN and the GPFG shall be removed from the investment universe of both funds if the Ministry decides to exclude the company. This is established in Report no. 24 (2006–2007) to the Storting and article 5.4.1 of the supplementary guidelines for the management of the GPFN. On these grounds, the Ministry of Finance has decided to exclude one company from GPFN.

The basis for exclusion of companies is discussed in more detail in section 3.4.4 below.

#### *On investments in areas affected by war and conflict*

In Report no. 20 (2008–2009) to the Storting, the Ministry discussed issues related to the application of the ethical guidelines when companies operate in areas affected by war and conflict. Companies' activities in such areas pose particular chal-

lenges. It will sometimes be the case that a company makes a positive contribution to the population of states affected by war and conflict. Companies may for example maintain economic activity, provide jobs, produce necessities or in some cases provide a certain degree of protection or social services, such as schools or medical services. At the same time, high levels of conflict often entail a higher risk of human rights violations such as forced labour and attacks on civilians, often linked to use of local security forces.

In 2009, the UN Global Compact initiated a project to establish clearer guidelines for companies with activities in areas affected by war or conflict. The guidelines are being prepared by a broad-based group of organisations, companies and investors in which the Ministry of Finance and the Council on Ethics are involved. The objective of the project is to provide guidelines for companies and investors on what can be regarded as responsible corporate practice in conflict areas. The Ministry of Finance and the Council on Ethics have presented the project to Norwegian non-governmental organisations and will endeavour to take into account comments made by these.

The Ministry of Finance will continue to follow this project until the planned launch at the Global Compact Leaders' Summit in June 2010. The new guidelines shall address the particular challenges companies face in conflict-affected areas and thus go further than the Global Compact's principles discussed in box 3.6. It is expected that these principles will be followed by companies that have joined the Global Compact and by investors that have adopted the UN Principles for Responsible Investment (PRI). The guidelines will emphasise the dependence between companies' profitability and long-term returns and how they handle the type of risk entailed by operations in war and conflict areas.

It is the Ministry's view that it is positive that the guidelines are prepared in consultation with representatives of companies, investors and organisations. This increases the likelihood of the guidelines being recognised and adhered to.

### **3.4.2 The ownership activities of Norges Bank**

Norges Bank is required to take good corporate governance and environmental and social issues into account in its operative management of the GPFG (see the discussion of the new guidelines for Norges Bank's work on responsible management and exercise of ownership rights in section

### **Box 3.6 Basic principles for the exercise of ownership**

The principles governing the exercise of ownership rights as part of the management of the Government Pension Fund are based on the UN Global Compact, the OECD Principles of Corporate Governance and the OECD Guidelines for Multinational Enterprises. These international principles define norms for good corporate governance and impose requirements concerning responsible environmental and social corporate practices. Norges Bank and Folketrygdfondet have defined their own principles for their exercise of ownership rights in keeping with these principles. In 2006, the UN published a set of principles aimed at investors: the «Principles for Responsible Investment» (PRI). The PRI are based on factors linked to corporate governance and environmental and social conditions affecting financial returns, and facilitates accounting for these factors in fund management and active ownership. The Ministry of Finance, Norges Bank and Folketrygdfondet are all members of the PRI. The Ministry of Finance reports on compliance with the PRI in its management of the GPFG and the GPFN, partly on the basis of information provided by Norges Bank and Folke-trygdfondet respectively.

#### *The UN Global Compact*

The UN Global Compact defines a total of ten universal principles derived from the Universal Declaration of Human Rights, the ILO Declaration on Fundamental Principles and Rights at Work and the Rio Declaration on Environment and Development. The principles are general in nature and state that businesses should respect human rights and not be complicit in human rights violations, should uphold the freedom of association and collective bargaining, and eliminate all forms of forced and compulsory labour, child labour and discrimination with respect to employment and occupation, support a precautionary approach to environmental challenges, promote greater environmental responsibility and the development and diffusion of environmentally friendly technologies, and work against all forms of corruption, including extortion and bribery.

Some 6,700 companies and organisations in more than 130 countries have joined the UN Global Compact. The members are encouraged to report annually on their compliance with the principles.

#### *OECD Principles of Corporate Governance*

These principles are very extensive and mainly address the basis for effective corporate governance, the rights of shareholders and key ownership functions, the equitable treatment of shareholders, transparency and disclosure, and the responsibilities and liabilities of boards of directors.

#### *OECD Guidelines for Multinational Enterprises*

These guidelines are voluntary principles and standards for responsible business practices in different areas in accordance with laws applicable to multinational companies. The OECD guidelines for multinational companies represent the only multilaterally recognised and detailed regulatory framework that member states are obliged to promote. They contain recommendations on a number of matters, including public disclosure of company information, working environment and employee rights, environmental protection, combating bribery, consumer interests, the use of science and technology, competition, and tax liability.

#### *The UN Principles for Responsible Investment*

The UN Principles for Responsible Investment are an initiative in partnership with the United Nations' Environment Programme Finance Initiative and the UN Global Compact. The initiative is aimed at the owners of assets, asset managers and their professional service partners, all of whom are encouraged to sign the principles. The principles can help raise financial market awareness in areas that need protection, as part of the work to ensure satisfactory, long-term corporate wealth creation. The principles cover aspects linked to being a responsible and active owner by taking environmental, social and corporate governance issues (ESG) into account in asset management and the exercise of ownership. Integration of this kind will also have consequences for what type of information investors request from companies and what the companies are expected to report on. The members of PRI have a duty to report on their compliance with the principles on an annual basis.

4.6). The Bank shall integrate the considerations of good corporate governance and environmental and social issues into its investment activities, in line with internationally recognised principles for responsible investment. These considerations shall be integrated in accordance with the Fund's investment strategy and role as financial manager. In executing its management assignment, the Bank shall give priority to the Fund's long-term investment horizon and that they are broadly placed within the markets included in the investment universe.

Norges Bank's ownership principles were revised in 2009. The principles are based on internationally recognised, global standards, such as the OECD Principles of Corporate Governance and Guidelines for Multinational Enterprises and the UN Global Compact. They are complemented by Norges Bank's guidelines for voting and Norges Bank's expectations documents on how portfolio companies should deal with child labour, climate change and water management. Norges Bank is a founding member of the UN Principles for Responsible Investment (PRI). Both the Ministry of Finance and Norges Bank have signed the PRI, and have a duty to evaluate compliance with the principles each year. The principles are described in more detail in box 3.6.

#### *Focus areas in the exercise of ownership*

During the course of 2009, Norges Bank has refined and strengthened its active ownership activities. Norges Bank has focused on six strategic priority areas in particular:

- equal treatment of shareholders
- shareholder influence and board accountability
- well-functioning, legitimate and efficient markets
- children's rights
- climate change
- water management

Good corporate governance is necessary for the development of profitable businesses. It safeguards shareholders' rights and ensures a fair distribution of returns. The equality of shareholders and shareholder influence is therefore central to Norges Bank's corporate governance activities. The focus area «well-functioning, legitimate and efficient markets» encompasses fundamental questions about the way markets work as well as issues concerning good corporate governance. The bank has been active in efforts to improve

market standards, including liquidity and transparency in the market for covered bonds in Europe. Norges Bank has also focused on environmental and social factors that influence companies' business environments and development, and thus also the Fund's assets. The priority areas climate change, water management and children's rights were selected on this basis.

Water management was one of two new focus areas for Norges Bank in 2009. The second was the promotion of well-functioning and efficient financial markets.

#### *Corporate governance instruments*

The tools at Norges Bank's disposal in its corporate governance efforts are linked to the bank's position as owner of many companies. Shareholders' primary means of expressing their opinion is by voting at annual general meetings. Norges Bank publishes each individual vote and has established principles for voting. Norges Bank is working actively to contribute to more efficient processes for global voting, and aims to vote at all the annual general meetings of companies the Fund has holdings in.

Other tools Norges Bank uses include dialogue with individual companies, collaboration with other investors, participation in international networks and organisations, input to regulatory authorities, research, and public communication of opinions and expectations.

When choosing between several possible instruments. Norges Bank also considers their expected efficiency. Sometimes it is most expedient to strive to exert an influence through regulations, as these have an impact on all the companies in a market sector. In other cases, change can be achieved through dialogue with one or more companies. There has been an increase in this type of activity.

#### *Voting and shareholder proposals*

Norges Bank's principles for good corporate governance entail that the chairman of the board shall be independent of the company's management. One of the board's main tasks is appointing and if necessary, replacing the chief executive. The board shall contribute to long-term strategy and value creation in addition to monitoring the company's activities and risk. An independent chairman is a prerequisite for the board's ability to carry out these tasks and monitor the management.

### **Box 3.7 New focus areas in 2009: Water management and well-functioning markets**

#### *Better water management in companies*

Norges Bank has identified seven sectors that are particularly exposed to risks associated with limited water supplies: agriculture, mining, cellulose and paper, pharmaceuticals, water supply, power generation and the food industry.

Many companies in these high-risk sectors lack a proper water management policy on how to carry out and report on risk assessments related to water. Norges Bank describes its expectations concerning companies' water management resources in the document NBIM Investor Expectations for Water Management.

Norges Bank is the main sponsor of the CDP Water Disclosure – an initiative launched in December 2009 to increase the availability and quality of information on companies' water management.

#### *Well-functioning markets*

Together with a number of other major investors, Norges Bank established the Covered Bond Investor Council (CBIC) to improve liquidity and information in the market for covered bonds, after the financial crisis had undermined investor confidence in these kinds of securities.

A well-functioning covered bond market is crucial for banks' long-term financing ability, and the financing of mortgages and the public sector in Europe.

The financial crisis undermined market confidence in the safety of these bonds, and liquidity premiums on the bonds rose. In 2009 Norges Bank and other CBIC investors therefore worked to increase the available information about the various covered bond programmes in Europe. CBIC recommended the establishment of common minimum standards for European covered bonds.

Norges Bank also participates in a number of broad initiatives to promote greater transparency and better reporting. Norges Bank believes that the transparency of payment flows is essential for well-functioning financial markets. To this end, the Bank has provided feedback on a project organised by the International Accounting Standards Board to establish global accounting standards for the industries engaged in extraction of oil, gas and minerals. The objective of these accounting standards is that companies in the extractive industries report capital paid to authorities on a country-by-country basis. The Ministry of Finance expects that Norges Bank will continue to support these and similar initiatives.

In 2009 Norges Bank voted against candidates for chairman in companies when such candidates were also the chief executive. For the first time, the bank proposed amendments to the articles of association in five U.S. companies to prevent the same person being both chairman and CEO.

The independence of the board was also an issue in European markets like Germany and France, and in Japan. There was increased pressure from international and local investors for greater independence in Japan, where with few exceptions, the board of directors tends to consist of members of the company management.

A large number of the environment-related shareholder proposals were related to greenhouse gas emissions and how companies should set targets for reducing emissions. Norges Bank maintained the policies of 2008 and supported proposals where the board could specify its targets.

#### *Cooperation with other investors*

Norges Bank cooperates with other investors in efforts to improve corporate governance standards. Cooperation means results can be achieved more efficiently. Norges Bank and other investors sent a joint statement on equitable treatment and protection of shareholders to the standard setters and government authorities in the Netherlands and Sweden. Norges Bank was represented by another European investor at general meetings in Taiwan, where the lack of effective voting in companies was probed.

Norges Bank has regular dialogue with other government institutions to exchange information and experiences. The Bank discussed voting, capital increases, board changes and other topics in 2009.

### *Dialogue with companies*

Norges Bank prepared documents detailing its expectations of how companies deal with climate change and water management in 2009. The Bank was in dialogue with 77 companies concerning children's rights in the cocoa, seed production, textiles, mining and steel sectors. Norges Bank conducted dialogue on climate change with 24 companies in the energy and cement industries and on water management with 14 companies in the automotive, construction, mining, oil and gas, retail and media industries.

In its dialogues on corporate governance, Norges Bank raised the issues of equitable treatment of shareholders, shareholder influence and the board's roles and responsibilities. The Bank urged the companies to appoint an independent chairman of the board, and addressed cases where minority shareholders' rights were not safeguarded. Examples of this are discrimination in connection with acquisitions, as well as differences among shareholders concerning their right to vote and receive dividends.

### *Input to the regulatory authorities: improve market standards*

Getting the authorities and other standard setters to raise corporate governance requirements makes it easier to hold the board and management accountable for their decisions and strengthen the protection of shareholders' rights. This is an effective way of safeguarding the Fund's assets in the long term.

In 2009 Norges Bank worked to raise the standards for management and monitoring of companies in the United States, the United Kingdom, the Netherlands, Brazil, Sweden and China. The Bank also participated in the preparation of the new global principles for corporate governance through the investor network International Corporate Governance Network (ICGN).

In the United States, Norges Bank worked to ensure independent board directors and increased competition for board positions. In the United Kingdom, Norges Bank suggested that board members should be subject to re-election each year. The Bank supported demands to the Hong Kong Stock Exchange for increased transparency in project assessments and environmental impact analyses of exploration and extraction companies. In the Netherlands, Brazil, Sweden and Hong Kong, Norges Bank emphasised equita-

ble treatment and protection of shareholders, particularly in connection with acquisitions. The rules on the Stockholm Stock Exchange were changed in October in line with recommendations from Norges Bank and other investors, so that buyers of companies must pay the same price for shares with reduced voting rights as for shares with increased voting rights.

### *Sector collaboration*

In some cases, it might be most expedient to conduct dialogue with several companies in the same sector to ensure an impact on an entire industry. In June 2009 the companies Monsanto, Bayer, Syngenta and DuPont announced that they had entered into a partnership to combat child labour in the seed production industry. This collaboration was initiated by Norges Bank. The industry standard CropLife Position on Child Labor in the Seed Supply Chain was published by a global industry organisation for the plant research industry. The standard sets out the common efforts the companies will make to eliminate the use of child labour by suppliers and other partners in the seed sector. The Bank will continue its dialogue with the four companies.

### *Following up individual companies*

Only in exceptional cases does Norges Bank make public its communication with a company. In October 2009, the Bank sent an open letter to the board of Volkswagen AG, criticising the company for providing insufficient information about transactions with its parent company Porsche SE, and the company's owners: the Porsche and Piëch families. These families control Porsche SE and thus also have indirect control of Volkswagen AG.

It is important, both as a principle and financially, for Norges Bank to prevent controlling owners from enriching themselves at the expense of the other shareholders.

Within the focus areas children's rights, climate change and water management, Norges Bank has issued dedicated expectations documents for company behaviour. In these documents the Bank describes how companies should manage the risks associated with these factors. Norges Bank's objective is to ensure that the companies create positive long-term financial value with acceptable social and environmental repercussions. The documents are used both as a starting point for mapping and analysis of various sec-

tors and as a basis for feedback and dialogue with individual companies. The public has the opportunity to provide input to the formulation of expectations documents through a consultation process, introduced in the wake of the evaluation of the ethical guidelines in 2009.

Norges Bank is introducing systematic reporting on how companies in the portfolio meet the expectations concerning the management of risks associated with climate change, water management and children's rights. The first report of this type assessed the extent to which 430 companies satisfied Norges Bank's expectations concerning children's rights in 2008. On the basis of the findings in the report, the Bank contacted the companies that did not have child labour policies and suggested how their protection of children's rights could be improved. In a new report on these companies' behaviour one year later, Norges Bank found that 33 percent of the 135 companies that were contacted had improved their performance and reporting on child labour and children's rights.

The number of companies that disclose their policy on child labour had increased by 62 percent, while the number of companies that say they are considering the risks associated with child labour had more than tripled. There was also an increase in the number of companies that reported preventive and corrective action plans related to child labour, both in their own activities and in the supply chain. These improvements were most evident within cocoa production and textiles retail. Mining and steel companies had an increasing number of policies on child labour. Transparency improved in all sectors.

The article in chapter 9 of this report discusses use of expectation documents in more detail.

### **3.4.3 The ownership activities of Folketrygdfondet**

The Executive Board of Folketrygdfondet has laid down guidelines for active ownership in the GPFN. The guidelines are based on the Norwegian Code of Practice for Corporate Governance and the UN Global Compact, as well as the OECD principles for corporate governance and for multinational companies. Folketrygdfondet has formally adopted and signed the UN-initiated Principles for Responsible Investment (PRI). These principles are described in more detail in box 3.6.

At the end of 2009, Folketrygdfondet decided to support the Carbon Disclosure Project (CDP).

Through its participation in the CDP, Folketrygdfondet will have access to information about companies' climate strategies that can be used to evaluate the way different companies handle potential risks and opportunities linked to climate change and how the management deals with these issues.

The overarching objective of Folketrygdfondet's active ownership is to safeguard the financial interests of the Fund. In order to help promote long-term wealth creation, Folketrygdfondet has defined ethical principles for investment activities that have been included in Folketrygdfondet's guidelines for active ownership.

#### *Key aspects of active ownership*

Good corporate governance and management promotes the rights of owners and other stakeholders and also ensure that company management mechanisms work as intended. Important principles underpinning Folketrygdfondet's corporate governance efforts are:

- ensuring the establishment of clear ethical principles and ethical guidelines
- ensuring the equitable treatment of shareholders
- safeguarding the rights of shareholders and their scope for promoting corporate governance
- ensuring that the appointment of directors is well prepared, related to defined competency requirements and vested in the shareholders
- ensuring the establishment of remuneration models that are goal-oriented and prudent, and which do not impair shareholder value.

In December 2007, the Executive Board of Folketrygdfondet adopted ethical principles for the management of the GPFN based on the ethical principles that were stipulated in 2004 (see the discussion in Report no. 16 (2007–2008) to the Storting).

Folketrygdfondet submits a report on its active ownership each year, normally in the autumn. The report gives an account of Folketrygdfondet's ownership activities and addresses, among others things, the following:

- special matters deliberated at annual general meetings
- relevant matters Folketrygdfondet has raised with the companies
- the number and type of offices held by employees of Folketrygdfondet

In order to safeguard shareholder value, Folketrygdfondet deems it important to monitor the mana-

gerial salary policies of the companies. This involves evaluating whether managerial salary schemes are structured in such a manner as to actually contribute to more effective and performance-oriented corporate management, etc. Folketrygdfondet also examines any option schemes, and what these imply in terms of value transfer from the shareholders to companies' management teams.

#### *Information gathering and company dialogue*

In order to ensure the most objective and precise assessment of companies' ethical attitudes and actions, Folketrygdfondet gathers information from publically accessible sources such as annual reports, the media and the Internet, and information provided directly by the companies.

Folketrygdfondet is currently involved in the Bærekraftig Verdiskaping (Sustainable Value Creation) project with the largest investors in Norway. This is an informal investor collaboration to promote sustainable development and long-term value creation in Norwegian listed companies. This collaboration is increasing the availability of both the amount and breadth of information with potential relevance for the GPFN's long-term returns (see the more detailed presentation below).

In 2009, Folketrygdfondet allocated more resources to the work on responsible investment, especially on the analysis side. In this way, Folketrygdfondet will be able to perform more comprehensive analyses of companies' governance, human rights, ethics, environmental efforts and other factors that may affect long-term value creation. This has led to these issues being broached in meetings with the management of the companies to a much greater degree than previously.

In 2009 Folketrygdfondet has been in direct dialogue with several companies in order to influence them to improve their public reporting on environmental and corporate social responsibility issues. Investors ought to have access to information on companies' efforts to reduce their social and environmental risks. Folketrygdfondet has pointed out to the companies that they want more extensive reporting within these areas and will continue to follow up this matter in 2010.

In its dialogue with one portfolio company, Folketrygdfondet has called for guidelines for compliance with human rights and labour rights for one of the company's subsidiaries. The company responded that it will consider preparing clear guidelines for this subsidiary. Folketrygdfondet

plans to follow up this commitment through further dialogue in 2010.

#### *Instruments*

Folketrygdfondet's ethical guidelines apply to the entire investment portfolio. In following up the ethical principles, Folketrygdfondet attaches particular importance to assessments of whether the company bases its business on actions or omissions that involve human rights violations, child labour, environmental damage, corruption and other violations of fundamental ethical norms. Different methods are used in the follow-up of the various sub-portfolios.

Folketrygdfondet's investment philosophy is based on the view that active ownership is the most appropriate instrument for following up the Norwegian equity portfolio. If a situation arises that gives grounds to query the conduct of a company in which the Fund is invested, the issue shall be raised with the company. In this way, an attempt is made to influence the company to correct unacceptable practices. The ownership of fixed-income securities does not provide the same ownership rights as equities and thus neither do they entail the same ownership responsibilities. Nevertheless, Folketrygdfondet raises ethical and other issues linked to its fixed-interest investments. If violations of Folketrygdfondet's investment principles are found, relevant steps will be considered and initiated. One possible action is active ownership through dialogue. For Norwegian companies in which the Fund has both equity and fixed income investments, a slightly broader set of tools is available in the contact with the companies, such as voting at annual general meetings.

As far as investments in Nordic equities or fixed-income securities are concerned, Folketrygdfondet follows the decisions made by the Ministry of Finance on the basis of recommendations by the Council on Ethics for the GPFG. This means that if the Ministry of Finance decides that the GPFG is not to invest in particular companies, these companies are also excluded from the investment universe of the GPFN. In keeping with this system, Folketrygdfondet divested from a Nordic company that produces tobacco.

#### *Following up individual companies*

Folketrygdfondet continuously monitors the equity and fixed-income portfolio by means of Internet searches in sources around the world. This



means that over 80.000 sources are monitored and more than half a million new items are scanned each day. The searches are systematic, and Folketrygdfondet is notified if companies in the portfolio are linked to key ethical topics such as corruption, human rights, child labour and environmental issues. The purpose is to monitor whether the companies are complying with their own guidelines. A similar monitoring system has also been established for the investments in bonds.

#### *Participation in international initiatives and collaboration with other investors*

Folketrygdfondet adopted and signed the UN Principles for Responsible Investment (PRI) in 2008. By signing the PRI, the organisation commits to a «comply or explain» approach. Folketrygdfondet's Ownership Report for 2009 describes how Folketrygdfondet follows up the UN principles.

At the end of 2009 Folketrygdfondet decided to join the Carbon Disclosure Project (CDP) 2010. CDP is an independent not-for-profit organisation that maintains the largest database of corporate climate change information in the world, including measurements and reporting of emissions of greenhouse gases. The target group of the CDP is listed companies, but investors also support the CDP's objectives. Each year, the CDP conducts a survey on climate change and emissions of greenhouse gases among the largest listed companies in the world. The information the companies provide can be used to evaluate risks and opportunities linked to climate change and how the management deals with these issues in companies in which Folketrygdfondet has a holding or wishes to invest.

In 2009, Folketrygdfondet took part in the Bærekraftig Verdiskaping (Sustainable Value Creation) project for the second time. The objective of this project is to actively influence Norwegian companies listed on the stock exchange to develop sustainably, as this is an important prerequisite for long-term value creation. Through the project, the investors sent out a questionnaire to all the companies listed on the main index of the Oslo Stock Exchange. The companies were asked to answer questions about whether they have guidelines covering key elements of corporate responsibility and sustainability, to whom these guidelines apply, where they are anchored, how they are implemented, and reporting on compliance. The survey also inquired about the board's responsibilities in these areas. Good corporate governance is

an important element of ensuring sustainable value creation.

The questionnaire was sent to 73 of the largest companies on the Oslo Stock Exchange in 2009, and 34 companies (47 per cent) responded. The survey revealed wide variation in how far the companies have come in their efforts to ensure responsible and sustainable business operations. Health, safety and environment (HSE) and corporate responsibility are areas that most companies deal with on the board level, and most companies believe they have board members who have specialist knowledge in these fields. HSE is also the area where most companies have some kind of management system, control routines, defined targets, and where non-compliance affects the management's pay. Human rights and labour rights are the areas where the companies on aggregate score the lowest. The survey also revealed that the companies score relatively highly on «guidelines» and «board responsibility», but do less well on «reporting and communication».

The results from the second round of the questionnaire showed a positive development and progress among the companies compared with 2008. For example, the four companies that did not respond to the questionnaire in 2008 chose to respond in 2009. In addition, several companies achieved markedly better scores in 2009, compared with 2008, and in 2009 there were no companies with scores in the lowest quartile, compared with three in 2008. This suggests that the project is increasing awareness of and actions linked to issues such as good corporate governance, ethics and environmental measures among Norwegian companies.

The Bærekraftig Verdiskaping (Sustainable Value Creation) project has helped initiate a number of positive processes. The purpose of this survey is not only to map the status of the companies' efforts in this area, but also to help ensure that companies are encouraged to improve their own work linked to sustainable value creation. The findings from 2009 will be incorporated into Folketrygdfondet's ongoing analysis of the companies it invests in and will form the basis for dialogue with the management of the companies.

#### **3.4.4 Reporting on the work linked to exclusion of companies from the GPF**

##### *Introduction*

According to the guidelines for observation and exclusion from the GPF introduced on 1 March

Table 3.5 Overview of companies excluded on grounds of production of tobacco and certain types of weapons

Product	Date	Company
Anti-personnel mines	26 April 2002	Singapore Technologies Engineering
Cluster munitions	31 August 2005	Alliant Techsystems Inc. General Dynamics corporation. L3 Communications Holdings Inc. Lockheed Martin Corp. Raytheon Co..
	31 December 2007	Hanwha Corporation
	31 December 2008	Textron Inc.
	30 November 2009	Poongsan Corporation New
Nuclear arms	31 December 2005	BAE Systems Plc. Boeing Co.. EADS Co1. EADS Finance BV. Finmeccanica Sp. A.. Honeywell International Corp. Northrop Grumman Corp.. Safran SA..
	31 December 2007	Gen Corp. Inc. Serco Group Plc.
Sale of weapons and military material to Burma	28 February 2009	Dongfeng Motor Group Co Ltd.
Production of tobacco	31 December 2009	Alliance One International Inc. Altria Group Inc. British American Tobacco BHD. British American Tobacco Plc. Gudang Garam tbk pt. Imperial Tobacco Group Plc. ITC Ltd. Japan Tobacco Inc. KT&G Corp. Lorillard Inc. Philip Morris International Inc. Philip Morris Cr AS. Reynolds American Inc. Souza Cruz SA. Swedish Match AB. Universal Corp VA and Vector Group Ltd.

<sup>1</sup> The company EADS was initially excluded on 31 August 2005 on the grounds of its involvement in the production of cluster munitions. EADS no longer produces cluster munitions; however, the company is involved in production of nuclear arms, and in the light of this, the Ministry of Finance upheld the company's exclusion on 10 May 2006.

Source: Ministry of Finance

Table 3.6 Companies excluded on grounds of conduct

Grounds for exclusion:	Date	Company
Complicity in serious or systematic human rights violations	31 May 2006	Wal-Mart Stores Inc. and Wal-Mart de Mexico SA de CV
Severe environmental damage	31 May 2006	Freeport McMoRan Copper & Gold Inc.
	31 October 2007	Vedanta Resources Plc.. Sterlite Industries Ltd. Madras Aluminium Company
	30 June 2008	Rio Tinto Ltd. and Rio Tinto Plc.
	30 November 2008	Barrick Gold Corp
	31 October 2009	Norilsk Nickel
Gross violations of fundamental ethical norms	31 August 2009	Elbit Systems Ltd.

Source: Ministry of Finance

### **Box 3.8 Criteria for exclusion from the GPFG**

#### *Product-based exclusion*

The guidelines establish that the assets in the Fund may not be invested in companies that, themselves or through entities they control:

- produce weapons that violate fundamental humanitarian principles in their normal use
- produce tobacco
- sell weapons or military material to states mentioned in article 3.2 of the supplementary guidelines for the management of the Fund, currently: Myanmar (Burma).

The Revised National Budget for 2004 provides an exhaustive list of weapons covered by the product-based exclusion criteria: chemical weapons, biological weapons, anti-personnel mines, undetectable fragmentation weapons, incendiary weapons, blinding laser weapons, cluster munitions and nuclear arms. The Fund shall not invest in companies that develop or produce key components for these types of weapons.

In Report no. 16 (2007–2008) to the Storting, the Government ruled that the GPFG shall not invest in companies that sell weapons or weapon technology to regimes on the list of nations whose government bonds the Fund is prohibited from investing in. At present, this means that the Fund must not invest in companies that sell weapons to Burma.

In Report no. 20 (2008–2009) to the Storting, the Ministry of Finance proposed excluding tobacco producers from the GPFG. The proposal was supported by the Storting. The new product-based exclusion criterion is limited to tobacco products and does not include associated products such as filters and flavour additives or the sale of tobacco products. All companies that grow tobacco plants or process tobacco into end products shall be excluded regardless of how large or small a share tobacco production represents of the company's overall operations. In keeping with this, the Council on Ethics made a recommendation on 22 October 2009 to exclude 17 companies from the GPFG. One of these companies was also in the portfolio of the GPFN and has also been excluded from that fund.

Altogether, the Ministry of Finance has excluded 37 companies from the Fund on the basis

of the product-based criteria: 19 companies have been excluded on the basis of production of weapons that violate fundamental humanitarian principles in their normal use, 17 companies have been excluded on grounds of tobacco production, and one company has been excluded on grounds of sale of military material to Burma.

The Council on Ethics routinely assesses whether the grounds for excluding a company still exist and may, in light of new information, recommend that the Ministry of Finance reverse an exclusion ruling. In 2009, on the basis of the Council on Ethics' recommendation, the Ministry of Finance has reversed the exclusion of the companies Thales SA. and United Technologies Corp. These companies had been excluded on grounds of production of cluster weapons and nuclear arms respectively.

#### *Conduct-based exclusion*

Companies shall be excluded from the Fund if their acts or omissions imply an unacceptably high risk of contribution to:

- serious or systematic human rights violations, such as, for example, murder, torture, deprivation of liberty, forced labour, the worst forms of child labour and other child exploitation
- serious violations of individuals' rights in situations of war or conflict
- severe environmental damage
- gross corruption
- other particularly serious violations of fundamental ethical norms

All in all, 11 companies have been excluded from the GPFG pursuant to these criteria. Three of the companies were excluded on grounds of complicity to serious or systematic human rights violations, seven companies were excluded because they are causing severe environmental damage, and one company was excluded on grounds of other particularly gross violations of fundamental ethical norms. There may be grounds to exclude some companies on the basis of several criteria, such as the company Vedanta Resources, for example.

Box 3.8 (cont.)

In November 2007, the Council on Ethics recommended exclusion of Siemens AG on grounds of gross corruption. In March 2009, the Ministry of Finance decided to place the company on a watch-list for four years, to allow the Council on Ethics and Norges Bank to monitor the developments in the company. If new instances of corruption are detected in the company, the threshold for exclusion will be very low. The Council on Ethics and Norges Bank submit an annual report to the Ministry of Finance on developments in the company. As a result of the revision of the ethical guidelines, the system for observing companies has been formalised. The

Council on Ethics can now recommend that the Ministry of Finance put a company under observation, and the Ministry of Finance can choose to put a company on the watch-list regardless of whether the Council on Ethics recommends exclusion or observation.

In 2009, the Ministry of Finance reversed the exclusion of the company DRD Gold Ltd. on the basis of the Council on Ethics' recommendation. DRD Gold Ltd. had been excluded because it was depositing the tailings from its mining activities into a river, but has now been reinstated as the company has sold the mine in question.

2010, companies shall be excluded if they are complicit in or themselves responsible for grossly unethical activities. The specific criteria for exclusion on the basis of products and exclusion on the basis of conduct have been continued from the ethical guidelines for the GPFG from 2004. The criteria are shown in box 3.8. As per 15 March 2010, the Ministry of Finance has excluded a total of 48 companies on the basis of recommendations from the Council on Ethics. These companies are listed in tables 3.5 and 3.6.

*The Council on Ethics' work on product-based exclusion*

The criteria for product-based exclusion are such that all companies with production covered by the guidelines shall be excluded from the Fund. The Council on Ethics has established a monitoring system to identify these companies. An external consultant monitors the Fund's portfolio and the companies that have been excluded from the Fund on an ongoing basis and reports each quarter on companies that may have activities in violation of the criteria. The Council is also collaborating with other investors on a consultancy project to map which companies produce cluster munitions. The Council on Ethics investigates all the companies where there are grounds to believe that the business is actually in violation of the guidelines. Normally, the Council on Ethics contacts the companies if there is reason to believe that they are engaged in production in violation of the guidelines. However, the companies that have been excluded on the basis of tobacco production

were not contacted, as the companies were classified as tobacco companies in the Fund's benchmark, and because the companies described their tobacco production on their websites.

If a company confirms the information invoked by the Council, the Council will render an exclusion recommendation. Companies that do not reply when approached are recommended for exclusion if the Council's documentation shows that there is a high probability that the company has products that violate the exclusion criteria.

This procedure offers a reasonable degree of assurance that companies producing products that violate the criteria in the guidelines will be excluded from the Fund. Nevertheless, it cannot be guaranteed that all companies will at all times be correctly screened by the Council's monitoring system.

*The Council on Ethics' work on conduct-based exclusion*

Whereas product-based exclusion is largely a matter of proving that a company makes a specific product, it is more difficult to determine whether the preconditions for conduct-based exclusion are met. It is also harder to find credible evidence that supports serious allegations of unacceptable aspects of a company's operations. The Council on Ethics therefore conducts its own investigations to identify and assess companies that may be involved in human rights violations, environmental damage, corruption and other violations of ethical norms.

A number of external consultants carry out regular Internet searches for news items about all

the companies in the portfolio. These searches are done in several languages, including English, Spanish, Russian and Mandarin. The Council on Ethics receives monthly reports about companies accused of complicity in human rights violations, or in corruption, severe environmental damage and other factors encompassed by the ethical guidelines. Among these, the Council selects the most serious cases for further investigation.

In its selection of cases, the Council on Ethics puts emphasis on how serious the norm violations are, whether a company is accused of several counts of unethical conduct, whether it is likely that such conduct will continue, and the scope for documenting the conduct of which the company is accused, etc. The intention is to identify companies where there is an unacceptable risk that violations of the ethical guidelines are taking place and are expected to continue. In many cases, several companies are accused of similar norm violations in the monthly reports. In order to identify the most serious norm violations, the Council on Ethics considers these cases together. In some cases, the Council on Ethics even reviews entire sectors in the portfolio.

Weight is attached to a number of factors in the more detailed assessment of a company. The degree of severity of the norm violation is reassessed, and the Council also investigates whether the violation is systematic and whether norm violations have been reported in several of the company's activities. The Council also evaluates how serious the norm violation is compared with the conduct of other companies with similar activities and compared to other companies in the same country or region. It is essential that the norm violations can be documented and that there is factual evidence to support the accusations levelled at the company. Further, there must be an unacceptable risk that the norm violations will continue. In many cases, closer investigations reveal that the accusations are less serious than initially assumed. They may be old events that have been reported again, or the company may already have implemented measures to remedy the situation. In such cases, the Council does not pursue the matter unless new information is received suggesting that the company ought to be reassessed.

There is often a need for supplementary information to what is available from publicly accessible sources to shed more light on cases. In this work, the Council on Ethics makes use of consultancy firms, research institutions and non-governmental organisations, often based in the country

where the alleged violations of norms are taking place. This may involve fieldwork and assessments of documentation. The Council attaches considerable weight to ensuring quality and confidentiality in this work. In 2009, the Council on Ethics entered into a framework agreement with a consultancy that can provide assistance in more in-depth investigations of companies.

The Council on Ethics contacts companies it believes ought to be excluded and asks them to comment on the grounds on which the exclusion recommendation is based. The companies may also be asked to answer specific questions. The Council on Ethics gives priority to describing in detail the basis for the exclusion recommendation and providing thorough documentation. Any allegations made are supported by specific source references, often from several sources. When the Council on Ethics contacts companies, the company is provided with information about the ethical guidelines and the factors that, pursuant to the criteria in the guidelines, could lead to exclusion. In several cases, the Council has had meetings with companies that have wished to provide additional information.

It is unrealistic to expect to be able at all times to identify all companies that contribute to serious violations of norms worldwide. Although the Council on Ethics has now initiated a special news search for Asian companies, there is still limited access to information about companies from these emerging markets. With a view to improving its access to information, the Council also signed a framework agreement with a consultant with the competencies necessary to evaluate companies in these markets. It is nevertheless very demanding to gather concrete, reliable documentation from countries that do not practise transparent government administration or where it may be illegal or dangerous to spread information about companies' activities. Nor is it the case that a company can be excluded immediately on the basis of stories in the media, for example, even if they are serious and credible. It is essential that the ethical guidelines are implemented in a predictable and credible manner over time. This means that the Council on Ethics must be allowed sufficient time to complete processes and evaluations in relevant cases, and that the companies have to be given the opportunity to present their version of the matter, or to adopt the necessary measures. Only through such thorough processes will the ethical guidelines be able to have an impact on other investors, and thus make a difference beyond the direct effect on the Fund's own investments.

## 4 Further development of the management framework

### 4.1 Introduction

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The Ministry of Finance has laid down guidelines for Norges Bank's and Folketrygdfondet's management of the GPFG and GPFN, respectively. The guidelines describe the overarching investment limits in the form of benchmark indices and limits for active management. Furthermore, the guidelines contain qualitative provisions on risk management and reporting, along with rules for responsible investment practice. The Ministry's guidelines are framework- and principle-based, and require the manager to set more detailed internal rules.

The overall framework for the management of the GPFG and GPFN is given in the form of parliament acts, regulations and supplementary guidelines stipulated by the Ministry. Management agreements have also been entered into between the Ministry and Norges Bank and Folketrygdfondet. The framework is available on the Ministry's website ([www.government.no/spf](http://www.government.no/spf)).

Folketrygdfondet is audited by an external auditor appointed by the Ministry. The auditor also carries out certification assignments for the Ministry. These are independent controls to see whether Folketrygdfondet complies with the GPFN management rules stipulated by the Ministry.

Norges Bank's Supervisory Council is responsible for supervising that the rules for the Bank's operations are adhered to, including the rules the Ministry has stipulated for managing the GPFG. The Bank's external auditor also carries out assurance reviews. In this regard the Ministry has established a dialogue with the Supervisory Council on the preparation of such reports, see section 5.4.1 of Proposition no. 58 (2008-2009) to the Odelsting and section 3.3.2 in this report.

The Ministry works constantly to refine and develop the framework for the management of the Government Pension Fund in line with leading international practice. As explained in section 3.3 and below, several measures have been carried out over the past few years to strengthen the management of the Fund.

Section 4.2 explains the Ministry's work on stipulating new rules for the management of the GPFG. In this connection, the Ministry's fundamental view of the division of work and roles between the Ministry and Norges Bank is explained. Section 4.3 briefly reviews the Ministry's plans for revising the rules for the management of the GPFN. Section 4.4 discusses alternative organisational forms for the management of the GPFG, see Recommendation no. 93 (2008–2009) to the Odelsting in which the Standing Committee on Finance and Economic Affairs stated the opinion that it would be appropriate for the Ministry to further illuminate the benefits and disadvantages of the current organisation of the operational management responsibility within Norges Bank. Section 4.5 covers the legislative process the Ministry has initiated with the aim of changing the reporting and remuneration routines for Norges Bank's Supervisory Council, while section 4.6 presents new guidelines for responsible investment practice, see the discussion of the results of the evaluation of the ethical guidelines for the GPFG in Report no. 20 (2008–2009) to the Storting.

### 4.2 New rules for the management of the GPFG

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#### 4.2.1 Introduction

Report no. 20 (2008–2009) to the Storting referred to the fact that the Ministry has initiated a review of the rules for the GPFG. The aim of this review is to clarify the division of responsibilities and roles between the Ministry of Finance and Norges Bank, and place stricter requirements on regulation of the active management.

The Ministry of Finance circulated proposed new rules for comment on 31 August 2009. The proposal was largely based on the current framework, but in certain areas more detailed regulations were called for. This concerned inter alia the risk limits in active management and management, measurement and risk reporting requirements.

The new rules will gather the rules for the management of the Fund in a single document instead of being currently contained in the following documents:

- Regulation no. 1725 of 22 December 2005 regarding the management of the GPF, and
- supplementary guidelines for the management of the GPF, and
- the management agreement of 12 February 2001 between Norges Bank and the Ministry of Finance.

Key topics in the proposed new rules circulated for comment include:

- a requirement for Norges Bank to prepare a strategic plan for management of the GPF, and
- stipulation of supplementary risk-taking limits in active management above and beyond the current limit for expected relative volatility,

- limit the opportunity to use leverage,
- rules that will require Norges Bank to manage, measure and verify risk according to more parameters than is currently the case,
- a more extensive procedure for approving new instruments,
- rules for investments in real estate, and
- more extensive public reporting requirements.

The consultative comments from the Office of the Auditor General and Norges Bank revealed different views on how detailed the rules for the management of the GPF should be. In its consultative response the Office of the Auditor General expressed the opinion that the proposed rules would mean too much delegation to Norges Bank, and queried whether the Ministry could adequately meet its control, management and follow-up responsibilities the way the proposal was designed.

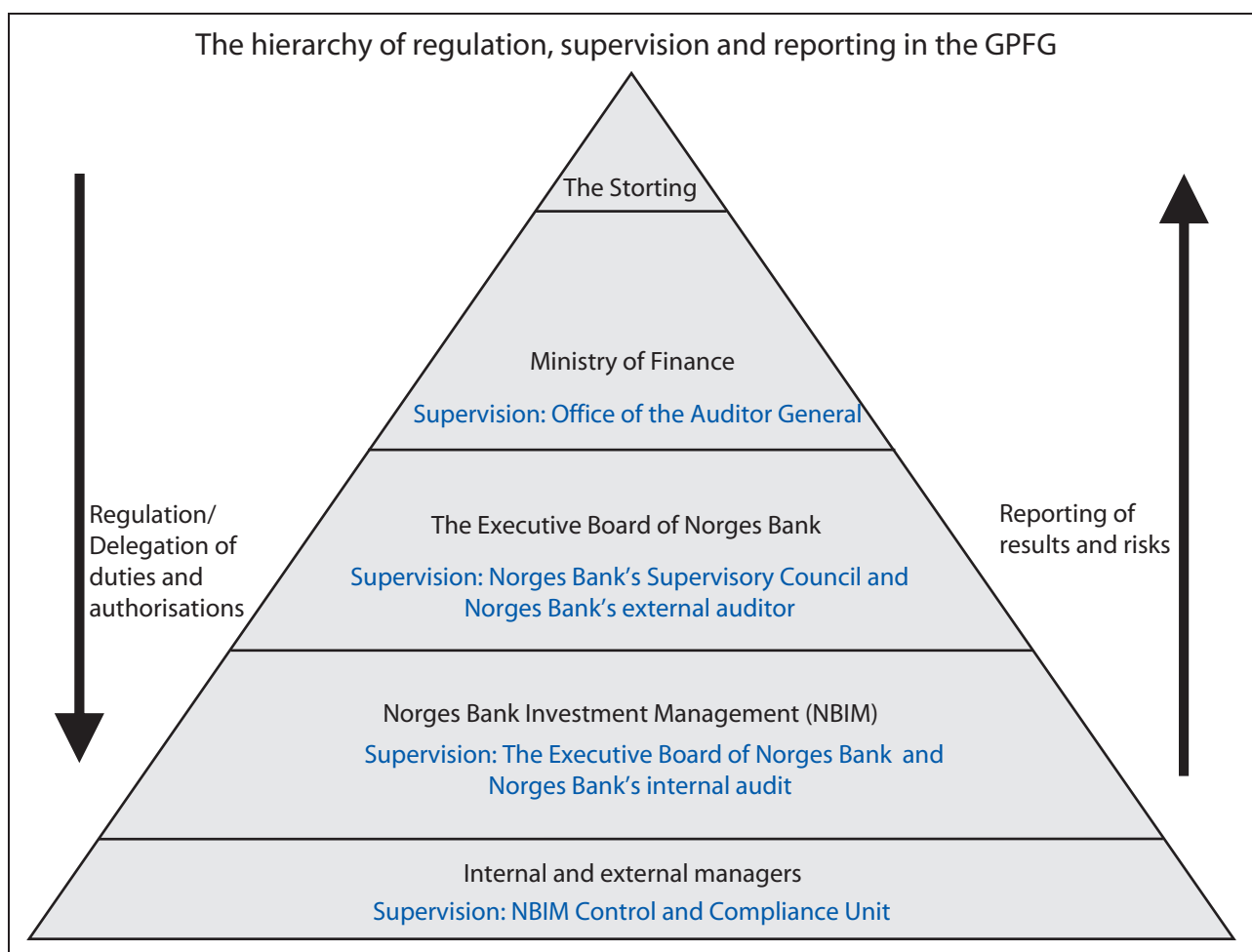


Figure 4.1 The hierarchy of regulation, supervision and reporting in the GPF

Source: Ministry of Finance

For its part Norges Bank argued that in certain areas the Ministry went too far in micro-managing the Bank's management. The Bank expressed the view that in order to be able to manage the Fund in a justifiable manner, the new rules should not be so detailed so as to make the role and responsibilities of the Executive Board unclear compared with the Ministry's exercise of ownership rights. In the Bank's view there is a risk that the Ministry will in practice assume the role of the Executive Board if the rules are too detailed.

As stated in Report no. 16 (2008-2009) to the Storting, the Ministry of Finance planned to let the new rules for the management of the GPFG enter into force on 1 January 2010. However, the Ministry has concluded that the Storting should be given the opportunity to discuss the division of responsibilities and roles between the Ministry of Finance and Norges Bank on a more principled basis before the new rules are finally adopted.

In the following, the regulation, reporting and supervision system related to the management of the GPFG is explained first, followed by the Ministry's fundamental view of the division of responsibilities and roles between the Ministry of Finance and Norges Bank. Section 4.2.4 outlines how the Ministry aims to specify these principles in new rules.

#### **4.2.2 Regulation, reporting and supervision concerning the management of the GPFG**

The regulation, supervision and reporting system concerning the management of the GPFG is illustrated in figure 4.1. Delegation of duties and authorisations descends through the system, while reporting of results and risks go upwards. Regulations and delegation authorisations will necessari-

ly be more detailed farther down the pyramid. The figure also specifies the bodies that supervise the individual levels.

In the Government Pension Fund Act, the Storting has given the Ministry of Finance responsibility for managing the GPFG. At the same time, the act requires the operational management to be discharged by Norges Bank, see section 2, second paragraph of the Pension Fund Act. The act requires the Ministry to stipulate further regulations for how the management is to be implemented, without the preparatory works providing further guidelines for the division of duties between the Ministry and Norges Bank. The Ministry has laid down regulations on Norges Bank's management of the GPFG. The Executive Board has established a separate operations area – Norges Bank Investment Management (NBIM) – to be responsible for the operational implementation of the management. The Executive Board has filled out the Ministry's overarching regulations through the establishment of principles for risk management in investment management and mandate and position instructions for the Executive Director of NBIM. The Executive Director of NBIM in turn lays down more detailed internal and external regulations and mandates for the operational execution.

Continual reporting takes place upwards in the system. Each level in the system has its own supervisory unit that receives reporting from, and exercises supervision of, the level below. The exception from this principle is that Norges Bank's Executive Board is subject to supervision from the Storting-appointed Supervisory Council, which also appoints the Bank's auditor. The responsibility of the individual bodies to establish regulations and supervision, control and reporting forms is shown in Table 4.1.



Table 4.1 GPFG – regulation, supervision and reporting

Body	Regulatory responsibility	Supervision form	Reporting
The Storting	Provides overall guidelines in the form of laws (Act on the Government Pension Fund and Norges Bank Act) and through the discussion of the Storting documents on the management of the Fund.	Receive and process reports to the Storting on the management of the Government Pension Fund, the Office of the Auditor General's report on the annual audit and control (Document no. 1) and the statement of the Supervisory Council on the supervision of the Bank. Appoints the Auditor General and Norges Bank's Supervisory Council.	Recommendations and legal enactments.
Office of the Auditor General		Management audit of the Ministry of Finance, see section 9, third paragraph of the Act relating to the Office of the Auditor General. Audit of the GPFG line item in the central government accounts, see section 9, first paragraph of the Act relating to the Office of the Auditor General. Monitors the Minister's exercise of authority, see section 2, fourth paragraph of the Norges Bank Act.	Submit report on the annual audit and control (Document no. 1) to the Storting.
Ministry of Finance	Provide specific rules concerning Norges Bank's management pursuant to sections 2 and 7 of the Act on the Government Pension Fund and establish regulations on risk management and internal control in Norges Bank.	Follow up investment strategy and financial results. Give feedback to the Supervisory Council on the design of certification assignments under the Bank's investment management. Use when necessary special consultants to follow up risk management etc. in Norges Bank.	Submit a report to the Storting on the management of the Government Pension Fund and the Financial Market Report in which the operations of Norges Bank are reviewed. Report each autumn to the Storting on the Fund in the National Budget
Norges Bank's Supervisory Council	Establishes accounting regulations for Norges Bank. Plans call for including the Bank's accounting regulations in a separate regulation issued pursuant to the Norges Bank Act, with effect from 1 January 2011.	Monitors the Bank's activities and ensures that the regulations governing the operations of the Bank are observed, see section 5 of the Norges Bank Act. Selects external auditor for Norges Bank and establishes the Bank's budget and accounts.	«... the statement of the Supervisory Council on the minutes of meetings of the Executive Board and its supervision of the Bank, are sent to the Ministry for submission to the King and communication to the Storting,» see section 30, second paragraph of the Norges Bank Act. Make public any special certification statements from external auditor.

Table 4.1 GPFG – regulation, supervision and reporting

Body	Regulatory responsibility	Supervision form	Reporting
The Supervisory Council's standing committee and secretariat		Function as case preparation body for the Supervisory Council. The secretariat carries out ongoing supervisory tasks in Norges Bank on behalf of the Supervisory Council.	Submit reports to the Supervisory Council.
Norges Bank's external auditor		Audits the Bank's accounts, see section 30 a of the Norges Bank Act. Carry out certification assignments at the request of the Supervisory Council.	Submit audit reports to the Supervisory Council. Certify the GPFG's annual accounts to the Ministry of Finance.
The Executive Board of Norges Bank	Provide NBIM management rules that fill out and supplement the GPFG management regulations issued by the Ministry of Finance. Stipulate investment mandates for NBIM and position instructions for the Executive Director of NBIM.	Ensure that the Bank's operations, including accounts and investment management, are subject to adequate governance and control. Function in reality as a corporate board for NBIM.	Submit quarterly and annual reports on the management of the GPFG to the Ministry of Finance. Submit reports to the Supervisory Council. Presents annual accounts and budget for approval by the Supervisory Council.
Executive Board's audit committee		Functions as a case preparation body for the Executive Board within the Board's supervisory functions, see section 10 of the regulations concerning internal control and risk management in Norges Bank (internal control regulations).	Reports regularly to the Executive Board about its work
Norges Bank's internal audit		Checks regularly the Bank's operations according to recognised auditing standards, see section 9 of the internal control regulations.	Reports regularly to the audit committee and the Executive Board. Submits report to the Executive Board on risk management and the internal control at least once a year, see section 9 of the internal control regulations.
NBIM's department for control and compliance		Separate unit for operational risk management, control and compliance.	Submits regular reports to the Executive Board on compliance with guidelines, operational risk and any undesirable events.

Source: Ministry of Finance and Norges Bank

Pursuant to section 2 of the Norges Bank Act, special procedures apply to the right of government authorities to make decisions about the opera-

tions of Norges Bank. Decisions may be made only by the King in Council after the Bank has had the opportunity to comment. Notice of the de-

cision shall be sent to the Storting as soon as possible. However, this special procedure applies only to the duties governed by the Norges Bank Act, i.e. the traditional central bank duties. Pursuant to the Pension Fund Act, the Ministry of Finance is responsible for the management of the GPFG, while Norges Bank is the operating manager. When the Bank carries out duties in this manner on behalf of the Ministry, the Bank may be instructed independently of the procedure in the Norges Bank Act, see page 26 of Proposition no. 25 (1984-1985) concerning the Act on Norges Bank and the Monetary System.

In principle, there are neither content-related nor formal constraints on the Ministry's right to instruct the Bank on how to manage the GPFG, and it becomes a practical issue of how work duties are to be divided among the organisational levels between the two. The question in the following is how the responsibilities are to be divided between the Ministry of Finance and Norges Bank's Executive Board, see figure 4.1.

#### **4.2.3 Division of responsibility and roles between the Ministry of Finance and Norges Bank**

As mentioned, the Act on the Government Pension Fund requires the operational implementation of the management assignment to be conducted by Norges Bank, in accordance with regulations set by the Ministry of Finance. However, the act and its preparatory works do not provide further guidelines for the division of assignments or further regulations for how the Ministry of Finance is to exercise its management responsibility. Hence it is for the Ministry to decide which duties are to be carried out in the Ministry, and which are to be carried out by the Bank.

The adjustment of the division of the work and roles between the Ministry and the Bank may be done in various ways.

One extreme is no or little degree of delegation, where the management is either done in the Ministry or where the Bank's duties consist of implementing instructions issued by the Ministry in all parts of the management such as strategy, implementation of individual trades, risk management and reporting.

The Ministry has previously stated that it is neither possible nor desirable for this type of operation to be micro-managed and continually governed by the Ministry, see page 36 of Report no. 20 (2008-2009) to the Storting. This general point

of departure also has broad support in the Storting. In connection with the debate on Report no. 20 (2008-2009) to the Storting, the Finance and Economic Affairs Committee unanimously stated, see page 21 of Recommendation no. 277 (2008–2009) to the Storting:

«The Committee shares in that connection the Ministry's view that Norges Bank must have a certain degree of freedom in the execution of its management assignment, and that continual micro-management by the Ministry is neither possible nor desirable.»

Consequently, this extreme is not a real alternative.

The other extreme would be full delegation, where the Bank itself stipulates the strategy and regulations for risk management and reporting.

Current GPFG regulations may be said to lie somewhere between these extremes.

The challenge in the future remains to find the optimal balance between sufficient control and follow-up, and necessary degree of delegation. In an international context, the degree of delegation in the GPFG has been small so far. Most comparable funds have investment mandates that assign managers the task of maximising returns within more or less specific risk limits, but without, for example, issuing clear regulations for dividing the investments into various asset classes or further specification of a benchmark. A requirement for real return over time is usually set for government reserve or pension funds. Owners of the capital have consequently delegated to a far greater degree the specification of the investment strategy to managers compared with what applies to the GPFG.

The financial crisis has underlined the importance of the risk level in the GPFG being well anchored among political authorities and that there is broad support of the long-term strategy of the Fund. The regulations on the management of the GPFG should reflect a risk level in the Fund that is in line with the wishes of the political authorities. How the desired level of risk is expressed will, however, vary with the type of investment.

For listed shares and bonds the Ministry finds that there shall be a real delegation of the operational execution of Norges Bank's management in line with the comments of the Committee. This view involves a rather large degree of freedom for the Bank to set further, specific provisions on the execution of the management assignment, including detailed provisions on measurement, manage-

ment and control of risks – within overarching guidelines set by the Ministry. More micro-managing by the Ministry would in practice imply moving parts of the ongoing responsibility for the operational implementation into the Ministry of Finance. At the same time the regulations must be designed so as to ensure that the operational management takes place in accordance with the decisions and assumptions of the Ministry and Storting. The Ministry must therefore establish certain overarching guidelines.

So far the GPFG has been invested in relative liquid markets where there are investable benchmark indices that can reflect the owner's risk preferences. They form the basis for regulation of the risk level. A better use of the Fund's distinctive features will mean that the investment strategy will continue to be developed in the direction of unlisted and other less tradable assets. The decision has already been made to invest in real estate, and investments in unlisted shares may be a possible investment alternative in the future. There are no investable benchmark indices for this type of investments. It is therefore not possible to distinguish between overarching strategy choices and decisions on operational execution in the same manner as for listed shares and bonds. Such investments require a different division of work between client and manager, with a larger degree of delegation. This is reflected in the regulations the Ministry has stipulated for investments in real estate, see the discussion in section 2.5.2.

The fundamental consideration of preserving confidence in the manner the Fund is managed requires a large degree of transparency about its management. This indicates rather detailed regulations on public reporting. Among other things, the Ministry aims to direct the Bank to publicise the Executive Board's supplementary regulations for the management of the GPFG.

#### **4.2.4 How the regulations should be formulated**

The most prominent risk in a financial portfolio will be the market risk – the risk that the value of the portfolio will change as a result of movements in share prices, exchange rates, commodity prices or interest levels. The market risk of the portfolio will be a trade-off between the desired long-term expected return and risk. If a higher expected return is desired, a higher market risk must be accepted.

Today, the essential portion of the market risk in the Fund is established through the asset allocation and the Ministry's choice of benchmark indices. The remaining risks have been determined by the active management, see discussion in chapter 3 of this report.

Under current regulations, active management is inter alia regulated in the form of a quantified limit for expected fluctuations in the return differences between the benchmark and the actual portfolio, known as expected relative volatility. In addition, the actual portfolio is required to have a good distribution of various securities. There are also requirements for internal procedures in the Bank. The framework for relative volatility can be viewed as a «risk budget» for active management from which the Bank can draw, see section 2.3.

In Report no. 20 (2008-2009) to the Storting the Ministry stated that stricter requirements would be made of Norges Bank's active management as part of the review of the GPFG regulations. Supplemental limits on risk taking in active management were mentioned as particularly relevant measures. Furthermore, it was stated that the Ministry would assess limits for leverage and short positions, along with the actual limit for expected relative volatility.

The financial crisis has shown that it can be appropriate to set limits for market risks along more dimensions than expected relative volatility. This will make the regulations more robust. In its internal regulations the Bank has chosen to set such supplementary quantitative limits.

In principle, the Ministry of Finance can set supplementary limits for risk taking in active management along many of the same dimensions. However, it is difficult for the Ministry alone to set such supplementary risk limits without knowing the full operational consequences of such choices. A better alternative would be to direct the Bank to set limits, which in advance of their planned entry into force shall be submitted to the Ministry. Such an alternative means that the Ministry could undertake changes when needed. In this manner, the initiative for specific drafting of the regulations lies with the Bank, which is closer to the market and carries out the investments, while safeguarding the Ministry's governance needs. Varying marketing conditions may indicate a need for a quite ongoing re-evaluation of the limits, but such a model does not pose an obstacle for quick adjustment of the limits should there be a need for it.

In line with leading international practice, it is also desirable to set overarching limits for other main categories of risks, including credit and counterparty risks.

The regulations the Ministry has stipulated for the GPFG today do not directly regulate leverage. This means that strategies that provide borrowing effects can be used as long as the qualitative and quantitative requirements the Ministry has stipulated in the overarching guidelines are met.

The Bank has used several investment strategies that provide borrowing effects. One example is lending of securities against collateral. Security in the form of cash received is reinvested and added to the Fund's assets but is recognised at the same time as debt on the balance sheet (because it must be paid back). Another example is strategies for exploiting different levels of interest in fixed-income securities through the use of derivatives, futures contracts and repurchase agreements (an agreement to buy back a security at a pre-agreed price). Here, the sum of the Fund's gross liabilities can exceed the value of the securities involved in the transaction. The difference is recognised as debt on the balance sheet.

The Bank recently reorganised its management substantially in these areas and issued internal regulations that limit leverage, see box in section 3.5.

In the Ministry's view, an absolute prohibition against leverage in the GPFG is not desirable. Leverage may arise as a result of securities lending, or when various financial instruments are used for managing risk in the Fund. At the same time, in the Ministry's view, the use of leverage to increase the Fund's exposure to risky assets is not desirable. In the new regulations, the Ministry therefore intends to allow the use of leverage for achieving effective execution of the management assignment, but not to increase the Fund's financial exposure to risky assets. The Bank shall establish leverage limits within this principle.

Outside the risk limits the Bank should in line with the above viewpoints be given a large degree of freedom in the operational execution of the management assignment, but the regulations should provide some general overarching requirements for the internal regulation. Through self-evaluation and external reporting requirements the Ministry can ensure that the Bank's internal follow-up supports the overarching considerations of the management.

Moreover, in consultation with the Supervisory Council the Ministry of Finance can through assurance reviews to the Bank's auditor ensure that the Bank complies with the guidelines set for the management of the Fund.

A key area where use of this methodology is proposed is in valuation, measurement of return and management and control of risk. Here, the Ministry proposes that the Bank shall lay down principles that at least meet internationally recognised standards and methods. The Bank will also be required to regularly evaluate its own principles and methods in these areas. Subsequently, further requirements to the Bank's regulations in this area are specified.

Within the risk limits and the general regulations the Ministry lays down, Norges Bank shall undertake investment decisions independently of the Ministry. This has been the practice since the Fund was established, but will be formalized in the new regulations. Decisions on exclusions according to the guidelines for responsible investment practices can be viewed as an exception to this principle. Here, the Ministry decides whether the Bank shall sell its shares in a certain company. However, the ethically founded decision is made in accordance with separate public regulations and is justified in each case. There is consequently transparency surrounding why the Ministry wishes in certain cases to undertake a sell-off on the basis of broader assessments.

Norges Bank is intended to follow international accounting standards as from 1 January 2011. New accounting regulations will inter alia require disclosure of information on wages and remuneration for the leading officials in the bank. The Ministry intends to require the Bank to release the same kind of information for GPFG, as if the Fund were a separate accounting unit. In that respect, it is the Ministry's opinion that it would be prudent to release information on wages and remuneration for the leading officials in NBIM, in accordance with international accounting standards.

#### **4.2.5 Maintenance of the actual benchmark**

In connection with the consultation on new regulations for the management of the GPFG both Norges Bank and the Office of the Auditor General noted that it should be the Ministry of Finance's responsibility to maintain the actual benchmark. Until today, Norges Bank has performed calculations of the actual benchmark and submitted these to the Ministry of Finance for ap-

proval. Starting with the second quarter of 2010, the Ministry of Finance will undertake its own calculations of the actual benchmark independently of Norges Bank, and compare these calculations with the proposal from Norges Bank.

#### 4.2.6 Summary

The Ministry aims to lay down new regulations that are more extensive than the three sets of regulations they are to replace. In part the Ministry aims to regulate areas not covered by current regulations and management agreement, and in part the new regulations will be more supplementary. At the same time regulation will continue to be framework-like so that Norges Bank must fill out the overarching limits and principles with more detailed internal regulations for operational management. Such a regulatory system means in practice a continuation of the current system, but by directing the Bank to publicise the Executive Board's supplementary guidelines the overall regulations will be more easily accessible.

In line with the previous points of view the Ministry of Finance plans to lay down new regulations for the management of the GPFG according to the following overarching principles:

- New regulations for the GPFG should reflect the political authorities' attitudes to what is an acceptable risk in the Fund.
- Norges Bank shall establish supplementary risk limits for active management. They shall be presented to the Ministry of Finance before they are adopted.
- The Ministry of Finance shall establish overarching qualitative requirements related to active management risks.
- The responsibility for formulating regulations for operationalisation of the management assignment shall be delegated to Norges Bank's Executive Board, but so that the Ministry of Finance's regulations specify relevant subjects for Norges Bank's own regulation.
- Extensive public reporting requirements about Norges Bank's execution of the management assignment will be made.

The Ministry's aim is for the new regulations for the management of the GPFG to enter into force from 1 January 2011.

### 4.3 New regulations for the management of the GPFN

The description of the division of responsibilities and roles between the Ministry of Finance and Norges Bank in sections 4.2.2 and 4.2.3 will essentially apply equally to the division of work between the Ministry of Finance and Folketrygdfondet, with the exception for the auditing and supervision system. While Norges Bank is under the supervision of the Supervisory Council and is audited by an external auditor appointed by the Supervisory Council, Folketrygdfondet is audited by an external auditor appointed by the Ministry of Finance.

Prior to the establishment of Folketrygdfondet as a special statute company from 1 January 2008, the Ministry of Finance laid down new regulations for the management of the GPFN in the form of a regulation with supplementary guidelines. A management agreement was also entered into between the Ministry and Folketrygdfondet. The regulations for Folketrygdfondet's management of the GPFN are essentially more detailed than the guidelines that the Ministry has set for Norges Bank's management of the GPFG, and the notified regulations that are under preparation, see the discussion in section 4.2.4. The difference between the current regulations for the GPFN and GPFG is particularly pronounced with respect to the degree of detail in the requirements for measurement, management and control of risks.

In connection with its conversion to a company created by special statute and new framework conditions for its management, Folketrygdfondet undertook material investment in new management systems. The Ministry believes that a high level of detail in the regulations for the GPFN have been necessary to clarify the Ministry's expectations of the operational management in connection with the conversion, including the systems that were to be established. The experience with Folketrygdfondet as a company formed by special statute has in the Ministry's view been good. Inter alia, Folketrygdfondet has invested considerable work into developing its management in line with stricter requirements than previously for measurement, management and control of the risks. In the Ministry's view it will therefore be appropriate now to undertake a revision of the regulations for the management of the GPFN in line with the fundamental view of the division of work between capital owner and manager out-

lined in section 4.2.3. This does not mean that less stringent requirements will be made of measurement, management and control of risk than before, but that to a greater degree it will be the responsibility of the board of Folketrygdfondet to develop more detailed regulations for risk management within overarching limits set by the Ministry.

The Ministry's preliminary aim is for the new regulations for the management of the GPFN to enter into force from 1 January 2011.

## **4.4 Organisation of the operational management of the GPFG**

### **4.4.1 Introduction**

In connection with the discussion of Proposition no. 58 (2008-2009) to the Odelsting on a new auditing system in Norges Bank etc., the Storting's Finance and Economic Affairs Committee stated that a management structure for the GPFG of the highest international class, with clear mandates and division of roles, close follow-up and control, and sound public reporting routines, is necessary for ensuring broad trust in the actual management model, see Recommendation no. 93 (2008-2009) to the Odelsting. In this connection the Committee pointed out that it would be appropriate if the Ministry of Finance in the report to the Storting on the management of the Government Pension Fund in 2009 could discuss benefits and disadvantages of the current organisation of the operational management responsibility in Norges Bank, compared with a separate management organisation headed by a board directly appointed by the Ministry of Finance.

### **4.4.2 Background for the current management model**

The current management model for the GPFG with operational management in Norges Bank is a continuation of the model originally selected for the Government Petroleum Fund. Proposition no. 29 (1989-90) to the Odelsting on the Act relating to the Government Petroleum Fund states:

«The Fund accordingly places its entire capital as the state's other funds in Norwegian kroner in Norges Bank. It will not be necessary to build a separate administrative apparatus to manage the Fund's capital. This will enable the cultivation of the Fund as an instrument of fiscal management, and not a means for mana-

ging the state's financial assets arising as a result of a moderate use of petroleum revenues.

The return on the Fund's investments will be determined on the basis of the same considerations underlying the determination of the return on the state's other funds.»

The Fund was consequently emphasised as a means of fiscal management, but the Ministry had basically no investor perspective.

Due to the combination of a prolonged slump in the Norwegian economy and relatively low net petroleum revenues, funds were not set aside in the Petroleum Fund until 1996. In this regard, the Ministry of Finance laid down guidelines for management of the Fund in accordance with the conditions in the preparatory works of the Act. They were based on the guidelines for foreign exchange reserves, and meant that Norges Bank should invest the Fund's assets in government securities with high liquidity.

In the Revised National Budget for 1997 the Ministry of Finance undertook a broader review of the guidelines. Estimates of when it would be necessary to use the Fund's assets indicated a long time horizon. Based on an assessment that the risks associated with the value of the Fund at the time the funds are to be tapped should be emphasised, it was deemed that the risk that the Fund's return may vary from year to year is less important. A balance between expected risk and return, as well as risk diversification considerations indicated in the Ministry's assessment that equity investments should be permitted in the Fund, and this was done starting 1 January 1998. This took place through the establishment of a benchmark with associated deviation limits.

The Revised National Budget for 1997 also discussed the Fund's role as investor and the management model. A relevant question was whether managers other than Norges Bank should be brought in to ensure sufficient expertise in the management of the Fund. The Ministry found that the management should be organised so that Norges Bank has overall responsibility for the Fund's investments, but that the Bank could use external managers where this was appropriate. The Ministry stressed that equity investments would lead to increased requirements for risk management and control in Norges Bank as well as a need to evaluate Norges Bank's management.

To improve its capacity to perform its duties as investment manager for a more complex investment portfolio, Norges Bank established from

1 January 1998 a separate unit for investment management - Norges Bank Investment Management (NBIM).

The main features of the management model drawn up in the Revised National Budget for 1997 remain unchanged. The Government Pension Fund was established on 1 January 2006 as a superstructure over the former Government Petroleum Fund and Folketrygdfondet. The arrangement of placing the funds in the GPFG in Norges Bank was continued in the new act, and in Proposition no. 2 (2005-2006) to the Odelsting concerning the Government Pension Fund the Ministry proposed that the regulations laid down for the management of the Fund in Norges Bank should be unchanged.

In the almost 14 years that have elapsed since the first transfer to the former Government Petroleum Fund, there have been major changes in the Bank's activities in general and within asset management in particular. The capital in the Fund has grown rapidly, and the GPFG is now one of the world's largest funds. At the same time the outlook is that the Fund will continue to grow in coming years. Moreover, the complexity of management increased significantly, and NBIM has become an essential part of the Bank's activities. There have also been several important changes within the traditional central bank areas. In 2001, Norges Bank was given new monetary policy guidelines through a flexible inflation target. In 2008 the Bank expanded its use of policy instruments in connection with the handling of the financial crisis.

Through the lifetime of the Fund the central bank has been an important partner for the Ministry in its efforts to determine an appropriate investment strategy for the Fund. The build-up of a substantial investment management unit within the central bank's operations also made it possible to assume that a good organisational culture would be established in the management unit.

#### **4.4.3 Alternative management models**

In the Ministry's view, the two most appropriate management models are a further development of the current model or a model in which investment management operations in Norges Bank are spun off as a separate special statute company wholly owned by the government, equivalent to Folketrygdfondet. One model that does not appear to be relevant in the Ministry's view is splitting the current Fund into several smaller management

units. Splitting would inter alia entail increased costs. In Sweden, an expert report recently recommended merging four of the AP funds due, among other things, to the unnecessary costs incurred by so many parallel management organisations. Analyses show that the GPFG is managed in a manner resembling passive indexing, see the discussion in chapter 14. Because there are economies of scale in passive management, many separate management environments only make sense if a variety of active strategies are desired. Even in such a case it will be difficult to avoid the overall management performance, based on many independent active strategies, being close to the index return, but with substantially higher costs. Division into several funds may also lead to an unfortunate competition between funds, with emphasis on short-term results and increased risk taking rather than competition for the most robust strategy and the best risk management.

#### *Further development of the current model*

There are international examples of large government-owned investment management operations with a business focus that have been established under central bank operations (beyond what follows from the management of foreign exchange reserves). The main impression is nevertheless that government investment management operations are organised as separate entities, and not as part of the central bank. As a rule, these units are not only responsible for ongoing management, but also stipulate the investment strategy. They consequently do not have the division between the Ministry and the manager that characterises the organisation of the GPFG. There is no reason to believe that the organisation of a state-run investment fund within a central bank violates international best practice.

In any case, organisation and division of roles will have to reflect the political institutions and traditions in each country. The deciding factor must be to have sound management principles with clear responsibilities and roles between manager and client.

As can be seen from Figure 4.1, the general rule in the management hierarchy for the GPFG is that the superior level is responsible for exercising supervision of the level just below, so that the Executive Board supervises NBIM etc. Supervision by Norges Bank's Supervisory Council represents an exception from this. In the management of the GPFG the Executive Board is subordi-



nate to the Finance Ministry, while the Storting-appointed Supervisory Council oversees and is responsible for auditing the Bank. This means that the scope of the Department's management responsibility pursuant to the Government Pension Fund Act may be difficult to delimit precisely in relation to the supervisory responsibility of the Supervisory Council under the Norges Bank Act. The Ministry does not have any formal role relating to the auditor's work on the follow-up of the Bank's management of the GPFG.

Norges Bank's responsibilities in monetary policy and financial stability are laid down in the Norges Bank Act. The management of the GPFG is performed according to guidelines issued by the Ministry of Finance in accordance with the Government Pension Fund Act and shall be carried out on commercial terms. This commercial activity has other characteristics than a central bank's core tasks that are more characterised by the public exercise of authority. Experience gained through 14 years has shown that it is possible to operate such different activities under a single superstructure, but it also poses specific management challenges to the organisation, not least when it comes to requirements for expertise.

The Governor of Norges Bank has pointed out that with its organisation, discipline and work requirements the NBIM business culture has had a positive impact on the rest of Norges Bank. Synergy also exists between the Bank's job as manager of the GPFG and its other tasks. As manager of a major international financial fortune, Norges Bank's governing bodies must have a very good understanding of the behaviour of the capital markets. This is also significant in the performance of the Bank's two other main tasks: monetary policy and financial stability. Regardless of the organisation of the GPFG, Norges Bank also has to manage substantial foreign exchange reserves, which requires insight into investment management.

There is also reason to believe that there has been a spill-over effect in the other direction, in that the bank's culture of responsibility and moderation has contributed positively to the management culture of NBIM.

If monetary policy and work on financial stability is to be implemented in a proper and efficient manner, it is essential that Norges Bank enjoys broad trust in the exercise of its duties. It can be a daunting task, especially during periods of turmoil in the markets, to manage both the traditional central bank tasks and a large and complex investment management operation. Weak results or

negative events in investment management may also ultimately undermine confidence in the central bank's management of its traditional tasks, or lead to reduced capacity to implement these in a proper manner. So far this has not been the case.

Both Norges Bank and the Ministry of Finance have recently implemented a number of measures to strengthen the fund management, see the measures referred to in section 3.3.2. Among these is a substantial strengthening of the Bank's governance structure within investment management, new auditing system with an externally appointed auditor and a new internal control regulation for Norges Bank.

Because several of these measures have been introduced relatively recently or will be introduced over the next few years, they have been in effect for a limited period. The Ministry of Finance assumes that taken together the measures will contribute to a substantial strengthening of the Fund's management in coming years.

Although a number of measures have recently been initiated to improve the current management model, it is possible in the Ministry's view to strengthen the model further, should there be a need for it.

Norges Bank has chosen to change the actual internal organisation related to the management of the GPFG, whereby the Executive Board and the Governor in reality operate, respectively, as board and chairman of NBIM. In contrast to the rest of the Bank, the Governor thus does not act as the general manager of NBIM – this responsibility is delegated to the Executive Director of NBIM. Since NBIM operations differ substantially from traditional central bank functions, this may be a suitable organisation. It does not, however, exempt the Governor from responsibility for the Bank's daily operations under the Norges Bank Act. If this organisation is found to function suitably, amending the act to formalise the system will be considered. This will mean that the role of the Governor and Deputy Governor vis-à-vis NBIM is exclusively that of chairman and deputy chairman of the board.

The Ministry has considered a model in which a separate board equal in ranking to the Executive Board is created for investment management in Norges Bank. Such a model is not advisable in the Ministry's view. It would create significant management challenges in Norges Bank in that no single body in the Bank would have overall responsibility for the Bank's activities. There is significant operational risk also in the other areas of

the Bank, and the nature of a number of issues is also such that they cover all parts of the Bank's activities. An example of the latter is risk management and internal control, where the Ministry has recently established a regulation that applies to all of the Bank's activities. In reality, a model with a separate board for NBIM would result in two separate organisations gathered under the same business name, with a blurred interface between the two. The Ministry is not aware of any major organisations that are governed by a model with two separate boards for different parts of operations within a single legal entity. In the Ministry's view testing such a corporate law innovation in the country's central bank would not be justifiable.

Should it be desirable to relieve the Executive Board of duties that would permit it to spend even more time on investment management, the creation of a separate monetary policy committee with responsibility for the conduct of monetary policy (setting interest rates) appears to be a more obvious measure. Interest rate setting is a task that is quite detached from the operational running of the Bank, and can therefore be removed from the Executive Board without impairing its overall responsibility for the Bank's operations.

A model with an executive board and a separate interest rate committee is a parallel to the model by which the Bank of England is governed. Under such a model, the Governor would head both the monetary policy committee and the Executive Board. The Executive Board would resemble more of a traditional corporate board, with tasks aimed at the overarching issues in corporate governance. Recruitment to the Executive Board would probably be easier because it would not be necessary to put as much emphasis on macro-economic expertise among board members in addition to knowledge of investment management, financial stability and general business management. If the Board no longer made interest rate decisions this would perhaps also provide a basis for easing the current rather strict impartiality requirements. However, such a model would require a broad study, and the Ministry does not find basis at this time to proceed with such work.

#### *Conversion of the investment management operations into a company formed by special statute*

As described above a number of measures that have not yet had time to work have been implemented to strengthen the organisation of the Fund, while there is also room for further im-

provement. Nevertheless, a model whereby investment management is spun off from the central bank into a company created by a special statute could more directly address the governance challenges pointed out above.

A company formed by special statute can establish an organisational framework which is tailored for the purpose, rather than make continuous adjustments within an organisational model that has been established for traditional central bank tasks in monetary policy and financial stability. This form of organisation was recently selected for Folketrygdfondet. The main part of a separated organisation would be the investment management unit which today is part of Norges Bank, and that through just over 12 years has built up considerable expertise and insight into the management of the world's largest fund. It will still be difficult to find the right balance between the Ministry and manager in terms of the degree of delegation, see section 4.2.

After a possible spin-off the central bank management would be able to increase its capacity to follow up the responsibility for the conduct of monetary policy and work on financial stability. It would also remove the risk of adverse events in investment management weakening the central bank's reputation.

Any spin-off would be a comprehensive process raising a number of sometimes complex and unresolved legal issues. Norges Bank benefits from its own central bank privileges in a number of jurisdictions. These include immunity from seizure of assets. It is not obvious that these privileges can be continued by a steward organisation detached from the central bank. A spin-off could also potentially trigger difficult tax and contract law issues. In converting an entity that for the most part operates in Norway, such as Folketrygdfondet, such issues can be effectively resolved through special legislation. Through laws, the Storting can determine that Norwegian contractual counterparties must accept the transfer of contractual obligations and that the conversion should not have tax consequences. This is not possible for an operation like NBIM, which operates internationally only.

#### **4.4.4 The Ministry's assessments**

In the Ministry of Finance's view the management model for the GPFG should as far possible

- facilitate professional and cost-effective management,

- specify clear lines of responsibility and predictable framework conditions,
- facilitate good communication between client and manager and between manager and the general public,
- contribute to converging interests between owner and manager,
- be well-equipped to deal with future challenges (increasingly larger funds, larger holdings in individual companies, the possible development in the direction of illiquid assets with greater management challenges etc.),
- take the role of the Fund as a fiscal policy instrument into consideration and
- take into account factors that have been important in the international debate about sovereign wealth funds, and reflect what is considered best practice internationally.

It is difficult to construct a management model that safeguards all these considerations in a proper and adequate manner. The Ministry does not assume that there is only one satisfactory model. Both a model of management within the central bank and a model of management in a separate unit outside the Bank can be designed so that these considerations are addressed. A good division of responsibility and roles between the client (the Ministry of Finance) and manager, see the discussion in section 4.2.3, is in practice an equally important question as the question of who should be manager.

In evaluating the model it must be further emphasised that the management assignment for the GPFG involves several different subassignments that require different and specialised expertise. Today, Norges Bank has five main tasks related to the management of the GPFG:

- the funds in the GPFG shall be invested in the markets at the lowest possible cost,
- the Bank shall maintain the market portfolio in a cost-effective manner,
- the Bank shall seek to achieve the highest possible return on investments within the limits the Ministry has laid down,
- the Bank shall exercise ownership, and
- the Bank shall provide the Ministry of Finance with advice on the long-term investment strategy for the GPFG.

Each of these are complex tasks, not least because of the Fund's strong growth in combination with an increasingly complex investment universe. A robust and competent manager organisa-

tion has been built up in Norges Bank to discharge these tasks. The Ministry's main impression is that the management of the GPFG in Norges Bank has worked well so far. Like other management environments NBIM was faced with major challenges during the financial crisis, particularly in fixed income management. As pointed out in section 3.2, it is the Ministry's assessment that Norges Bank handled these challenges in a positive way when the crisis occurred, and there is hardly any reason to believe that another form of organisation would have reduced the challenges caused by the financial crisis.

The model with management of the GPFG in Norges Bank has in the Ministry's view helped to create legitimacy for the structure of the Fund. Norges Bank is a highly-reputable social institution with high integrity, and there is reason to believe that the Bank's organisational culture has contributed positively to the development of NBIM as a solid manager organisation that is highly respected internationally. In the Ministry's view there should be weighty reasons for dismantling a well-functioning and well-regarded model.

Traditional central bank responsibilities such as monetary policy and financial stability are also highly demanding tasks. Regardless of whether Norges Bank manages the GPFG, the Bank must establish control and governance systems in line with leading international practice. The Bank also has ordinary foreign exchange reserves that in any case must be managed in a professional manner. Risk management, control and supervision are constantly evolving internationally, requiring continuous work on both the client side and within the Bank to ensure good internal systems. With the measures implemented in recent years, the Bank's governance and control structure has been further improved, and in the Ministry's view the organisation is well equipped to meet the challenges it faces in the future. In all essentials the current model satisfies the considerations that are highlighted above.

Any further additional potential for strengthening the management organisation and Norges Bank by separation must be weighed against the costs. A reorganisation will in any event be resource intensive, both for the Ministry and the Bank, and there is risk associated with a conversion, see discussion above. Such a process would therefore easily take attention away from important processes that are under way to improve the framework and risk management.

Taking into consideration that, all in all, the current model must be said to work well, and that it is now further strengthened, the Ministry sees no reason to separate the management of the GPFG from Norges Bank at this time. While it cannot be excluded that this rationale may be changed at some point in the future, in continuing to develop the framework of the GPFG the Ministry will work from the assumption that the model of operational management in Norges Bank remains unchanged. The Ministry will continuously evaluate the measures implemented to further improve the governance structure of Norges Bank, and will as needed make additional adjustments to continue to develop the organisation in line with best international practice.

#### **4.5 Proposed amendments of the Norges Bank Act – Supervisory Council reporting and remuneration**

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Norges Bank's Supervisory Council is appointed by the Storting and shall pursuant to the Norges Bank Act oversee the Bank's operations. On 10 December 2009 the Supervisory Council sent a letter to the Ministry of Finance stating that the Council is in the process of formulating a strategy for further development and strengthening of the supervisory regime in the Bank. As part of this work the Supervisory Council considered the possibility of expanded and more direct reporting to Storting. Under the current system

«The annual report and the audited annual accounts, as well as the statement of the Supervisory Council on the minutes of meetings of the Executive Board and its supervision of the Bank, are sent to the ministry for submission to the King and communication to the Storting,»

see section 30 of the Norges Bank Act. The statement today is very brief.

The Supervisory Council will also have evaluated the possibility of transferring the expertise to determine the Supervisory Council's remuneration from the King to Parliament. Today, this expertise is delegated by the King to the Ministry of Finance.

In line with input from the Supervisory Council the Ministry of Finance sent a letter on 4 February 2010 to Norges Bank's Supervisory Council and the Executive Board in which the Ministry proposed changes to the Norges Bank Act rules for determining the remuneration of the Supervi-

sory Council and the manner it should report to Storting. It is proposed that the Storting, which is responsible for the appointment of the Supervisory Council, should also determine its remuneration. The remuneration gives an indication of how much time the persons selected are supposed to spend on the position. It is appropriate that the body responsible for the selection through the determination of remuneration also indicate how much time and effort lies in the position.

The Ministry agrees with the Supervisory Council that having the Supervisory Council report directly to Storting will strengthen the Bank's governance model. Direct reporting to the Storting is the scheme for all other Storting-appointed ombuds and bodies, and in the Ministry's view there are no special considerations that indicate a different solution for the Supervisory Council. Direct reporting will help to elucidate and strengthen the Storting's control of Norges Bank's operations, not least when it comes to the GPFG.

For the same reasons the Ministry also finds reason to suggest minimum requirements for the Supervisory Council's statement pursuant to the Norges Bank Act. It should, inter alia, state how the supervision has been organised and the supervision tasks that have been completed. Furthermore, the results of the supervision should be clearly evident. In regard to the GPFG's unique position in terms of size and operational risk, the Supervisory Council should be required to provide a separate report for the supervision of investment management.

The Ministry is submitting the proposition to the Storting about changes in the Norges Bank Act simultaneously with this report.

#### **4.6 New guidelines for responsible investments in the GPFG**

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##### **4.6.1 Introduction**

Ethical guidelines for the GPFG were laid down by the Ministry of Finance on 19 November 2004, based on the recommendations from the Graver Committee in NOU 2003: 22 Forvaltning for fremtiden (Management for the future).

In 2008, the Ministry of Finance carried out a broad evaluation of the ethical guidelines. The results were presented in Report no. 20 (2008-2009) to the Storting. The main conclusion of the evaluation was that the ethical guidelines had proven to be robust and many important aspects have been

maintained. In addition, the Ministry announced its plans for a more comprehensive strategy for responsible investment practice in the GPFG and decided to introduce several new measures. The Storting gave its approval to the Government's plan, see section 3.2 of Recommendation no. 277 (2008-2009) to the Storting.

An overview of the results of the evaluation of the ethical guidelines and the implementing measures is given in section 2.5.3. The contents of the two new guidelines on responsible investment practices that implement several of the proposed measures are described below.

#### *Main features of the ethical guidelines of 2004*

Point 1 of the ethical guidelines of 2004 specified the ethical obligations of the GPFG. Point 2 of the guidelines stated that the ethical obligations should be promoted through three mechanisms: active ownership, negative screening of companies on the basis of production of weapons that violate fundamental humanitarian principles through their normal use, as well as the exclusion of companies with unacceptable risk of contributing to the following conditions:

- serious or systematic human rights violations such as murder, torture, deprivation of liberty, forced labour, the worst forms of child labour and other exploitation of children,
- gross violations of individuals rights in war or conflict situations,
- severe environmental damage,
- gross corruption, and
- other particularly serious violations of fundamental ethical norms.

In 2008 it was decided that the Fund cannot be invested in government bonds issued by the state of Myanmar (Burma). It was furthermore decided that companies that sold weapons to Burma should be excluded from the Fund's investment universe.

#### **4.6.2 Introduction of new guidelines for responsible investment practice**

As a follow-up of Report no. 20 (2008-2009) to the Storting the Ministry of Finance has laid down new rules pertaining to the work on responsible management of the GPFG. Draft new guidelines have been circulated for comment in the Council on Ethics and Norges Bank. Further consultation has not been considered necessary, in that an ex-

tensive consultation process was conducted with input from more than 50 consultative bodies in the evaluation process.

Firstly, the Ministry has laid down *Guidelines for Norges Bank's work on responsible management and active ownership*. When the new regulations on the management of the GPFG are determined, see discussion above in section 4.2, these guidelines will be incorporated into the regulations as a separate chapter.

Secondly, the Ministry has laid down *Guidelines for observation and exclusion from the GPFGs investment universe*. The guidelines include the Ministry's, the Council on Ethics' and Norges Bank's work on these issues.

These two guidelines replace the previous Ethical guidelines that were established on 19 November 2004.

#### *Further details on the Guidelines for observation and exclusion from the GPFGs investment universe*

The new guidelines continue the essential elements of the previous ethical guidelines. There are also several new provisions, all of which are a follow-up of Report no. 20 (2008-2009) to the Storting. Below is a description of the most important changes.

In the evaluation of the Ethical guidelines it was decided that companies that produce tobacco should be excluded from the Fund's investment universe, see discussion on p. 127 et seq in Report no. 20 (2008-2009) to the Storting and section 3.2 of Recommendation no. 277 (2008-2009) from the Storting. Production of tobacco is therefore included as a new criterion for exclusion, see section 2, first paragraph b of the guidelines. The Ministry decided to exclude 17 tobacco producers from the Fund's portfolio, in accordance with the Council on Ethics' recommendation of 22 October 2009. The decision was announced in January 2010, after the sale of the shares in the companies was completed. Otherwise section 2 of the new guidelines continue the exclusion criteria from the Ethical guidelines of 2004.

The new guidelines specify several factors that the Ministry can take into consideration when assessing whether or not a company should be excluded, see section 2, fourth paragraph. Among other things, this applies to the probability of future violations of norms, the severity and extent of the norm violations, the connection between the norm violations and the company in which the Fund is invested and whether the company does

what may reasonably be expected to reduce the risk of future violations of norms within a reasonable time frame. The company's guidelines for and efforts to safeguard good corporate governance, the environment and social conditions and whether the company is making a positive contributions for those affected past or previously by its behaviour, can also be emphasised.

Moreover, it is stated that the Ministry shall consider the use of other measures before exclusion based on grossly unethical conduct is decided, see section 2, fifth paragraph. This may be relevant if other instruments may be better suited to reducing the risk of continued violations of norms, or may be more appropriate for other reasons. The Ministry may ask Norges Bank for an assessment on the case, including whether active ownership might reduce the risk of future violations of norms. The provisions are in line with section 4.3.4.4 of Report no. 20 (2008-2009) to the Storting.

Section 3 of the guidelines contains a new provision on the observation of companies. Observation of companies has been used before, but section 3 formalises the use of this instrument and is a follow-up of Report no. 20 (2008-2009) to the Storting, see the discussion in section 4.3.5.4. It is the Ministry that makes decisions to keep companies under observation, following a recommendation from the Council on Ethics. The Ministry may opt for observation both after a recommendation for exclusion and following a recommendation to put a company under observation, see section 4, fourth and fifth paragraphs of the guidelines.

Report no. 20 (2008-2009) to the Storting discusses whether or not the observation of companies is to be made public. In the Ministry's view, disclosure should be the general rule. In some cases there may, however, be specific factors that indicate that an observation decision should not be made public, although there may be good reasons for following up a company more closely. There may be cases where disclosure of observation could be counterproductive if, for example, the company is in the process of making changes for the better at the initiative of other actors. To ensure that the application of the new guidelines is transparent, such decisions should be reported in the annual report to the Storting on the management of the Fund, possibly in anonymous form.

Section 5, third paragraph of the guidelines continues the rule that companies being consid-

ered for exclusion must be provided with the grounds so that they can comment on it. In the evaluation of the ethical guidelines of 2004, the Ministry called for giving the Council on Ethics broader opportunities for dialogue with individual companies, in addition to written correspondence, see page 126 of Report no. 20 (2008-2009) to the Storting. The Ministry stated that this could contribute to strengthening the information base as well as giving the company a better opportunity to explain the situation in question. The potential positive effects of greater predictability for companies in addition to the fact that some companies might want to change their behaviour as a result of such a dialogue, were also pointed out. At the same time the Ministry stated that it must be expected that a number of companies either will not want a dialogue, or that the dialogue will quickly show that the company has no interest or willingness to address the problems in question. In that context it was pointed out that the Council on Ethics cannot necessarily be expected to give companies specific instructions about, for example, how a company should reduce its emissions.

The provision in section 5, third paragraph permits increased dialogue between the Council on Ethics and individual companies in that it gives the companies being considered for exclusion the opportunity to provide information and opinions to the Council on Ethics early in the process. In this context, the Council shall make the factors that may form the basis for exclusion clear to the company. The provision must be understood in light of the views cited above. Increased dialogue is primarily a tool for ensuring a broader and more complete basis for decision making, and for increasing predictability for companies and their ability to submit objections. The extent of dialogue with individual companies must be weighed against the objective of good resource use. It must also be taken into consideration that it is not appropriate for the Council on Ethics to go too far into issues relating to a company's operations, and that Norges Bank is primarily responsible for the exercise of ownership rights. If the Council decides to recommend exclusion, its draft recommendation shall as before be presented to the company for comment.

Report no. 20 (2008-2009) to the Storting called for the establishment of principles for the Council on Ethics's selection of companies for further examination and routines for the Council's handling of cases concerning whether a decision to exclude should be repealed. Reference is made

to section 5, first and fourth paragraphs of the guidelines. The Council on Ethics is in the process of drafting these principles and routines.

An important subject in the evaluation was issues related to strengthening the interaction between the active ownership and exclusion instruments. In Report no. 20 (2008-2009) to the Storting the Ministry called for better coordination between the Council on Ethics and Norges Bank's work in areas where there are overlapping responsibilities, see section 4.3.5.4. This has been followed up by a new provision on information exchange and coordination between Norges Bank and the Council on Ethics in section 6 of the new guidelines. Regular meetings will be held by the Ministry of Finance, Council on Ethics and Norges Bank to exchange information about work on active ownership and the Council's monitoring of the Fund's portfolio. The Council on Ethics and Norges Bank shall have routines to ensure that any contact with the same company is coordinated.

The Council on Ethics may ask Norges Bank for information about how cases related to specific companies are dealt with through active ownership. The Council on Ethics may furthermore ask Norges Bank to comment on other circumstances concerning companies in the portfolio. Norges Bank may also ask the Council on Ethics to make its assessments of individual companies available.

With respect to exchanging information, it is clear that Norges Bank has other and stricter confidentiality rules under the Norges Bank Act than those which apply to the Council on Ethics. This must be taken into account when applying section 6.

The area of application for the new guidelines for the observation and exclusion of companies is the entire portfolio of the GPFG's listed investments, including real estate investments. In the case of unlisted investments, reference is made to the discussion below.

#### *Further details on the Guidelines for Norges Bank's work on responsible management and active ownership of the GPFG*

Section 1, first paragraph of the new guidelines points out that the management of the fund assets shall be based on the goal of achieving the highest possible return, see section 2, third paragraph of Regulations no. 1725 of 22 December 2005 concerning the management of the Government Pension Fund Global. The provision assumes that a sound return in the long term is dependent on sus-

tainable development in an economic, environmental and social terms. This is a continuation of section 1.1 in the earlier Ethical guidelines. In addition, it is specified that the highest possible return in the long term is considered to depend on «well-functioning, legitimate and efficient markets.» This is in line with the discussion in section 4.3.2 of Report no. 20 (2008-2009) to the Storting and box 4.2.

As a follow-up of the results of the evaluation, section 1, second paragraph of the guidelines requires the Bank to integrate good corporate governance, environmental and social issues in the investment activities. This is an ambitious goal, which is also in line with the UN Principles for Responsible Investment (PRI). Both Norges Bank and the Ministry of Finance endorse the PRI. Integration of such considerations shall take place in respect of the Fund's investment strategy and role as financial manager. The second paragraph of this provision states that in executing its management assignment, the Bank shall give priority to the Fund's long-term horizon for investments, and that the investments are broadly placed within the markets. Reference is also made in this context to the article in chapter 11 concerning the Fund as a universal owner.

The requirement in section 1, second paragraph of the guidelines about the integration of good corporate governance, environmental and social factors is formulated as a general requirement. How these considerations in practice can be integrated in investment operations will vary between investment areas and asset classes. The concrete implementation must therefore be carried out by Norges Bank. Pursuant to section 1, third paragraph, the Bank shall develop internal guidelines that indicate how said considerations are integrated into the investment activities for the various asset classes, for both the internally and externally managed parts of the portfolio. Reference is made to section 4.3.3.4 of Report no. 20 (2008-2009) to the Storting, in particular pages 109 and 112.

Section 2 of the guidelines deals with Norges Bank's active ownership, and continues the significant parts of the contents of section 3.1 of the earlier Ethical guidelines. A new provision has been included in section 2, third paragraph, which states that major changes in the Bank's priorities in its ownership activities are to be submitted to the Ministry before a final decision is made. The Bank's plans shall be subject to public consultation before being submitted to the Ministry. This is a follow-up of the results of the evaluation, see

page 112 of Report no. 20 (2008-2009) to the Storting. This procedure has already been implemented in connection with Norges Bank's preparation in 2009 of two new documents detailing expectations towards companies' management of water and climate change mitigation and adaptation.

Through the management of the GPFG it is the Ministry's ambition to contribute to the development of best practice in the area of responsible investment, see Report no. 20 (2008-2009) to the Storting and sections 2.1.1, 4.1.1 and 4.3.3.4. Section 3 of the guidelines contains a provision that the Bank shall actively contribute to the development of good international standards in responsible management and active ownership.

New requirements for transparency and reporting about the work on active ownership were announced in Report no. 20 (2008-2009) to the Storting, see page 113. Section 4 of the guidelines contains new rules for reporting on the Bank's work in active ownership and integration of good corporate governance, environmental and social issues. The provision in section 4 is more detailed, and gives instructions for more frequent reporting, than the previous Ethical guidelines.

#### *Unlisted investments*

The new rules for the GPFG's real estate investments allow investments in unlisted instruments, such as unlisted equities and bonds.

The exclusion mechanism is suited to listed instruments. These investments are largely determined by the benchmark. Securities are purchased without prior assessment of the company's practices regarding environmental and social conditions. Listing of companies in the GPFG's equity portfolio contributes to a relatively high level of public information about the company. The holdings are consistently small and the investments are liquid, so that a divestment can be accomplished without significant impact on prices and with relatively low transaction costs.

The investments in the real estate portfolio will have other characteristics. The holdings can be much larger than in the equity portfolio, and they will be far less liquid than publicly traded securities. This means that a required disposal may lead to far greater risk of loss and high transaction costs. If the holding is large, it can also be argued that it would not seem very ethical to sell the holding if there is a problem related to for instance environmental protection or labour rights. On the contrary, it can be argued that the Fund should

have a good chance of influencing the situation through improvements and initiatives. Access to public information about private investments will generally be poorer than for listed ones. This makes it difficult for the Council on Ethics to monitor the portfolio. The information the Council on Ethics relies on is often based on publicly available sources.

Page 96 of Report no. 16 (2007-2008) to the Storting states:

«The ethical guidelines will, generally speaking, also apply to investments in new asset classes like real estate.»

The Ethical guidelines of 2004 have been replaced by the two new guidelines for responsible investment practices described above. The Guidelines for Norges Bank's work on responsible management and active ownership are applicable to listed as well as unlisted investments.

With respect to the Guidelines for observation and exclusion, the particular characteristics of unlisted investments described above indicate that it would not be appropriate to let the current exclusion mechanism apply to such investments. The ethical minimum standards laid down by the Guidelines for observation and exclusion should be safeguarded in other ways for unlisted investments in the real estate portfolio. It will be particularly appropriate to call for assessments of social and environmental conditions in advance of an investment. Should problems related to specific investments arise after they are made, active ownership should be the primary instrument.

The Ministry has accordingly concluded that the Guidelines for observation and exclusion should not be applied to unlisted investments. The Ministry will return to these questions and consider whether and in which cases special regulation of such factors should be applied to unlisted investments.

#### **4.6.3 Questions concerning government bonds**

In 2007, a new provision was introduced in section 3.2 of the supplementary guidelines for the management of the GPFG concerning restrictions on investments in certain government bonds. The provision is designed to give the Ministry the option of barring Norges Bank from investing in government bonds issued by certain countries. The Ministry of Finance has decided that the GPFG is not to be invested in government bonds



issued by the state of Myanmar (Burma). The reason for this emerges from section 3.4.2 of Report no. 24 (2006-2007) to the Storting:

«(...) To avoid the creation of uncertainty as to the purpose of the Fund's investments, it is emphasised that such decisions have to reflect broad political agreement in line with the principle of «overlapping consensus» as defined by the Graver Committee. Decisions not to invest in the government bonds of individual countries should therefore primarily apply to countries in respect of which UN sanctions have been imposed, or countries that are subject to other special international measures supported by Norway. The Government intends, against the background of the measures adopted by the EU and other countries against Burma (Myanmar), to amend the guidelines in such a way as to explicitly bar Norges Bank from investing the Pension Fund's capital in bonds issued by the state of Burma.(...)»

The Storting subsequently approved the move, see Recommendation no. 228 (2006-2007) to the Storting, which states:

«The Committee takes note of the information and the Government's proposal to amend the guidelines so that Norges Bank is explicitly barred from investing the Pension Fund's capital in bonds issued by the state of Burma.»

Report no. 20 (2008-2009) to the Storting discusses issues concerning the Ethical guidelines' applicability to the Fund's investments in government bonds. The reason for this was that some consultative bodies in the evaluation had raised the issue of whether the scope of the prohibition against investing in certain countries' government bonds should be expanded. Other consultative bodies had raised issues related to so-called «illegitimate debt». In section 4.4.1 of Report no. 20 (2008-2009) to the Storting the Ministry stated:

«(...)Like the Graver Committee, the Ministry believes that normal foreign policy channels are a far more important instrument for influencing the authorities of other countries in the desired direction. To avoid creating uncertainty about the purpose of the investments in the Fund, such decisions should reflect broad political agreement. The decision not to invest in the government bonds of certain countries should therefore primarily apply to countries on which the UN Security Council has imposed sanctions, or countries covered by other international measures supported by Norway. On this basis it has

been decided that the Government Pension Fund Global cannot be invested in government bonds issued by Burma.

The Government finds that it would represent a dramatic boycott of a country to go so far as to exclude this country's government bonds from the investment universe. The Ministry would only take such a step if it ensued from international sanctions. It has not been Norwegian policy to introduce unilateral measures against countries engaged in war, civil war etc. It would also be perceived as a strong politicisation of the Fund and characterise it as being more of a foreign policy instrument. Another aspect of this is that in general, investments in government bonds can hardly be considered direct financing of war or conflict, but may just as well be spent on legitimate services provided by the state, such as education and health etc. Without an international anchoring as described above, using the threat of exclusion from investment as a general instrument in Norwegian foreign policy is out of the question.»

Recommendation no. 277 (2008-2009) to the Storting states:

«The majority points out that the exclusion of government bonds is conditional on the introduction, with Norwegian support, of comprehensive international sanctions against the authorities of the country concerned, and refers to the rationale for this in Report no. 20 (2008-2009) to the Storting. The majority will request that next year's management report provide a more detailed review of opportunities for continuing to develop the Fund's ethical guidelines also for investments in government bonds, in light of the overarching desire to avoid the unacceptable risk of contributing to environmental damage, gross corruption or other gross violations of human rights. The majority points out, however, that the Fund should not be a foreign policy tool.»

In line with the majority's comment, the Ministry has undertaken a new review of the rules that provide an opportunity to bar the GPFG from investing in certain countries' government bonds.

Government bonds are bonds issued by states in order to fund the country's public expenditure. Government bonds are placed on sale in the international financial markets, and may as a rule be traded on the secondary market after they are issued. The bond market is one of several financing sources that a country can use to obtain funding. Capital borrowed through the government bond market is used by the authorities of the country in

question. In addition, financing can take place through direct borrowing from other states or international financial institutions such as the World Bank, the International Monetary Fund or regional development banks. Government bonds will only be suitable as a source of funding if there are buyers for the bonds. This means that the states that have low confidence in the capital markets due, for example, to weak government finances, or lack of trust in those in power, often in practice will not issue government bonds.

The Ministry holds the view that it would be extremely demanding to apply a system where the Fund as a financial investor were to take measures, including exclusion of government bonds or initiating dialogue with authorities in other states, based on an assessment of whether the country is guilty of conduct as described, for example, of environmental damage or human rights violations. First of all, the Fund would move very far into foreign policy. The GPFG is owned by the state, and it would be difficult to prevent any exclusion of other countries' government bonds from the Fund being simultaneously perceived as Norway's official view. It will be difficult to avoid such decisions being interpreted as a unilateral boycott of the country concerned, and in that manner a strong foreign policy signal. As the majority of the Committee points out the Fund shall not be an instrument of foreign policy. Sending foreign policy signals through the Fund that are in conflict with the policy Norway otherwise pursues, for example vis-à-vis countries that are at war, civil war etc., would be highly problematic. It has not been Norwegian policy to introduce unilateral measures against countries in such a situation. Also, any exclusion on the basis of assessments related to the other states' alleged unlawful actions could lead to difficult legal issues, both in terms of the country's internal law and international law. The same applies to clarification of the facts.

Furthermore, owning government bonds will not be a natural starting point for a dialogue with authorities of other countries on for instance human rights issues. Neither the Ministry of Finance as the owner of the Fund nor Norges Bank as manager has a natural role in the dialogue with authorities of other countries on such issues. Such dialogue must take place through the Ministry of Foreign Affairs and in the forums that have been established for this. Bond holdings would also not be a very suitable entry point for addressing the issue of human rights in certain countries. Many of the countries where there may be the most cause for

concern about human rights violations do not issue bonds. This underlines the importance of using established foreign policy channels in dialogue with other states. It provides the best basis for prioritizing efforts where the needs are greatest.

On the basis of these weighty considerations, there has been a fundamental departure since the ethical guidelines were adopted that measures directed at states are not a suitable instrument for the Fund. However, an exception has been made that applies to the system of barring investments in government bonds issued by the state of Burma. As shown in Report no. 24 (2006-2007) to the Storting, Burma has been singled out because of the scope of international measures against the country. The system of prohibition against investments in Burmese government bonds is thus based on clear and objective characteristics that are observable to others and is therefore in less danger of being perceived as a unilateral foreign policy action. Moreover, the fact is that most countries that could be included in the same category as Burma do not issue government bonds.

The current framework for the management of the Fund, supplementary guidelines section 3.2, gives the Ministry the option of barring investments in Burmese government bonds. The criteria for such a decision are not, however, contained in section 3.2. It may therefore be appropriate to formalize such an arrangement on a more general basis. Exclusion of government bonds issued by certain countries should only be decided where comprehensive UN sanctions have been adopted, or where Norway has supported other large-scale international initiatives aimed at a specific country. Only on such a basis would it be appropriate to make exceptions from the fundamental principle that the Fund shall not implement measures against states. The Ministry of Finance aims to include rules about this in its guidelines for observation and exclusion from the GPFG no later than by the end of the year.

The Ministry also points out that Norway through the Ministry of Foreign Affairs participates in international efforts aimed at arriving at an agreed definition of responsible lending and illegitimate debt and any rules that will prevent such borrowing. This work is not primarily directed at debt borrowed through government bonds, but state-to-state debt. The funds in the GPFG are not used to provide direct loans to states. Nevertheless, the Ministry of Finance will keep itself updated on the work on a general basis.

*Part II*  
*Topic articles*



## 5 The financial crisis and its impact on the benchmark index of the GPFG

### 5.1 Introduction

The investment strategy for the GPFG is based on assessments of expected long-term return and risk. The strategy is expressed in a benchmark index consisting of 60 per cent equity and 40 per cent bonds (fixed-income securities). At times, the financial markets will be subject to wide fluctuations, and the returns achieved can deviate significantly from the long-term expectations. Knowledge about turbulent periods is important for the work on the Fund, because it gives insight into the diversification properties of the portfolio and its sensitivity to developments in the economy and other risk factors.

The financial crisis sparked the biggest fall in the stock market in the Fund's history. The global stock market fell 54 per cent from October 2007 to March 2009, and the benchmark for the GPFG fell 24.9 per cent in the same period. Below we analyse the developments in the benchmark index during the financial crisis. The analysis of the benchmark for equities focuses on developments in the different sectors which the stock market can be divided in to. This approach provides good insight into several of the key characteristics of the financial crisis.

### 5.2 Developments in the stock market

Figure 5.1 shows the developments in the stock market since the end of 1997. The problems in Asia and Russia in 1998 triggered a brief, less dramatic fall of 14 per cent. The areas that were affected by the crisis constituted a relatively small portion of total market value of the stock market, thus limiting the impact. In the period 2000–2002, the stock market fell 45 per cent. This period is often referred to as the «IT bubble» as the fall followed a period of very high valuation of the sectors information technology, telecommunications and media. Investors were also uncertain of the impact the falling stock market would have on

economic growth. There was worries that a marked reduction in households wealth – caused by the fall in the stock market – might lead to increased savings, thereby reducing private consumption sharply. This was avoided, partly because the Federal Reserve reduced interest rates significantly.

The financial crisis triggered expectations of a deep, global recession. The crisis illustrated just how tightly integrated the financial system is and how vulnerable the economy is to problems in this system. The financial crisis was both a credit crisis and a liquidity crisis. The lack of liquidity led to different markets being more closely linked than normal. This was reflected in the returns in the various sectors. The crisis affected all the sectors, and most sectors fell 40 per cent or more (see figure 5.2). The financial sectors in particular suffered massive losses. Banking, insurance and financial services (including investment banks) fell more than 70 per cent.

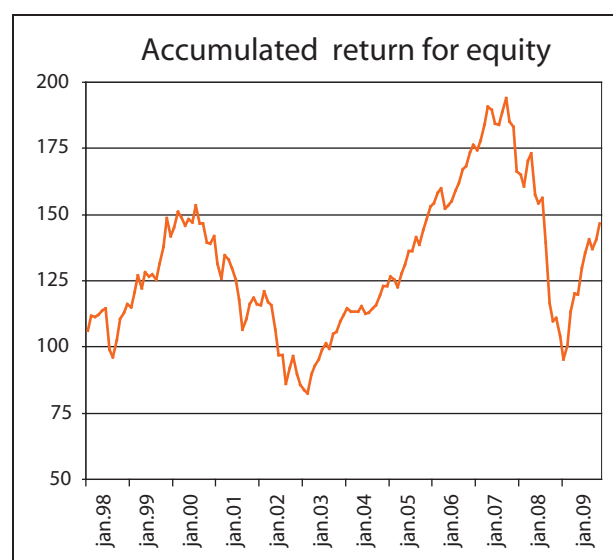


Figure 5.1 Accumulated nominal return on the benchmark for equities of the GPFG measured in the currency basket of the benchmark. December 1997 = 100

Source: Ministry of Finance and Norges Bank

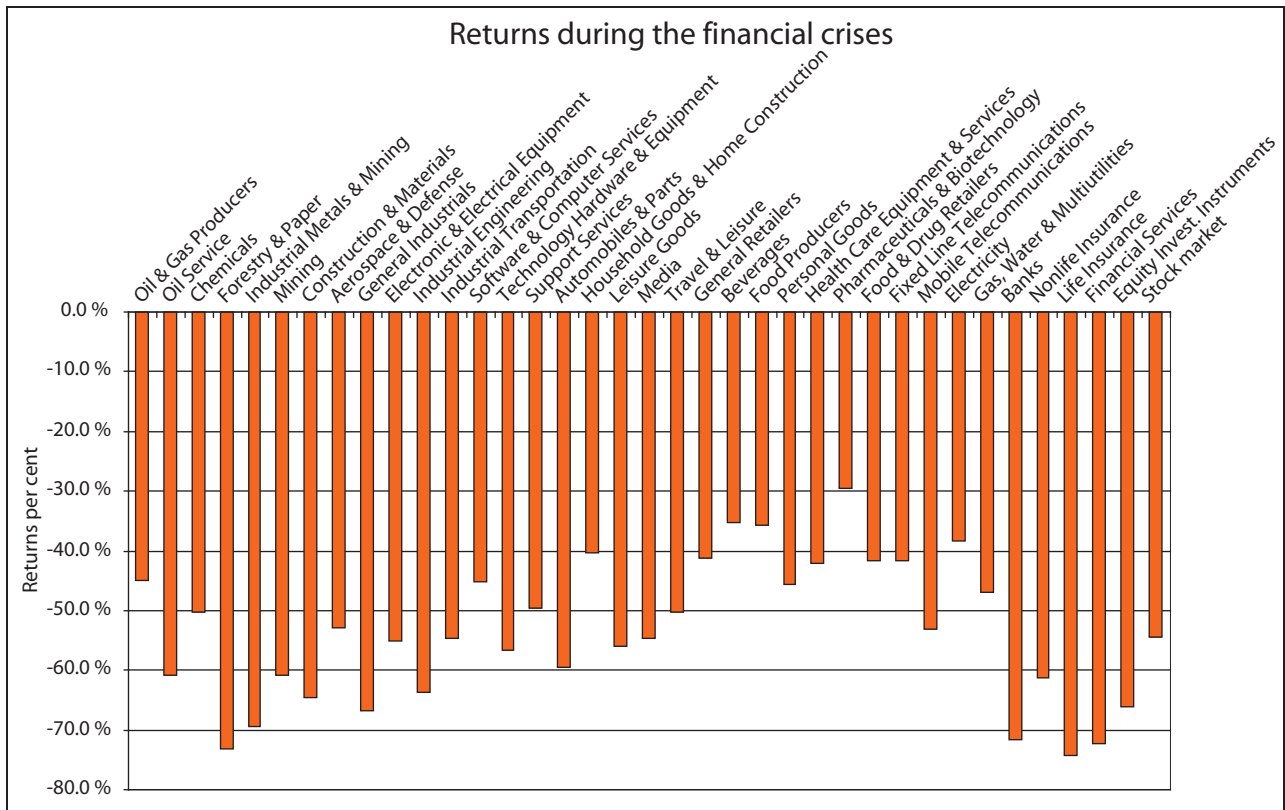


Figure 5.2 Nominal returns for the sectors in the FTSE All-World Equity Index from 31 October 2007 to 28 February 2009 measured in local currency

Source: FTSE and Ministry of Finance

At the beginning of the financial crisis, the banking sector was by far the largest single sector in the stock market with a 13.7 per cent share of the total market value. Insurance, banks and financial services accounted for 23 per cent of the total market value of the stock market. The sharp price falls in these sectors thus had a large direct impact on the stock market.

Figure 5.3 shows each sectors contribution to the fall in the stock market so that the total adds up to 100 per cent. The drop in share prices in the financial sectors explains a total 29.3 per cent of the overall decline in the stock market, while the banking sector alone was responsible for 17.7 per cent. In the other sectors, the contributions are far more evenly distributed, even for sectors with high market value such as healthcare and energy. In addition, the financial sectors are major players in the financial markets as investors, issuers of debt securities and by virtue of their central role in the credit market. The problems in these sectors therefore also had a significant, negative, indirect impact on the stock market.

The developments in the sectors during the financial crisis can be assessed in light of their sen-

sitivity to the stock market during «normal» times. This provides a basis for assessing how the sectors were influenced by the financial crisis beyond the general decline in the stock market. Beta is a measure of a sector's sensitivity to changes in the overall stockmarket. Sectors with historically small fluctuations and low correlation with the stock market have a low beta value and are expected to fall less than the stock market during periods with falling stock market.

Jensen's alpha is used to assess a portfolio's return in relation to its beta. A positive alpha means that the sector had lower depreciation during the financial crisis than expected in view of its beta. Jensen's alpha shows how large this excess return is – after adjustment for risk-free interest.

According to the Capital Asset Pricing Model (CAPM), beta is also a measure of the overall risk that investors will require compensation for. Jensen's alpha is therefore a measure of risk-adjusted excess return. In financial literature, however, there is general consensus that also other factors should be included in an analysis of risk-adjusted excess return (see the discussion of risk factors in chapter 7). Figure 5.4 shows Jensen's al-

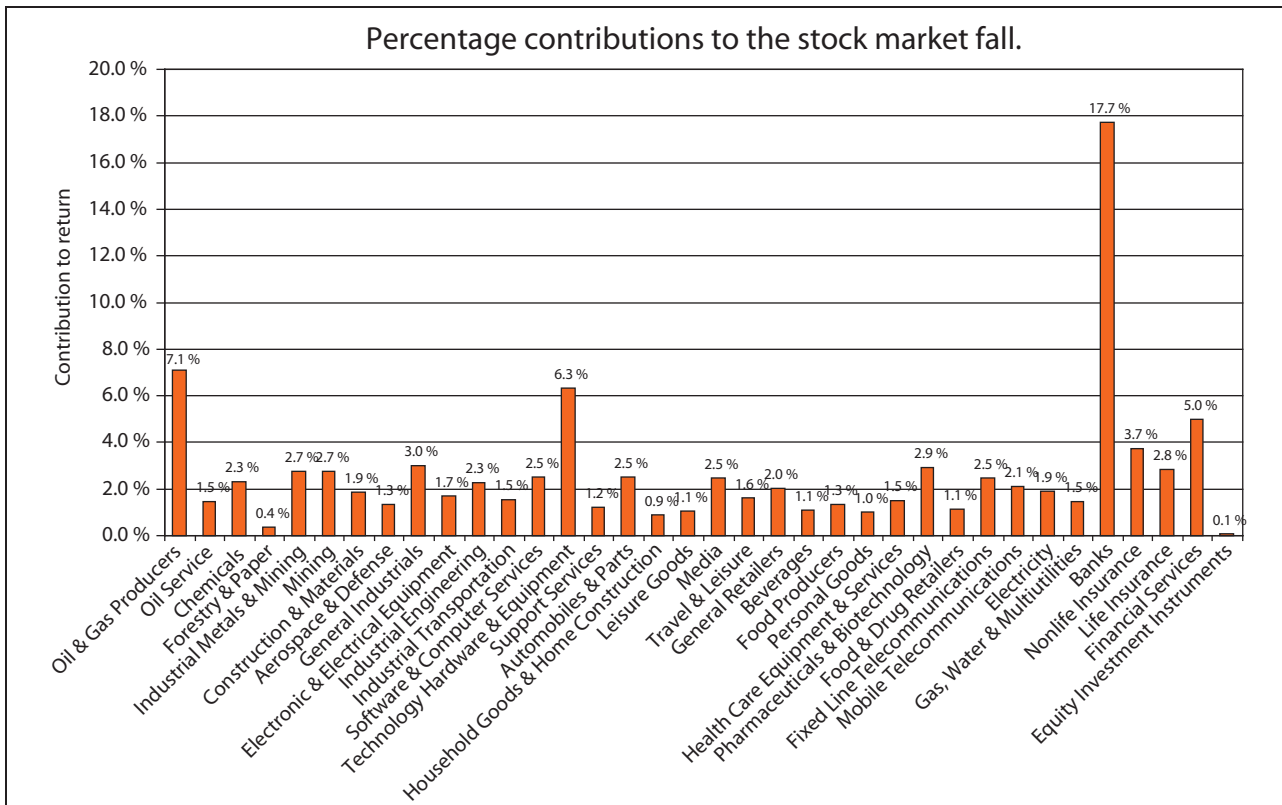


Figure 5.3 Sectors' proportional contribution to the fall in the FTSE All-World Equity Index from 31 October 2007 to 28 February 2009. Per cent

Source: FTSE and Ministry of Finance

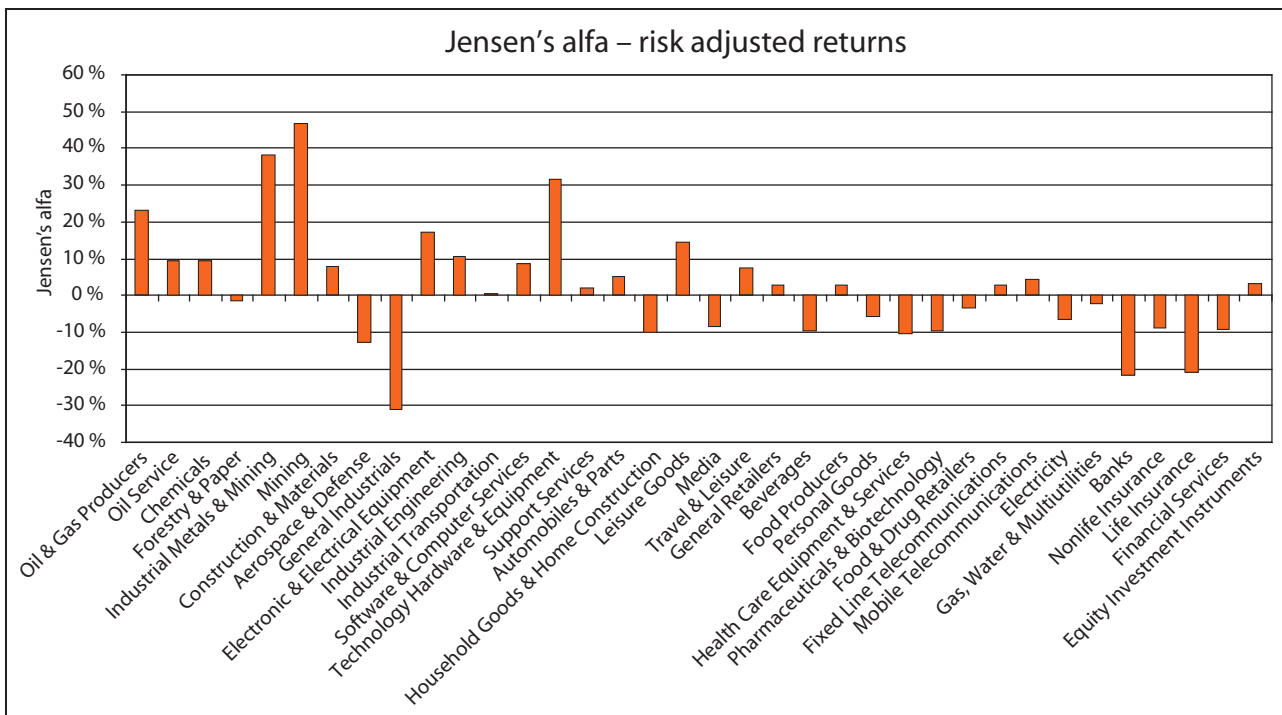


Figure 5.4 Jensen's alfa calculated for the sectors in the FTSE All-World Equity Index

Source: FTSE and Ministry of Finance

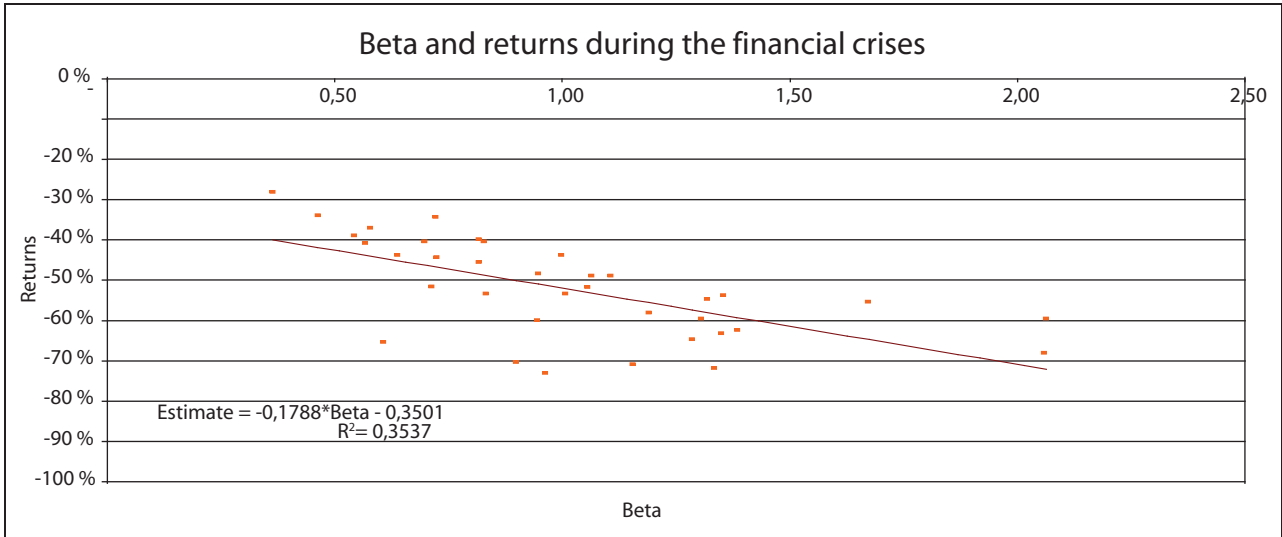


Figure 5.5 Estimated beta values for the sectors in the FTSE All-World Equity Index and nominal returns from 31 October 2007 to 28 February 2009 measured in local currency

Source: FTSE and Ministry of Finance

pha for the sectors based on beta values estimated from 2004 until 2007.

Figure 5.4 shows that the financial sectors had a negative return adjusted for beta. The banking sector fell 72 per cent during the financial crisis – 22 per cent more than the historical beta values indicate. The corresponding figure for life insurance was 21 per cent and 9 percent for financial services. Sectors in which developments in emerging economies are important – such as oil and gas, mining, industrial metals and chemicals – made a significant, positive contribution. In recent years, these sectors have had significantly higher returns than the overall stock market.

In turbulent markets, we often see an increasing correlation between risky assets. This means that the effect of diversification is reduced in these periods. As the financial crisis progressed, growing correlation could be observed among all the sectors – especially in those sectors that had initially had low correlation and thus a low beta. Sectors that historically were not especially sensitive to the stock market therefore achieved a weaker beta-adjusted return in figure 5.4 than sectors that already had high sensitivity. Figure 5.5 shows the return in the sectors during the financial crisis and their respective beta values. On average, sectors with a high beta fell more than sec-

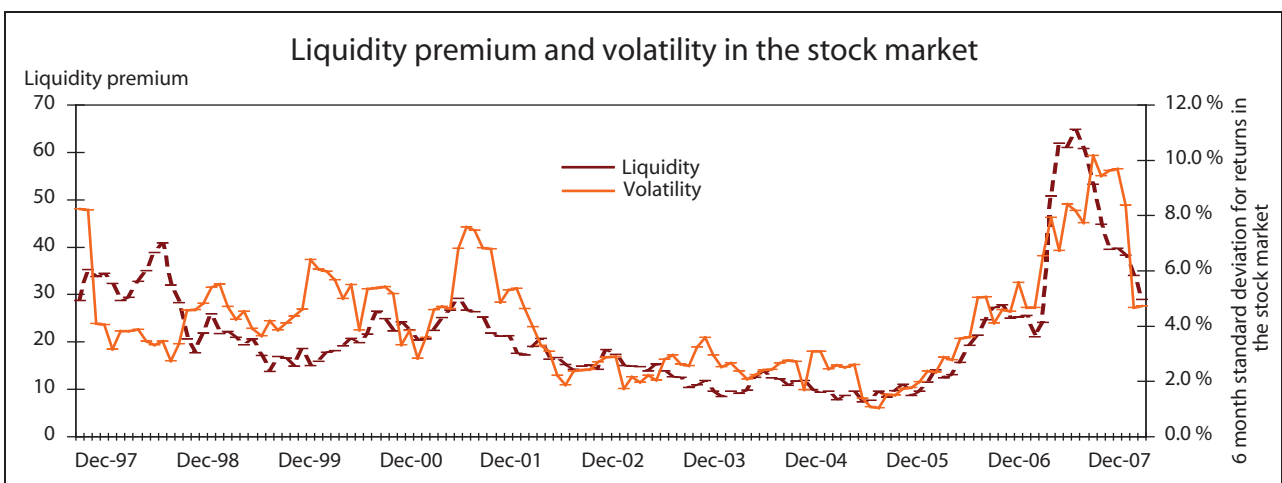


Figure 5.6 Rolling six-month standard deviation for the FTSE All-World Equity Index in local currency and yield differential of US on-the-run and off-the-run Treasury bonds

Source: FTSE and Ministry of Finance



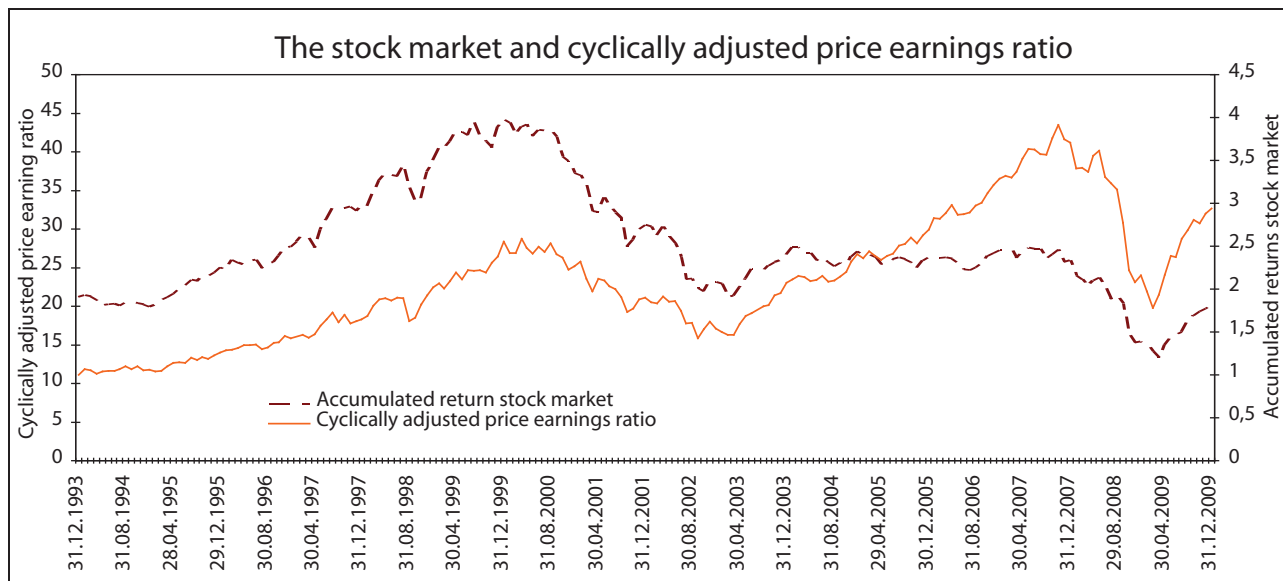


Figure 5.7 Accumulated nominal return for the FTSE All-World Equity Index measured in local currency and developments in the trend-adjusted price–earnings ratio of the US stock market

Source: FTSE and Ministry of Finance

tors with a low beta, but the difference was less than suggested by the historical data. This indicates that other factors may have been more important for the sectors' performance during the financial crisis than those that formed the basis for the calculation of the beta value.

Many investors also had similar experiences with different asset classes and investment strategies – which were much more closely correlated with the stock market during the financial crisis than they had been in the past. Many sources cite the massive reduction in access to liquidity as an important explanation. During the financial crisis, large positions in the financial markets had to be liquidated as investors no longer had access to financing. Falling prices and lower liquidity led to increased demands for provision of collateral for leveraged positions. This in turn caused more securities being sold off. The banks had also major problems borrowing, and any excess liquidity was placed in liquid government bonds, rather than loans to investors. During the financial crisis, the investors were also very uncertain about the potential outcomes of the crisis. It was difficult to assess the consequences of the extensive problems in the financial system. In a situation with sharply falling growth, a banking crisis and extreme market volatility, investors were looking to reduce their exposure to shares in all sectors. This had the effect of increasing the correlation among the sectors. In the financial markets, there was growing demand for low-risk securities – primarily gov-

ernment bonds – while risky assets became more closely correlated.

From 2003 to 2008, the market went from having very good access to liquidity to a severe lack of liquidity. The outcome of this was a sharp increase in the volatility of risky assets, and the stock market plummeted from October 2007. In turbulent markets, investors demand safe and liquid securities, as they offer predictability and flexibility. In markets with good access to liquidity, investors are not willing to pay as much for these properties. Figure 5.6 shows the relationship between the developments of a liquidity premium in the government bond market (which is described in more detail in chapter 7) and volatility in the stock market.

The stock market is driven by expectations of future earnings and valuation. Valuation of the stock market is often procyclical and reflects increased optimism and willingness to take risks among investors. Factors such as good access to liquidity often contribute to higher valuation of the stock market. However, the rise in the stock market prices prior to the financial crisis was driven less by high valuation than often seen previously. This probably helped moderate the fluctuations in the stock market during the financial crisis. A higher valuation at the onset of the crisis could have led to an even larger fall.

Figure 5.7 shows the developments in the stock market and valuation. Valuation is measured using the value of the US stock market compared

with ten-year rolling earnings. Prior to 2000, increased valuation was a very important factor behind the upturn. There were extremely high valuations in the technology, telecommunications and media areas in particular. When these sectors did not deliver results consistent with the expectations, there was a significant drop in valuation. The stock market fell 45 per cent – only 9 percent less than during the financial crisis – despite the fact that financial crisis had far greater negative consequences for the real economy.

### 5.3 Developments in the fixed-income market

The level of risk in the GPFG is determined primarily through strategic asset allocation. The interaction between the equity and fixed-income indices is the main source of risk diversification in the fund.

During the decline in the stock market in the period 2000–2002, the fixed-income benchmark rose by 19.5 per cent, whereas during the financial crisis it rose by 6.3 per cent. The fixed-income benchmark thus helped mitigate the drop in the Fund's total benchmark index in both periods. In particular, government and government-guaranteed securities helped dampen the impact on the Fund's total return in these periods. This is due not only to the fact that sharp falls in the stock market have been followed by a more expansion-

ary monetary policy, but also that government bonds are very liquid and are generally considered a «safe haven» in turbulent markets. Corporate bonds will also benefit from falling interest rates, but usually the yield differential between government bonds and corporate bonds increases as the stock market falls. Falling stock markets reflect expectations of lower cash flows from the corporate sector and thus reduced debt-servicing capacity.

Figure 5.8 shows the returns in the different issuer segments in the fixed-income benchmark. With the exception of corporate bonds, all the segments developed positively during the financial crisis. Roughly two-thirds of the fixed-income benchmark has an explicit or an implicit government guarantee. This was central to the return on the fixed-income benchmark during the financial crisis.

Corporate bonds had a negative return during the financial crisis. The benchmark index for the GPFG consists exclusively of corporate bonds with high credit ratings – i.e. investment grade bonds. Increased credit risk was an important cause of the fall, but a sharp reduction in liquidity also served to lower the return on these securities. The fixed-income markets were hit much harder by lower liquidity during the financial crisis than the stock market.

Figure 5.9 shows the value development of the fixed-income benchmark and the 12-month rolling correlation between the return on the equity and

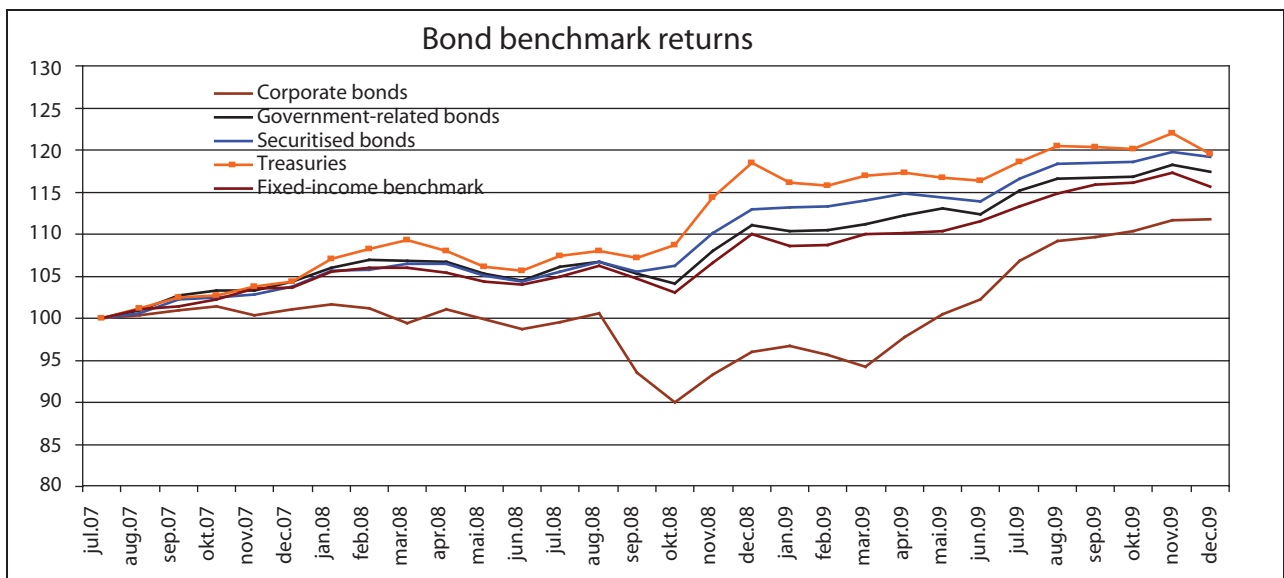


Figure 5.8 Accumulated nominal return on the benchmark index for fixed-income securities in the GPFG measured in local currency and distributed according to issuer sector

Source: Ministry of Finance and Norges Bank

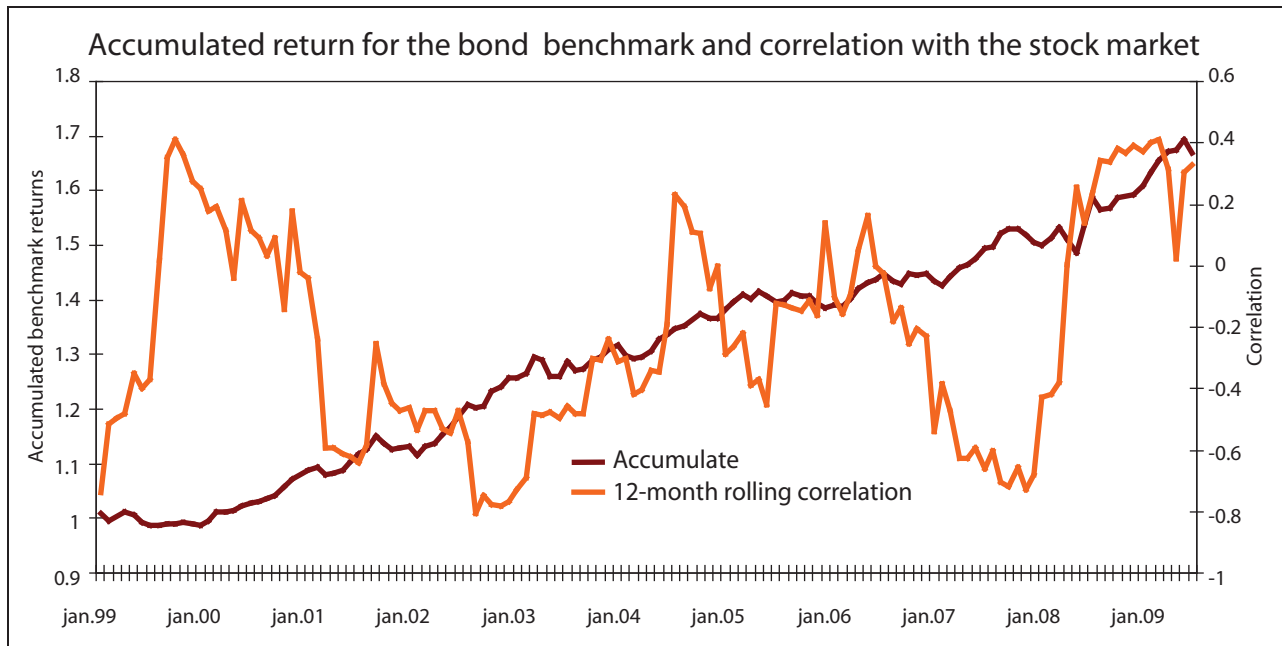


Figure 5.9 Accumulated nominal return on the fixed-income benchmark for the GPFG and 12-month rolling correlation between nominal return on the benchmark indices for fixed-income securities and equities in the GPFG measured in the currency basket of the benchmark index

Source: Ministry of Finance and Norges Bank

fixed-income benchmarks. With few exceptions, the fixed-income benchmark has risen throughout the period, meaning that developments in the stock market have been important for the measured correlation. The correlation between equities and interest rates has varied over time and

has been positive for prolonged periods. Since 1997, however, inflation has been low and stable, giving central banks considerable scope to lower interest rates in response to problems in the financial markets or the economy.

## 6 The academic research on efficient markets and active management

### 6.1 Introduction

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Chapter 2 of this Report provides a detailed account of the evaluation of the active management of the GPFG. It states, among others, that the Ministry of Finance ordered an external report from professors Andrew Ang (Columbia Business School), William N. Goetzmann (Yale School of Management) and Stephen Schaefer (London Business School); the purpose of which was to account for the theoretical and empirical basis for active management, analyse the results achieved by active management of the fund in the past, and discuss the foundation for active management in the future. This article presents a summary of the results of the expert group's review of the academic research on efficient markets and active management.

### 6.2 The Efficient Market Hypothesis

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The report from Ang, Schaefer and Goetzmann is based on the «Efficient Market Hypothesis» (EMH), which was developed in the 1960s and 1970s. The efficient market hypothesis states that the price of a financial asset, like a share or bond, always reflects all available information about the asset's fundamental value. If this hypothesis is correct, it will be impossible for a manager to consistently «beat the market». Active management will thus not have much of a role to play regarding adding value.

The theoretical starting-point for the efficient market hypothesis is based on a large active marketplace for listed securities, characterised by tough competition between investors, leading to the lack of any extra return beyond normal compensation for market risk. An implication of this is that investors who seek to achieve a higher return through active management will accrue a loss. A pure indexing strategy will consequently outstrip a strategy that is based on active management, where the purpose is to use erroneously-priced securities.

The efficient market hypothesis is based on a number of strict assumptions. During the past two decades, the academic research on efficient markets has attempted to further develop the hypothesis by making less strict assumptions. The result of this research is a more modern description of the EMH, which takes consideration of the existence of market frictions, the costs of information gathering, principal-agent problems, and restrictions related to capital structure, among others.

The report by Ang, Goetzmann and Schaefer shows that this development does not change the basic insight from the efficient market hypothesis; namely that it is very difficult to achieve excess return in a market characterised by a high level of competition. However, the academic research does not preclude the existence of cases of erroneous pricing. Recent research has focused in particular on the institutional framework conditions that must be present to be able to use such erroneous pricing, and the extent to which an active role yields benefits that can be transferred to tasks other than «beating the market».

Academic studies are described below that attempt to test the extent to which the efficient market hypothesis can be rejected within different markets and asset classes.

### 6.3 Empirical studies of the Efficient Market Hypothesis

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In the report, Ang, Goetzmann and Schaefer point out that much of the academic research on the efficient market hypothesis and active management is based on data from the US stock market, and US equity funds. This limit is due to the lack of access to data for other markets and investors.

Empirical studies of the efficient market hypothesis are either based on tests of prices or of managers. Price tests are typically based on investigating whether specific types of active strategies could have been exploited to create a positive risk-adjusted return when they are tested on historical

data. If it is possible to prove profitability in such strategies, this is considered a breach of the efficient market hypothesis. Active strategies or trading rules that contain this quality are often considered «anomalies».

In general there are a number of methodical issues associated with this type of test. So-called 'data mining' is one issue, and is related to the fact that when many researchers actively analyse specific data, it is almost unavoidable that one or more trading rules will incidentally appear to be profitable later. Another issue is related to price tests in practice being a shared test of the model for the expected return and level of market efficiency.

Price tests are generally based on a specific pricing model that is presumed to represent the 'correct' price of the financial asset (for example a share) in the form of exposure to a set of common risk factors. The simplest model is the «Capital Asset Pricing Model» (CAPM), while the one used most lately is the multi-factor model developed by Ross (1976): «Arbitrage Pricing Theory»

(APT). This model is based on investors being compensated in the form of a higher expected rate of return to assume the risk of exposure to a set of risk factors. Both the CAPM and APT model place emphasis on the risk factor's importance regarding setting the expected future return on an investment.

A number of empirical studies in the 1970s and 1980s showed a breach of these models in that accounting issues, different goals for company earnings and more company-specific issues could be exploited to predict future movements in share prices. These findings were called anomalies because they could not be explained by the theoretical models. For example, the capital asset pricing model states that the expected return only depends on a single factor: market risk (beta). Later studies also revealed breaches of models that include several risk factors other than market risk; among others, size, value and momentum (cf. table 6.1). This is described in further detail in article 7 in this report.

Table 6.1 Selected studies of different types of price tests<sup>1</sup>

	Study
<i>Past studies of breaches of efficiency (anomalies)</i>	
Small-cap premium: small companies yield a higher return than big companies	Banz (1981)
The January effect: investments in January yield a higher return than those in other months	Keim (1983), Reingaum (1983)
The price/earning effect: the relationship between the price and the company's earning can be use to predict future return on shares	Basu (1977)
The price/book effect: the relationship between recorded value and the company's market value can be used to predict a relative return	Stattman (1980)
Short-term reversal: a strategy based on being long shares that have had poor development during the past month and short shares that have had a high return, has had a tendency to yield a positive average return over time	Rosenberg et al. (1985)
The momentum effect: a strategy based on being long winner shares during the past 12 months and short loser shares, yields an excess return	Jagadeesh and Titman (1993)
Long-term reversal: a strategy based on being long shares that have had a low return during the past 1–5 years, and short shares that have had a high return during the same period, have had a tendency to yield a positive return during subsequent periods	Debondt and Thaler (1985)
A strategy that is based on being long shares with surprisingly positive news about earnings and short shares with surprisingly negative news yielding an excess return.	Bernhard and Thomas (1989)

Table 6.1 Selected studies of different types of price tests<sup>1</sup>

	Study
Investors make transactions based on information in companies' annual reports, which was previously reported in quarterly reports.	Hand (1990)
A negative relationship between accrued accounting figures and future return on shares	Sloan (1996)
<i>More recent studies of anomalies</i>	
Companies with a higher company-specific risk have a lower return	Ang et al. (2006)
Investor sentiment affects prices	Baker og Wurgler (2006)
Share transactions among small investors affects share prices	Kumar and Lee (2006), Kaniel et al. (2008)
Football World Cup losses result in a negative return the following day	Edmans et al. (2007)
Shares that are sensitive to market turmoil have a lower average return	Campbell et al. (2008)
Shares at supplier companies react more slowly to financial shocks than shares at manufacturer companies	Cohen and Frazzini (2008)
The markets react differently to tangible and intangible information	Daniel and Titman (2006)
Shares with a high return during the past week yield a persistently higher return up to 12 months	Gutierrez and Kelly (2008)
The impact on prices resulting from earnings news is greater when published on a Friday	Dellavigna and Oplet (2009)
<i>Risk factors</i>	
The market portfolio does not yield the highest possible average return for a specific level of risk	Kandel and Starnbaugh (1987)
Single-factor models like CAPM can be rejected to the benefit of multi-factor models	Hansen and Jagannathan (1997)
<i>Long-term predictability</i>	
Historical return, the relationship between dividends/earnings and price/earnings predicts a long-term return on shares	Fama and French (1988a, 1988b)
Fundamental factors like price/earning can be used to time the market	Shiller (1981), Poterba and Summers (1988), Campbell and Shiller (1988)

<sup>1</sup> A further description of each reference in this table is found in the report by Ang, Goetzmann and Schaefer.

Source: Ang, Goetzmann and Schaefer (2009) and the Ministry of Finance.

As tests of the efficient market hypothesis based on prices are a shared test of the specific pricing model and the level of market efficiency, the specification of the pricing model will be of great importance to the result. Many of the early studies that detected a breach of market efficiency

(anomalies) were based on a model where market risk is the only risk factor. Specification of this model was further typically based on a reference index that consisted of a market-weighted stock portfolio for the US market.

The debate regarding the efficient market hypothesis has lately focused particularly on the extent to which such breaches must be interpreted as inefficiency, or whether they reflect that other relevant risk factors have been inadequately identified and specified. The report from Ang, Goetzmann and Schaefer points out that independently of whether the efficient market hypothesis is due to inefficiency or no consideration has been taken of other relevant risk factors, studies of price tests may be of potential relevance to the GPFPG, if they can state possible sources of return.

In their report, Ang, Goetzmann and Schaefer argue that if the benchmark is exclusively a market-weighted portfolio made of up all securities traded, active management (defined as a deviation from these market weights) may be appropriate to achieve exposure to risk factors that are not covered by the exposure to market risk. Academic research supports investors over time receiving compensation for taking systematic risk, for example by investing in value shares, compared with growth shares. If more systematic factors are included in addition to the market risk factor in a price test, empirical studies show that a hypothesis that the market portfolio is efficient can be rejected.

Testing active strategies that are based on creating risk-adjusted excess return (pure alpha), based on historical data, indicates that there are a number of potentially profitable investment strategies. However, Ang, Goetzmann and Schaefer point to several issues that mean that these strategies have limited transfer value to the fund. First, the profitability of these strategies represents a calculated, and not actually achieved excess return. No consideration has further been taken of transaction costs, management costs and market influence. Second, the results may be influenced by the potential skewedness that follows from the methodical problems associated with data mining (cf. above). Changed market conditions, including a variation of the profitability of active strategies over time, mean that it is generally difficult to extrapolate the results. Third, Ang, Goetzmann and Schaefer make reference to several of the proven profitable deviations from the market portfolio not being scalable, and that they therefore cannot be executed on a scope relevant to the GPFPG.

The other type of empirical studies of the efficient market hypothesis is tests based on managers and institutional investors (cf. table 6.2). These tests are more relevant to the fund than tests based on prices.

Table 6.2 Selected studies of managers and institutional investors<sup>1</sup>

	Study
<i>Equity funds</i>	
No statistical support for a hypothesis of systematic skill	Jensen (1986)
The equity fund has yielded a negative excess return of 0.85 % per year after costs (0.29 % before costs)	Fama and French (2008)
The equity fund has yielded a higher return than the S&P500 before costs, but not after	Wermers (2000)
The average risk-adjusted return or costs are approximately zero	Ferson and Schadt (1996)
The average investor may be able to increase its average return by 0.67 % through passive management	French (2009)
<i>Institutional managers</i>	
Support for positive risk-adjusted excess return	Tonks (2005)
Support for persistence among pension fund managers, but only among managers with relatively weak results	Christopersen (1998)
Termination of managers and employment of new managers yields no value, compared with keeping present managers	Goyal and Wahal (2008)
Support for persistence, but this is due to the momentum factor	Busse et al. (2009)
No evidence of value creation through manager selection	Stewart et al. (2009)

Table 6.2 Selected studies of managers and institutional investors<sup>1</sup>

	Study
The pension fund yields a higher return than equity funds, based on style and size	Bauer et al. (2008)
Certain types of university funds perform better than other funds	Lerner et al. (2008)
The ability among university funds to create alphas has been underexploited	Brown and Garlappi (2009), Brown et al. (2009)
<i>Sovereign wealth funds</i>	
Positive results in the short-term, but negative in the long-term	Bortolotti et al. (2008)
Positive results in the short-term, but zero risk-adjusted excess return in the long-term	Kotter og LeI (2008), Dwenter et al. (2009)
<i>Hedge funds</i>	
Hedge funds beat equity funds in 1988–1995, but on average do not yield a positive risk-adjusted excess return	Ackermann et al. (1999)
Support for positive risk-adjusted excess return	Brown et al. (1999)
Persistence among winners in the short-term, but signs of differences in skills	Agarawal and Naik (2000)
Persistence among the best, a sign of skill	Jagannathan et al. (2006)
Finds evidence for average excess return	Bailey et al. (2004)
Positive results and persistence, based on annual horizon	Kosowski et al. (2007)
Positive alpha and sign of timing skill	Avramow et al. (2008)
Finds no sign of skill	Griffin and Xu (2007)
No sign of positive results	Malkiel and Saha (2005)
Alpha documented in other studies is compensation for carrying liquidity risk	Gibson and Wang (2009)
<i>Interest rate management</i>	
Several interest rate strategies are profitable later, but in several cases excess return is not significant	Duarte et al. (2005)
No sign of skill among interest rate fund managers	Elton et al. (1993)
Average negative excess return (insignificant)	Ferson et al. (2006)
Excess return before, but not after costs	Chen et al. (2009)

<sup>1</sup> A further description of each reference in this table is found in the report by Ang, Goetzmann and Schaefer.

Source: Ang, Goetzmann and Schaefer (2009) and the Ministry of Finance.

Many of the empirical studies of research results among managers are based on equity funds, but typically will have a cost structure and a starting-point for value creation that significantly deviates from the Fund. The results of these studies therefore have limited relevance to the management of the GPF. The results of these studies therefore have limited relevance to the management of the GPF.

More recent academic research indicates that certain managers have special skills that allow them to achieve a better return than the return in

the market, calculated before management costs. However, the research shows that there is no statistical basis for determining that the special skills are reflected in excess return for the client. The empirical studies generally show that for equity funds, the yield after costs and risk-adjusted excess return (alpha) is on average zero or negative (cf. table 6.2). At the same time, there is support for some managers being better than others, even though an average equity fund typically performs



more poorly than a passive portfolio on a risk-adjusted basis after management costs.

The empirical studies also show that for management through hedge funds there is no statistical support for the creation of a positive risk-adjusted return after deducting management costs. The data series at the heart of these analyses are significantly shorter than the studies of equity funds, and the quality of the data is also less certain. At the same time, the market for hedge fund management is changing, which makes it difficult to extrapolate the results of these studies. However, Ang, Goetzmann and Schaefer state that there is little support in statistics for private equity and venture capital to create a positive risk-adjusted excess return. Some studies indicate a certain level of persistence in skills, but it is not possible to draw clear conclusions, based on available data. For property management, there is not enough data to be able to assess the extent to which managers have created value on a risk-adjusted basis.

There is an even poorer foundation within other types of institutional management, like large university funds (endowments', pension funds and sovereign wealth funds, to determine whether active management can yield a positive risk-adjusted return. Certain US university funds achieved very good results before the financial crisis through an investment strategy based on alternative asset classes. It is asserted that a long time horizon allowed these funds to focus on alternative asset classes: Ang, Goetzmann and Schaefer make reference to most studies indicating that pension fund managers are unable to identify the best managers in advance, at the same time as the managers have little ability to

create a risk-adjusted excess return. The few studies of sovereign wealth funds that are based on investments in listed securities show that share prices react positively when a sovereign wealth fund makes an investment, at the same time that the long-term results of these investments are not particularly good.

## 6.4 Summary

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The modern description of the efficient market hypothesis allows for the existence of profitable active management strategies, based on exploitation of comparative advantages. Such advantages can be specialised knowledge, lower transaction costs, lower management costs or lower costs linked to principal-agent problems, and a financing structure that allows trade in securities with a long verification horizon. Such strategies mean that liquid securities markets are generally very efficient, even though there may be certain deviations (anomalies). Ang, Goetzmann and Schaefer argue in favour of being able to view the consideration between passive indexing and active management as a decision-making variable. The best adaptation will generally depend on perceptions of the existence of and potential linked to the manager's skill, the pricing of the securities on the market in question, the investor's time preferences and risk aversion, and the manager's competence and reward system.

Ang, Goetzmann and Schaefer believe that even modest skill on the part of a manager speaks in favour of at least part of the GPFG being managed actively.

## 7 Risk factors in the stock and bond market

Report to the Storting no. 20 (2008–2009) contained a discussion of priced systematic risk factors in the stock, bond and property market (cf. box 2.3, page 54). It showed that multi-factor models have taken over for the simple capital asset pricing model as an explanation of stock return. Credit risk, term risk and liquidity risk are recognised priced risk factors in the bond markets. Also possible priced risk factors in the property market were discussed.

Systematic risk is the risk one is left with in a well-diversified portfolio, while the diversifiable risk goes under other names like security-specific and idiosyncratic risk. The systematic risk reflects the inherent uncertainty of the economy. Investors cannot diversify away from economic downturns, credit crunches, lack of liquidity and market collapses, etc. However, an investor can refrain from investing (or only invest a smaller portion) in securities, such as shares, which tend to fall sharply in value in bad times.

As most investors are risk averse, and because systematic risk is inextricably associated with investments in securities, investors demand compensation for this risk in the form of a higher expected return. An important insight from finance theory is that the required return on a share or bond is linked to the investment's contribution to the portfolio's systematic risk, and not the risk of the security in isolation.

It was assumed in the finance theory developed in the mid-1960s (the capital asset pricing model) that the systematic risk of a security depends on the covariation between the return on the security and the return on the market portfolio, measured by the beta. Securities with a beta greater than one are more risky than the market in general, and will have a correspondingly higher required return than the required return on the market portfolio.

The capital asset pricing model is of great importance to the understanding of return and risk in the securities markets. A security's beta is still considered an important priced risk factor. However, empirical research has shown that the relationship between return and risk is more complex

than assumed by the model. For example, the model cannot explain a number of phenomena observed in the securities markets. Small companies have, for example, proven to outperform large companies with regard to their average rate of return, and this cannot be attributed to differences in the companies' betas. Nor can the model explain why companies with a low market value compared to recorded equity (so-called value companies) have later had a higher average return than companies with a high market value compared to recorded equity (growth companies). Empirical studies also show that companies that have had high return over the past 3–12 months tend to have high return also during the subsequent 3–12 months (cf. chapter 6). This so-called momentum effect cannot be explained by different market betas.

This indicates that the capital asset pricing model is too simple. Moreover, it is based on a set of unrealistic assumptions.

In light of this, Fama and French<sup>1</sup> expanded the capital asset pricing model to include two more systematic risk factors: company size (given by market value) and value (market value compared with recorded equity). According to this model, small companies will have a higher expected return than large companies, corrected for the market beta. The same applies to value companies. Carhart<sup>2</sup> expanded this so-called three-factor model to include a momentum factor («four-factor model»).

A possible theoretical explanation of the size and value effects is that small companies and value companies are more vulnerable during crises. During economic downturns it is assumed that it is easier for this type of company to go bankrupt or suffer greater financial problems than other companies. The stock return will thus be especially poor under such market conditions, and poorer than the companies' market beta exposure would

<sup>1</sup> Fama, E.F. and K.R. French, 1993, Common Risk Factors in the Returns on Stocks and Bonds, *Journal of Financial Economics*, Volume 33, Number 1, pp. 3-56.

<sup>2</sup> Carhart, M.M., 1997, On Persistence in Mutual Fund Performance, *Journal of Finance*, Volume 52, Number 1, pp. 57-82.

suggest. Instead of securing stability, these shares contribute to reinforcing the fluctuations in the portfolio's return. The average investor will then demand a higher return on such shares.

A corresponding «rational» explanation of the momentum effect has not been developed.

Even though these three and four-factor models provide a better explanation of the return differences in the stock market, and some of the factors have a somewhat intuitive explanation, financial theorists do not fully agree that all of these factors are actually systematic risk factors, priced in the market. Some prefer a behavioural explanation which involves temporary mispricing, which may reflect less rational investor behaviour.

Liquidity is another known risk factor. As liquidity varies over time, there is uncertainty about future transaction costs. Liquidity also affects price levels, and liquidity fluctuations may therefore also affect the price volatility. Liquidity variations therefore represent an extra risk in addition to the ordinary market risk. Securities that are relatively illiquid when the market return is generally low are particularly risky for investors, because they reinforce the return variation. In theory, this is compensated through a higher expected return.

Empirical surveys support the idea that liquidity risk is priced, and may explain some of the difference in the average rate of return between different investments. However, it has turned out to be difficult to calculate reliable time series for the liquidity premium.

A globally diversified portfolio like the GPFG is probably exposed to many of these systematic risk factors, both in the strategic benchmark and in the actual portfolio. The report from professors Ang, Goetzmann and Schaefer about active management of the GPFG points out that the fund's purpose and uniqueness may call for another exposure to some of these risk factors than what is embedded in the market portfolio – see the discussion in paragraph 2.3. While the average investor keeps the market portfolio per definition, investors with different risk tolerances will seek different levels of exposure to the priced risk factors, thereby optimising the trade-off between expected return and risk. Cochrane<sup>3</sup> provides a good description of such portfolio adaptation to several risk factors.

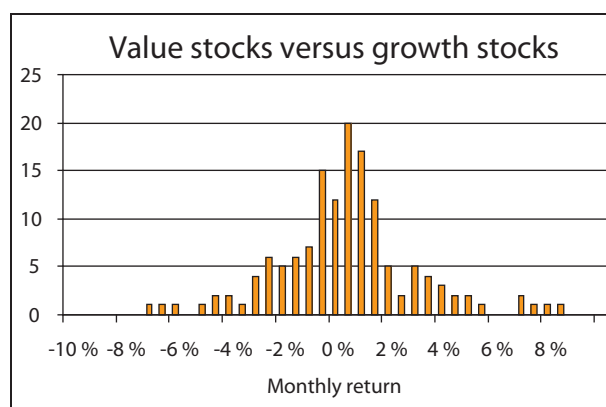


Figure 7.1 Historical monthly excess return on global value stocks, compared to growth stocks, measured in USD. December 1997 – September 2009.

Source: Ang, Goetzmann and Schaefer (2009)

A key issue is how different risk factors may affect return and risk in the GPFG. Historical data shows that the return distributions to risk factors can be very different. An investor looking for another factor exposure than given by the market portfolio must therefore expect different return and risk. The return distributions of some of the most important risk factors in the stock and bond market are described below. The historical data used is based on the report by Ang, Goetzmann and Schaefer. This data set contains monthly factor returns for the period of December 1997 – September 2009.

The monthly excess return in a globally diversified portfolio of shares in *value companies*, relative to growth companies, is shown in figure 7.1. Value and growth companies are defined here by the index provider MSCI. Value companies have had higher return than growth companies during the period (2.1 per cent annual average excess return). This is approximately the return an investor would have achieved (before deductions for transaction costs) by selling the growth companies in the MSCI index and buying the value companies. The annual standard deviation (volatility) of this return has been 9.1 per cent. Figure 7.2 shows the value over time of a portfolio that has been invested according to such a strategy. The volatility is relatively low, and the fall in value during the financial crisis has been moderate, compared with the strong fall in the global stock market in general (shown by the FTSE All-World total return index). This reflects the fact that the return on this value portfolio has been weakly correlated with the return in the global stock market.

<sup>3</sup> Cochrane, J.H., 1999, Portfolio Advice for a Multifactor World, Economic Perspectives, Federal Reserve Bank of Chicago.

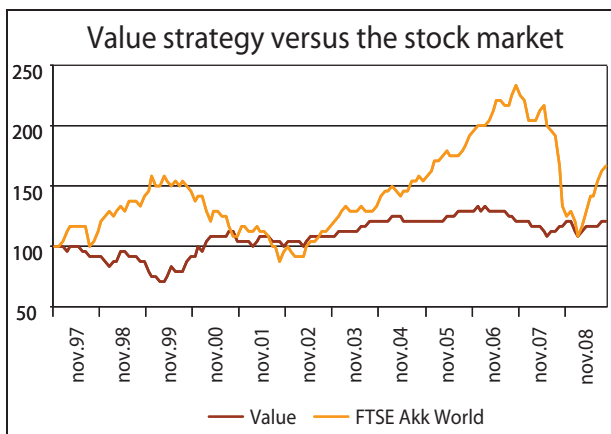


Figure 7.2 Historical (nominal) value across time of a portfolio invested according to a global value strategy (buy global value shares, sell global growth shares), measured in USD. The value of the total global stock market is also shown (FTSE All-World total return index). December 1997 – September 2009. The value has been set at 100 in November 1997.

Source: Ang, Goetzmann and Schaefer (2009), and Datastream

The monthly excess return in a globally diversified portfolio of shares in *small companies*, relative to large companies, has also been positive (3.5 per cent annual average excess return since 1997). The volatility of the excess return has been 7.7 per cent. Large and small companies have again been defined by MSCI. This is the return an investor would have received, before transaction costs, by selling the large companies in the MSCI index, and buying the small ones. Also this portfolio would have been less volatile than the general stock market. The correlation with the stock market has been low.

The monthly excess return on a *momentum* strategy is shown in figure 7.3. This is the difference in return between US shares that have had, respectively, a high and a low return during the past 12 months. The «winner shares» have on average yielded almost two per cent higher annual return than the «loser shares» during the period. However, the volatility of the excess return has been very high, fully 23 per cent. The return distribution also has so-called fat tails, or greater weight in the tails than does the normal distribution. It is also skewed towards low return (negative skewness), which reflects increased downside risk. A momentum strategy based on buying US winner shares and selling loser shares would have given a return that is weakly correlated with the US stock

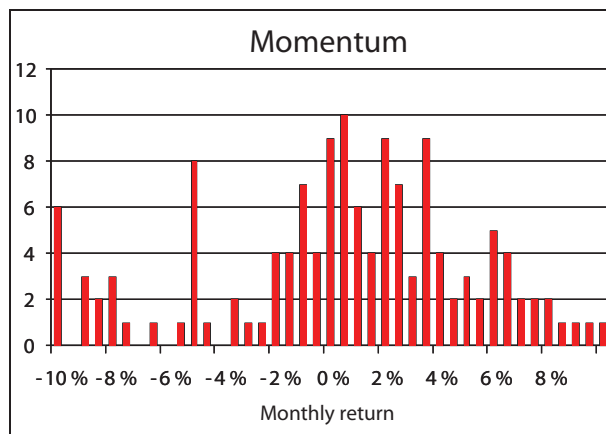


Figure 7.3 Historical monthly excess return on US shares that have had high return during the past 12 months, compared with shares with low return, measured in USD. December 1997 – September 2009.

Source: Ang, Goetzmann and Schaefer (2009)

market, except during the financial crisis when the return on the strategy fell dramatically, shortly after the broad stock market had fallen. This is illustrated in figure 7.4. Dimson, Marsh and Staunton<sup>4</sup> have studied the momentum effect in 17 developed stock markets using return data dating back to 1900. They find that a momentum strategy as described above would yield a very high return (before transaction costs) in most stock markets. However, it would be costly to implement the strategy, due to high transaction costs. Their result therefore says little about future return or costs associated with this strategy.

In the bond markets, *term risk* and *credit risk* are known priced risk factors, giving rise to term and credit premia. US government bonds with long time to maturity (over 20 years) have had about a 4 per cent higher annual return than government securities with short time to maturity (US Treasury bills, 1–3 months) since 1997. The volatility of the excess return has been about 12 per cent. However, the high excess return is not representative of the long run expected term premium on US bonds, as it was generated by falling interest rates during the period. This fall led to high return on bonds with a long duration. A more reasonable estimate of the long run term premium is 0.5 – 1.5 per cent, depending on the duration (cf. chapter 8).

<sup>4</sup> Dimson, E., P. Marsh and M. Staunton, 2008, *Global Investment Returns Yearbook 2008*, ABN-AMRO.

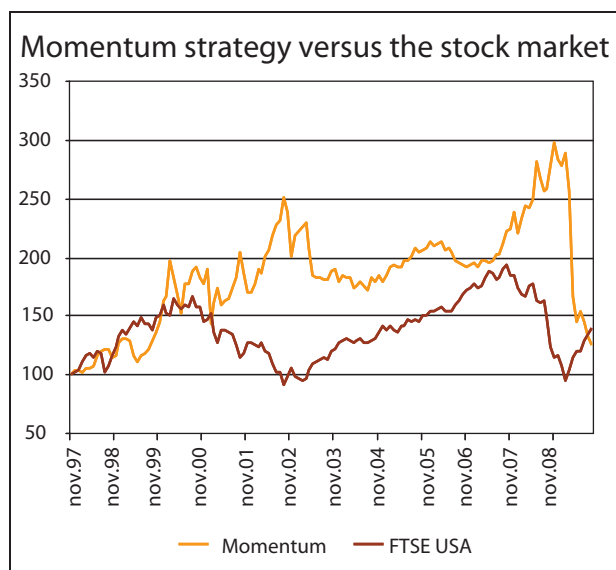


Figure 7.4 Historical (nominal) value over time of a portfolio invested according to a momentum strategy in the US stock market (buy «winner shares» and sell «loser shares»), measured in USD. The value of the US stock market is also shown (FTSE USA total return index). December 1997 – September 2009. The value has been set at 100 in November 1997.

Source: Ang, Goetzmann and Schaefer (2009), and Datastream

Credit risk gives rise to an expected credit premium, over and above the yield on corresponding bonds without credit risk. The size of the premium depends on the creditworthiness of the issuer. However, the realized (ex post) credit premium can vary greatly over time, and over extended periods it has been negative. Examples are US corporate bonds with a medium to high credit rating (Aa), which since 1997 have yielded an average annual negative excess return of 0.6 per cent, relative to US government bonds. Over the same period, US corporate bonds with a very low credit rating («high yield») have had annual negative excess return of 3.8 per cent, relative to corporate bonds with a somewhat higher credit rating (Baa). These losses are mainly due to the financial crisis (and to a lesser extent the technology bubble that burst in 2000–2002), which pushed up the expected credit premium and thereby drove down the value of corporate bonds. The negative return since 1997 is therefore not representative of the expected long run credit premium. Dimson, Marsh and Staunton<sup>5</sup> have estimated the historical credit premium of US corporate bonds dating back to 1900. They find a premium, relative to

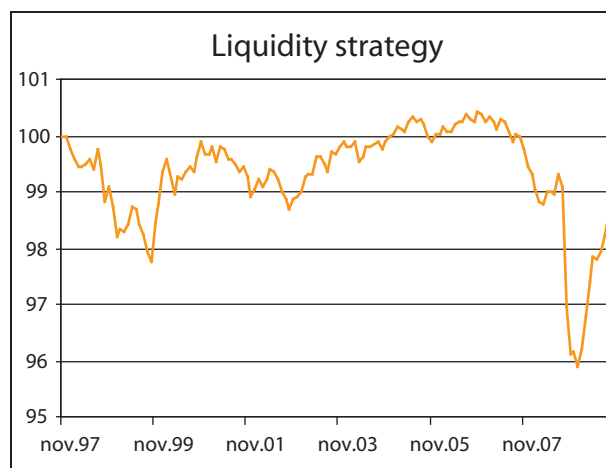


Figure 7.5 Historical (nominal) value over time of a portfolio invested according to a liquidity strategy in the US government bond market (buy «off-the-run» and sell «on-the-run»), measured in USD. December 1997 – September 2009. The value has been set at 100 in November 1997.

Source: Ang, Goetzmann and Schaefer (2009)

government bonds, of about half a percentage point for bonds with a medium to high credit rating (Aaa and Aa).

As already mentioned, it is difficult to estimate the *liquidity premium*. However, the data set from Ang, Goetzmann and Schaefer contains information that can be used to estimate the realized liquidity premium. This information is the difference in yield on 10-year US government bonds which are, respectively, «off-the-run» (older securities that are fairly illiquid) and «on-the-run» (newer securities that are relatively liquid). Empirical studies indicate that this difference, multiplied by the duration, can provide an approximate estimate of the realized liquidity premium, at least in the government bond market (cf. Ang, Goetzmann and Schaefer's report). The result of such a calculation is that the average annual return on liquidity risk has been marginally negative since 1997 (-0.1 per cent), and that the return distribution has very fat tails and is skewed towards low returns. A liquidity strategy based on 'harvesting' the liquidity premium in the US government bond market by selling the liquid government bonds and buying the illiquid ones would thus have lost value in 1997–2009, as shown in figure 7.5. The

<sup>5</sup> Dimson, E., P. Marsh and M. Staunton, 2002, *Triumph of the Optimists*, Princeton University Press.

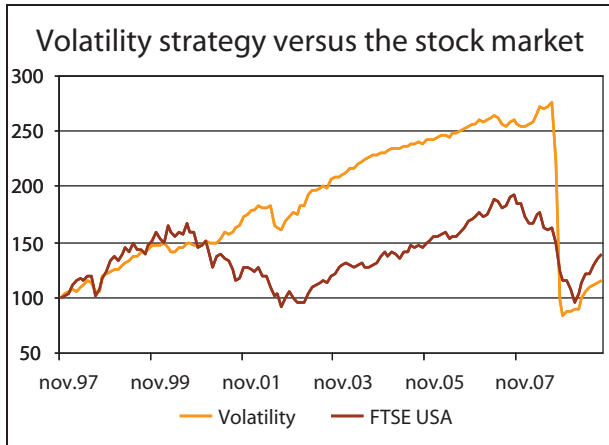


Figure 7.6 Historical (nominal) value over time of a volatility strategy in the US stock market («swap» between expected and realized volatility), measured in USD. December 1997 – September 2009. The value has been set at 100 in November 1997.

Source: Ang, Goetzmann and Schaefer (2009)

loss probably reflects rising liquidity premia during the financial crisis and during the bear markets in 2000–2002. This led to negative return on liquidity risk. However, as mentioned earlier, it is reasonable to assume that the liquidity premium is positive in the long run.

Many researchers believe that there are even more priced risk factors, and that their importance can vary over time.

Ang, Goetzmann and Schaefer estimate the contribution to excess return from two additional risk factors: volatility and foreign currency investments financed by foreign currency loans («foreign exchange carry»). The volatility factor captures the difference between the expected and realized volatility. Investors who can tolerate high market volatility can earn a risk premium over time by selling insurance against unexpectedly high volatility to investors who want protection against such volatility shocks. Figure 7.6 shows the return since 1997 associated with such a volatility strategy in the US stock market, over and above the risk free interest rate. The return was consistently high until the financial crisis hit. Then heavy losses effectively wiped out all accumulated return earned since the end of 1997. The return improved in 2009, so that the average annual return was marginally positive at the end of September 2009 (1.2 per cent above the risk free rate). The low return reflects the unexpectedly high stock market volatility during the financial crisis, which entailed great losses for the issuers of volatility insurance. The extent to which this strategy will yield a positive risk premium over the long run depends on the pricing and assessment of future market volatility. As with any type of insurance, the strategy can be profitable if the price of risk is set correctly. Ang, Goetzmann and Schaefer argue that volatility belongs to the set of priced risk factors in the stock market.

## 8 Expected long-term real return and risk

In Reports no. 16 (2007-2008) and no. 20 (2008-2009) to the Storting, the Ministry explained the market expectations underlying its calculations of the GPFG's long-term return and risk. More specifically, expectations were formulated for long-term real return and risk (volatility) associated with the global equity and bond indices in the Fund's strategic benchmark, and for a globally diversified real estate portfolio. In addition, long-term correlation coefficients between the real returns on these asset classes were estimated.

It is necessary to periodically assess these estimates in light of new information. The financial crisis and its effects on world capital markets over the past few years represent important new information in this respect. This chapter reviews the estimates and considers the need for changes. It is shown that only some minor adjustments are needed.

The Ministry's earlier estimates of expected long-term annual real return, risk and correlations are shown in tables 8.1 and 8.2. Of course, considerable uncertainty is associated with such point estimates.

The basis for these market expectations is an analysis of historical real returns, and a review of recent research literature.

The estimates are used to calculate the expected real return and risk on the Fund's strategic benchmark. This is done by using a stochastic simulation model, which simulates the portfolio value over time.

The expectations are intended to apply over very long investment horizons. They represent estimates for average annual real return and volatility over a period of many decades, or over a period that is long enough to encompass many economic and financial cycles. Such long-term expectations are often called unconditional, since they are little affected by time varying factors. In the medium term, for example the next 10 to 20 years, the expected average real return and volatility may differ from the long-term estimates, for example due to time varying risk premia or imbalances in market prices, as pointed out in the Report no. 20 (2008 – 2009) to the Storting. Estimates for such time varying expectations are called conditional. The final part of this chapter

Table 8.1 Point estimates of expected long-term annual real return and risk (volatility) for global bonds, real estate and equities (geometric), measured in local currency.<sup>1</sup> Per cent

	Bonds	Real estate	Equities
Expected return	2.7	3.5	5.0
Expected volatility	6.0	12.0	15.0

<sup>1</sup> Global bonds include credit bonds with a share about the same as in the GPFG's fixed-income portfolio. Expected real return on government bonds is 2.5 per cent, while the real return on credit bonds is about 0.5 percentage points higher.

Source: Source: Ministry of Finance

Table 8.2 Point estimates of expected long-term correlations between the real return on global bonds, real estate and equities.

	Bonds	Real estate	Equities
Bonds	1	0.3	0.4
Real estate		1	0.6
Equities			1

Source: Ministry of Finance

contains a brief discussion about whether the return expectations for the medium term deviate from the long-term expectations.

Since the unconditional expectations are for very long time horizons, the threshold is relatively high for making major changes solely based on market developments over the past two years.

In the following, the market expectations in Tables 1 and 2 are discussed, with an emphasis on equities and bonds.

#### *Expected real return and volatility in the long run*

*Government bonds* (in the form of a globally diversified government bond portfolio with a duration of around 5 years, and country weights approximately as in the GPF's strategic benchmark) is expected to provide an annual real return of 2.5 per cent<sup>1</sup> and volatility of 6 per cent, according to Table 8.1. The expected real return is higher than the historical average for the period 1900-2009, which is 1.1 per cent, according to annual data from Dimson, Marsh and Staunton (2010), see Table 8.3 which shows the historical returns and volatility. At the end of 2007, before the financial crisis had fully impacted the financial markets, the historical average real return was marginally lower (1 per cent). The low historical real return shows that government bonds were a bad investment during several periods in the last century, due to high inflation (or hyperinflation) and wars.

However, the Ministry's estimate is considerably lower than the real return on government bonds after 1975 (after the collapse of the Bretton Woods fixed exchange rate system), which is a period that may be more relevant to compare with (5.3 per cent real return at the end of 2009, and about the same at the end of 2007). The high real return during this period reflects the battle against inflation and the decline in inflation expectations through the 1980s and 90s, which more than offset losses in the bond markets during the period of high inflation in the 1970s. Given the current situation, where central banks largely aim for low and stable inflation, a recurrence of a similar disinflationary path is not considered the most likely scenario for the coming decades.

The Ministry's estimate of future long-term real return on government bonds (2.5 per cent) therefore seems reasonable, even after the experi-

ences of 2008 and 2009. The estimate lies between the very low average for the period 1900-2009 and the very high average for the period 1975 to 2009. The estimate is consistent with an expected real return on short duration government bills of 1 to 2 per cent and a term premium of 0.5 to 1.5 per cent. Historically (1900-2009), this term premium has been about 1.4 per cent according to the data set from Dimson, Marsh and Staunton (for government bonds with long duration).

The expected volatility of bonds (6 per cent, see Table 8.1) is lower than the historical volatility, which has been 8.9 per cent in the period 1900 to 2009, see Table 8.3. In the period 1975-2009 volatility was about the same (8.3 per cent). However, the average duration of the GPF's government bond portfolio is significantly lower than the duration of the government bonds that are part of the historical return series of Dimson, Marsh and Staunton. It is therefore reasonable to assume a lower volatility for the GPF's bond portfolio.

The Ministry therefore keeps unchanged its estimates of the expected real return and risk on the bond portfolio.

*Equities* (in the form of a globally diversified equity portfolio with country weights approximately as in the GPF's strategic benchmark) are expected to yield an average annual real return of 5 per cent (geometric), according to Table 8.1. The historical data set of Dimson, Marsh and Staunton shows that the corresponding historical average for the period 1900-2009 is about 6.3 per cent, as shown in Table 8.3. At the end of 2007 the historical average was 6.7 per cent.

This shows that the experience of the past two years, with the dramatic fall in equity markets in 2008 followed by strong recovery in 2009, pulls down the historical average real return by only 0.4 percentage point.

If the historical stock market analysis is limited to the period after the Second World War (from 1946), thereby giving modern times greater weight, the real return is somewhat higher (7.1 per cent at the end of 2009, and 7.8 per cent at the end of 2007).

As can be seen from these statistical measures, the Ministry's estimates for future average real return on equities is lower than the historical average since 1900, although the difference is reduced somewhat when one includes the return figures from 2008 and 2009 in the historical average. As financial research has shown, however, historical returns are not necessarily a good estimate of future returns. Nor can future equity re-

<sup>1</sup> The 2.7 per cent figure in Table 8.1 applies to the GPF's portfolio of both government and credit bonds. The Ministry has assumed 0.5 percentage point higher real return on the latter.



Table 8.3 Historic real return and risk (volatility) for global portfolios of government bonds and equities for the period 1900–2009 (geometric average, measured in local currency). The values in parentheses are for the period 1900–2007 (before the financial crisis). The portfolio weights are about the same as in GPFG's strategic benchmark. Per cent

	Government bonds	Equities
Historical return	1.1 (1.0)	6.3 (6.7)
Historical volatility	8.9 (8.8)	15.6 (15.0)

Source: Dimson, Marsh og Staunton (2010) and the Ministry of Finance.

turn be estimated independently of the return on alternative, less risky investments (or independent of the pricing of the stock market and expected future dividend streams). The estimate will also depend on the assumed size of the equity risk premium («equity premium»).

The expected *equity premium* can be defined as the difference between the expected return on a globally diversified equity and government bond portfolio. According to the Ministry's estimates the long-term equity premium is 2.5 per cent (5 per cent real return on stocks minus 2.5 per cent real return on government bonds). This estimate can be compared with the historical premium. The average historical equity premium may be determined by taking the difference between the (geometric) average real returns on global portfolios of stocks and government bonds, as described above (country weights about the same as in the GPFG's strategic benchmark). One then finds that the average equity premium was significantly greater than 2.5 per cent over the period 1900 to 2009 (5.2 per cent, see Table 8.3). However it has fallen in recent times, to 2.6 per cent for the period 1975 to 2009. The low equity premium in the recent period is partly connected with the high real return on government bonds during this period. Over the last decade (1999–2009) the realized equity premium has actually been negative (minus 6.5 per cent), reflecting the large drops in world stock markets during the bursting of the dotcom bubble and during the financial crisis. In Japan, the equity premium has been negative over an even longer period. This is an effect of the sharp decline in Japanese asset prices that began in 1990.

In light of these historical figures for the equity premium the Ministry's long-term expectation of 2.5 per cent seems realistic. The expectation is in line with the equity premium realized in recent times. The estimate is also consistent with some important research results. Dimson, Marsh,

Staunton and Wilmot (2009)<sup>2</sup> estimate an expected long-term equity premium in the global equity market of 3 to 3.5 per cent against short duration government securities, which corresponds to approximately 2 to 3 per cent relative to long duration government bonds (geometric mean). According to these researchers, there are three main reasons why the historic equity premium has been higher than this: dividends have been historically high, there has been unexpectedly strong growth in the world economy after the Second World War, and the required return has fallen. A repeat of this course of events cannot be expected. Ibbotson and Chen (2003)<sup>3</sup> estimate a future equity premium 1.25 percentage points lower than the historical average. Arnott and Bernstein (2002)<sup>4</sup> find that a «normal» equity premium is below 2.5 per cent. However, some forecasts are more optimistic. A late 2009 survey of the Chief Financial Officers of a large number of U.S. companies shows that on average, they expect a long-term (10-year) equity premium in the U.S. stock market of about 4.4 per cent, when measured against 10-year U.S. government bonds.<sup>5</sup>

In this light, the Ministry's estimates of the expected real return on government bonds (2.5 per cent) and the equity premium (2.5 per cent) still seem realistic.

Expected stock market volatility has until now been 15 per cent, see Table 8.1. This expectation value was largely intended to reflect historical volatility in the stock market, as this is considered a good reference point for estimating future volatility.

<sup>2</sup> Dimson, E., P. Marsh, M. Staunton and J.J. Wilmot, 2009, *Global Investment Returns Yearbook 2009*, Credit Suisse Research Institute.

<sup>3</sup> Ibbotson, R.G. and P. Chen, 2003, *Long-Run Stock Returns: Participating in the Real Economy*, *Financial Analysts Journal*, Volume 59, Number 1, pp. 88–98.

<sup>4</sup> Arnott, R.D. and P.L. Bernstein, 2002, *What Risk Premium is "Normal"?*, *Financial Analysts Journal*, Volume 58, Number 2, pp. 64–85.

<sup>5</sup> Duke/CFO Magazine *Global Business Outlook Survey*, 2009, Fourth Quarter.

ty. Historical volatility was also 15.0 per cent at the end of 2007, when the estimate was prepared, see Table 8.3. However, the financial crisis, which resulted in wide fluctuations in equity returns in 2008 and 2009, pushed the historical volatility up to 15.6 per cent at the end of 2009. In light of this, the Ministry is adjusting the estimate of future stock market volatility upwards, to 16 per cent.

Another consequence of the financial crisis is that the historical distribution of annual stock market returns has become slightly more skewed in the direction of lower (real) returns (a little more «negative skewness»). Although this effect does not have very high statistical significance due to few observations, the Ministry now chooses to model a slight degree of negative skewness when the real return on equities is simulated in the stochastic portfolio model used to calculate the strategic benchmark's real return and risk. This procedure is expected to give a more realistic description of the risk of losses, which is often underestimated when a normal distribution, without skewness, is used. The modelling of negative skewness is done using stochastic shifts of log-normal return distributions.

*Real estate* investments are usually expected to provide a long-term return that lies between government bonds and equities, and this also applies to expected volatility. Given that the Ministry assumes an equity premium of just 2.5 per cent, the possible range for the «real estate premium» (the difference in the real return on a global real estate and government bond portfolio) is narrow. The Ministry has estimated this premium to about one percentage point, which gives an expected real return of 3.5 per cent, see Table 8.1. The estimate of volatility (12 per cent) is in the upper part of the interval between government bonds and equity volatility, and thus takes into account that real estate investments are leveraged to a certain extent. Reliable historical return data for comparison are hard to find. Available data go only a few decades back in time, and do not reflect the true time variation in the return. Estimates of future real return and volatility on global real estate investments are therefore associated with particularly high uncertainty. The Ministry finds no reason to change its estimates.

#### *Expected correlations in the long term*

The correlation between the annual real return on equities and government bonds is estimated at 0.4, see Table 8.2. This is a measure of covaria-

tion, where a correlation of 1 means that the annual real returns show synchronous variation. The estimate of 0.36 is close to the historical correlation for the period 1900-2009, for globally diversified portfolios of equities and government bonds with country weights about the same as in the GPFG's strategic benchmark (again according to the data set from Dimson, Marsh and Staunton). However, the historic correlation has varied considerably over time. More recently (1975-2009), the average was 0.08, meaning that the real returns have varied almost independently of each other. This low correlation is usually attributed to the low and stable inflation in the industrialised world since the 1980s. When inflation is stable, variations in economic growth become more important for the correlation, which is pushed down. The correlation also goes down when investors «flee» to secure government bonds in turbulent times. By assuming a correlation of 0.4, the Ministry has taken into account that the correlation may pick up again for various reasons (for example, because of greater variation in inflation), and fluctuate around the historical average since 1900. The estimate is conservative, in the sense that it does not underestimate the risk in the GPFG's strategic benchmark (a higher correlation means higher portfolio volatility).

The estimates of the correlations between real estate and, respectively, government bonds and equities are explained in Report no. 16 (2007-2008) to the Storting. The Ministry finds no reason to change them.

The *conclusion* of this review of long-term expectations is that the earlier estimates in Table 8.1 will be carried forward with the following two exceptions. First, the expected volatility of the strategic benchmark for equities is adjusted up, from 15 to 16 per cent. Secondly, a slight degree of negative skewness is assumed in the distribution of annual stock market real returns. The skewness is incorporated into the simulation model used to calculate the expected real return and risk of the GPFG's strategic benchmark.

The revised expectations are summarised in Table 8.4.

#### *Expected real return in the medium term*

As pointed out earlier, the unconditional expectations are intended to describe the long-term trend rate of return that is consistent with long-term fundamental economic variables. In the shorter term, there may be deviations from the trends, for

Table 8.4 Revised point estimates of expected long-term annual real return and risk (volatility) for global bonds, real estate and equities (geometric), measured in local currency.<sup>1</sup> Per cent

	Bonds	Real estate	Equities
Expected return	2.7	3.5	5.0
Expected volatility	6.0	12.0	16.0

<sup>1</sup> Global bonds include credit bonds with a share about the same as in the GPFG's fixed-income portfolio. Expected real return on government bonds is 2.5 per cent, while the real return on credit bonds is about 0.5 percentage points higher.

Source: Ministry of Finance

example because of time varying risk premia or imbalances in the financial markets. Such fluctuations around a more fundamental trend return are often called mean reversion. Market expectations for a medium investment horizon (next 10-20 years) are therefore discussed in the following.

The real return on the *bond portfolio* will depend on the nominal interest rate today, the future interest rate path, and inflation. Current interest rates on U.S., European and Japanese government bonds are low, which is partly due to the financial crisis. The real interest rate on a government bond portfolio with 3 to 5 years duration (as in the GPFG) is significantly lower than 2.5 per cent, which is the Ministry's long-term projection. If one assumes that the real interest rate remains as low for the next 10 to 15 years, the expected real return on government bonds will be substantially lower in the medium term than the long-term estimate of 2.5 per cent. However, it seems more likely that the real interest rate will gradually move back to a higher level. Such a course could push up the expected real return in the medium term, since bonds can be re-invested at higher real interest rates. By how much the expected real return will increase depends on the assumptions for the interest rate path.

In the medium term the expected real return on the *equity portfolio* may also differ from the long-term expectation of 5 per cent. Both the bond return and equity premium vary over time. Many also believe that the stock market is at times mispriced, which may affect future returns. However, there is still considerable disagreement among researchers about whether stock market returns can be predicted. Analyses of predictability are usually based on an assumption of a correlation between certain valuation indicators and future equity return. Examples of such indicators are the cyclically adjusted price-earnings ratio (CAPE), proposed by Robert Shiller, and Tobin's Q. The first measures the level of the stock market relative to average earnings per share over the

last decade (inflation adjusted). The second measures the level of the stock market in relation to the replacement cost. Historically, a high indicator value relative to the historical average has signaled low returns in the medium term, and vice versa. Smithers shows that the signal from Tobin's Q has been somewhat stronger than the signal from CAPE.<sup>6</sup> This relationship can be understood theoretically using models for pricing future dividend flows. In these models, a high CAPE value means low expected equity return and/or high expected growth in dividends, and vice versa. Alternatively, the signal can indicate mispricing of the stock market (in relation to the equilibrium earnings).

According to Shiller's own calculation, the CAPE for the U.S. stock market was 20.12 at the end of 2009. The historical average since 1881 is 16.35 (again according to Shiller). This is interpreted by many as an indication of the overpricing of the U.S. stock market (by some 20 per cent), and a (weak) signal of abnormally low real return in the medium term.

Values for Tobin's Q can be found in the reports «Flow of Funds Accounts of the United States» that the Federal Reserve publishes quarterly. The latest update, for the third quarter of 2009, gives a Tobin's Q value of 0.91. During the fourth quarter the U.S. stock market rose more than 5 per cent. Given this rise, it is reasonable to assume that Tobin's Q was very close to 1 at the end of 2009. The historical average, however, has remained well under 1. This may reflect a tendency to overestimate replacement costs in the official data. According to Smithers the historical average is 0.63. Using this average as a basis, Tobin's Q also signals overpricing of the U.S. stock market.

However, such analyses are associated with considerable uncertainty, since the predictive

<sup>6</sup> Smithers, A., 2009, *Wall Street Revalued: Imperfect Markets and Inept Central Bankers*, Wiley.

power of the various valuation indicators is debatable. This uncertainty is reinforced by the fact that current signals for the U.S. stock market only indicate moderate overpricing. Similar analysis of other stock markets would be even more uncertain, because of limited access to historical data.

There are therefore no strong indications that the expected equity return in the medium term is significantly different from the Ministry's long-term estimates.

## 9 Expectations documents as tools in exercising ownership rights

### 9.1 Introduction

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Norges Bank is the formal owner of the securities in the GPF's portfolio and is responsible for exercising the ownership rights that come with the role of shareholder in the companies in the portfolio. The overall purpose of the active ownership work is to safeguard the Fund's financial values by contributing to good corporate governance and by striving to achieve higher ethical, social and environmental standards in the companies. Norges Bank's principles for the execution of ownership are based on internationally recognised guidelines: the UN Global Compact, OECD's principles for corporate governance and OECD's principles for multinational companies.

Norges Bank has selected six strategic priority areas within its ownership work:

- Equal treatment of shareholders
- Shareholder influence and board accountability
- Well-functioning, legitimate and efficient markets
- Climate change
- Water management
- Children's rights

In selecting priority areas, Norges Bank, among other things, emphasised that the areas shall be relevant to investors generally and the GPF's portfolio in particular; they shall be suitable for dialogue with the companies and/or regulatory authorities, and provide an opportunity for real impact. They should be justifiable financially, since Norges Bank acts in the capacity of investor.

Norges Bank uses several instruments as part of its ownership activities, including voting at annual general meetings, shareholder proposals, dialogue with companies, legal action, contact with regulatory authorities and collaboration with other investors. In recent years Norges Bank has prepared and published what are called expectation documents that are used as tools in the ownership work.

### 9.2 Specifics of expectation documents

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Within the focus areas children's rights, climate change and water management, Norges Bank has formulated its expectations of the companies in dedicated documents. In these documents the Bank sets out its expectations of how companies should manage the risks associated with these factors. Norges Bank's objective is to ensure that the companies' business operations create long-term financial gains with acceptable social and environmental effects.

The documents are used both as a starting point for identifying and analysing various sectors and as a basis for feedback and dialogue with individual companies. Follow-up of the expectations documents is discussed further below.

The public can provide input to the formulation of expectations documents through a consultation process, which was adopted during the evaluation of the ethical guidelines in 2009.

The first expectations document Norges Bank published was in the field of children's rights. The expectations cover, inter alia, prevention of the worst forms of child labour, sustaining of the minimum age standard, monitoring systems, measures to ensure children's health and welfare, and the companies' governing structure and reporting systems with regard to these issues. The document requires the companies to have clear guidelines regarding child labour, perform risk analysis, have plans and programmes to prevent child labour and have corrective measures and systems pertaining to the supply chain. Moreover, companies are expected to have monitoring systems and report on their results. They should integrate the potential economic impacts of social-related factors in the company's strategic planning and have a transparent and well-functioning governance structure.

In August 2009, Norges Bank published an expectation document on the companies' management of risk factors related to climate change. Climate change is expected to have major economic

consequences, both as a result of the physical impact of the changes and as a result of regulatory measures that could lead to a different pricing of carbon than is the case today. As a long-term investor with a broad portfolio the GPFG will be exposed to risks as a result of such change. Companies are expected to have strategies for managing both physical and economic climate effects, to measure its emissions and set targets for reducing them, to explore and exploit opportunities to develop new products and services that will help the transition to a low-carbon economy, and to develop a strategy for dealing with climate change risk in the supply chain. Companies are also expected to be constructive when engaging with policy makers regarding regulatory response to climate change and to be transparent regarding their strategies, objectives and progress on climate change management, both in terms of their own operations and in the supply chain.

In February 2010 Norges Bank published an expectations document related to companies' water management. Water is a limited resource, and water shortage may have major environmental, social and economic consequences. Water shortage and poor management of water are risk factors that may have an increasing significance for companies' long-term financial results. For investors such as the GPFG, which is broadly invested in sectors exposed to high water-related risks, companies' management of such risks can have great significance.

The Fund is broadly invested in sectors exposed to high water-related risks. Norges Bank has identified seven sectors that are particularly vulnerable: the food industry, agriculture, pulp and paper, pharmaceuticals, mining, industrial and power generation and water supply.

Expectations in the document relate to three main areas: the companies shall have a clear strategy for water management, a sustainable water management and the governance structure must facilitate realistic strategies and responses. The document requires a clear strategy regarding water management, «water footprint» and risk analysis, preventive and corrective plans for identified risks, supply chain management systems and monitoring systems for environmental and social impacts of activities with regards to water, including sustainable water measures. The company is expected to conduct consultations and collaborate with groups of stakeholders, have a clear policy for water management, transparent performance

reporting and a transparent and well-functioning governance structure.

### **9.3 Follow-up of the expectations documents**

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The expectation documents provide the basis for a comprehensive follow-up process. On the basis of each document, the problems and risk factors of vulnerable sectors are identified.

Norges Bank uses the expectations as a starting point for a systematic analysis of the companies' management of climate change and children's rights, and from 2010 water management. The analysis of the companies is based on publicly available information. The results are published in an annual sector compliance report.

The results are also used as a basis for giving companies individual feedback, in addition to Norges Bank selecting some companies for further dialogue with the aim of contributing to positive changes in the companies.

The expectations document on children's rights was the first to be adopted, and in this area, Norges Bank has conducted follow-up as described above since 2008. In the first public report 430 companies in the cocoa, apparel, mining and steel industries were analysed against the expectations document on children's rights. Based on the findings, Norges Bank contacted 135 of these companies and suggested specific improvements. When the Bank undertook a review of the same companies in 2009, 33 percent of the companies had improved their performance with regard to child labour and safeguarding of children's rights and reporting on such issues. Norges Bank will continue follow-up work in 2010.

The cocoa and textile industries accounted for the major improvements with regard to the number of companies that had publicly available guidelines on child labour, and other measures such as having plans and programmes to prevent child labour and corrective measures. Improvement was also evident in the mining and steel industries, including making guidelines for child labour public. Furthermore, there was increased transparency when it comes to relations with other stakeholders. Generally, the level of transparency on child labour and children's rights increased in all sectors.

Norges Bank conducted dialogue on water management with 14 companies in the car, construction, mining, oil, gas, retail and media indus-

tries. Norges Bank had dialogue on climate change management with 29 companies in the energy and cement sectors.

In 2010 Norges Bank will publish its second annual sector compliance report on children's

rights and an initial report based on the expectation document relating to climate change. The first report based on the expectation document on water management will be published in 2011.

## 10 International development in the area of responsible investment

### 10.1 Introduction

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The term «responsible investment practice» has begun to take hold as a recognised and applied concept in the global investment community. It springs historically speaking from the idea that business has an ethical and social responsibility that extends beyond directives to comply with laws and regulations.

At the same time the debate about what constitutes responsible investment practice has gradually moved back to the core of investment management: managing capital with the aim of achieving the highest possible financial return within an acceptable risk, in line with shareholders' interests. There has been a move away from a purely philanthropic or ethical point of view to greater awareness of self-interest. From a perspective of ensuring a long-term return on capital values, many investors consider the following questions relevant: What ensures the companies' assets in the long run? What risk factors must a broadly diversified, long-term investor consider? Are there sufficient converging interests between owners and managers of the capital? Should companies demonstrate that they take due account of environmental and social factors, so as to convince investors that they create value over time?

There is reason to believe that the financial crisis has pushed such issues higher up on the agenda. Financial markets that do not function satisfactorily lead to costs and create uncertainty about the pricing of securities. Questions about good corporate governance, including core matters such as equal treatment of shareholders and transparency in compensation systems and incentive structures contributing to greater correlation with owners' long-term interests, are now considered more important than ever. Institutional investors were the subject of criticism in the wake of the financial crisis. «The Walker Review»<sup>1</sup> in the

UK highlighted shortcomings in active ownership on the part of UK banks and other financial institutions and the failure of owners to follow up their long-term financial interests. Among other things, the report points out the reciprocal obligations between major institutional shareholders and the boards of the companies in which they invest:

«The potentially highly influential position of significant holders of stock in listed companies is a major ingredient in the market-based capitalist system which needs to earn and to be accorded an at least implicit social legitimacy. As counterpart to the obligation of the board to the shareholders, this implicit legitimacy can be acquired by at least the larger fund manager through assumption of a reciprocal obligation involving attentiveness to the performance of investee companies over a long as well as a short-term horizon. On this view, those who have significant rights of ownership and enjoy the very material advantage of limited liability should see these as complemented by a duty of stewardship.»

Many investors are also showing growing interest in issues related to the environment and handling of the effects of climate change. Whether and to what degree it will be possible to limit these changes will have great significance not only for the global economy, but potentially also for the financial markets and the pricing of companies. It is essential to have national and international regulation in place to limit greenhouse gas emissions by means of pricing or quota mechanisms and technology, to reduce or eliminate the climate threat. Investors are therefore pressuring governments to put in place clear targets for emissions reductions.

For two years in a row a large group of investors has called on government leaders and climate negotiators to put in place a future climate agreement that is strong and binding. The last petition, promoted in September 2009, was signed by 181 investors, who together manage more than USD 13,000 billion. Investors are also exerting pres-

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<sup>1</sup> A review of corporate governance in UK banks and other financial industry entities [The Walker Review], Final recommendations 26 November 2009.



sure nationally. Recently, the U.S. Securities and Exchange Commission (SEC) introduced new guidelines for environmental reporting from listed companies, following pressure from a U.S. group of institutional investors including the Environmental Defense Fund and investors led by the Ceres investor coalition. The guidelines aim to ensure more uniform reporting of potential effects climate change might have on a company's performance.

## 10.2 What do recent studies show about development in the area?

Many investors have over time considered ESG factors (environmental, social and governance issues) in their investment management. Some of these operate according to a goal of financial returns, at the same time as they have clear ethical, social and environmental demands from the owners of the capital. There is also a growing number of investors who consider ESG factors as directly relevant to financial returns in a more narrow sense. This is often referred to as incorporating or integrating ESG factors in investment activities. The growing support for the UN Principles for Responsible Investment (PRI) – where safeguarding ESG considerations is central – is an indication of such a trend.

This trend was given a closer look in a report from the consulting and research organisation «Business for Social Responsibility» (BSR).<sup>2</sup> The idea of incorporating ESG considerations in investment strategy and investment decisions suggests that these types of considerations are viewed as part of investment management. This means in turn that it is very difficult to measure results directly ensuing from an emphasis on these types of considerations. Some investors, however, cite qualitative reasons why they emphasise ESG considerations in their management. Strong ESG performance in a company may be seen as a proxy for strong and effective management. Moreover, attention to ESG factors is considered to indicate a high awareness of the company's external operating environment and the ability to identify new risk factors, a generally increased ability to manage risk, and an ability to turn risk into opportunity.

<sup>2</sup> "ESG in the Mainstream: The Role for Companies and Investors in Environmental, Social and Governance Integration", September 2009, BSR.

The BSR report shows that while interest in ESG integration is increasing, only a handful of investors actually integrate good corporate governance, environmental and social factors in all parts of their asset management. Most investors use specialised products and services by, for example, investing in specific funds or indices that use ESG data as a supplement to traditional financial analysis.

The BSR report points out several changes that are necessary for obtaining a higher degree of integration of ESG considerations. Companies need to communicate actively and regularly about factors that may have particular significance for the company's long-term value creation, including ESG issues. Investors must in turn request ESG data and develop analyses and methods to take these types of factors into greater consideration. Focus on returns in the short term is deemed an obstacle to the appreciation of ESG factors, which normally will have effects on value performance in the longer term. Even institutional investors, who constitute an important group among the investors who have requested information on ESG factors, by and large measure and reward their managers based on short time horizons. This can be an obstacle to real integration of ESG considerations.

It is still challenging to obtain information on ESG factors from the companies. Nevertheless, positive change is evident through initiatives that contribute to more uniform reporting on these topics. Examples of this are the Global Reporting Initiative (GRI) and Carbon Disclosure Project (CDP).<sup>3</sup> Several of the findings from the BSR are also supported by the consulting firm Mercer in a report from November 2009.<sup>4</sup> The report compares 16 academic studies done after 2007 that look at the relationship between ESG factors and company and portfolio performance. 10 of the 16

<sup>3</sup> Global Reporting Initiative (GRI) is an institution controlled by multiple stakeholders (companies, business organisations, NGOs, governments, etc.) collaborating to develop global guidelines and standards for sustainability reporting. The guidelines contain principles and indicators that organizations can use to measure and report their economic, environmental and social performance.

The Carbon Disclosure Project (CDP) is an independent not-for-profit organization which maintains the world's largest database of corporate management of greenhouse gas emissions, including monitoring and reporting. Each year, the CDP conducts a survey on climate change and emissions of greenhouse gases among the largest listed companies in the world. The information from the companies is used by investors to evaluate companies' management of risks and opportunities associated with climate change.

<sup>4</sup> "Shedding light on responsible investment: Approaches, returns and impacts", November 2009, Mercer.

studies in the Mercer report shows a positive relationship between ESG factors and financial performance, two studies show a negative-neutral relationship, and four studies reported a neutral association.

Responsible investment practice is a broad topic that covers a fairly diverse set of tools: voting, engagement with companies, investor collaboration, negative and positive screening, as well as ESG integration into valuation metrics. The breadth of instruments shows that it will be too easy to claim that incorporating ESG factors in investment activity will automatically limit the investment universe, and for that reason will always lead to lower returns. What can rather be assumed, as Mercer does in a report to the Ministry of Finance of December 2009,<sup>5</sup> is that expectations of a clear ownership strategy on these issues will only increase. This will apply regardless of whether the fund assets are managed actively or passively.

«This is a dynamic area with increasing pressure on investors to play a more active role in capital markets. Such an environment is likely to continue to influence investor behaviour and practice for both funds and fund managers alike. If pressures from fund members and beneficiaries, regulators and industry norms continue to be put on funds to take on the role of active owners, we believe that – eventually – it will become harder for investors to justify the absence of a thoughtful and well-defined active ownership strategy, backed up by the resources to ensure its effective implementation, and with the transparency to communicate its results.»

As Mercer points out in its report of November 2009, it is not obvious that taking ESG factors into account in investment management will have a specific or uniform impact on portfolio performance. Various elements such as manager skill, investment style (active or passive management) and time period will affect the relationship between ESG factors and financial returns. According to Mercer, this means that an attempt should be made to assess this relationship on more disaggregated levels, where distinctions are made between the sectors and asset classes. A majority of the studies Mercer compared showed that strong corporate governance has a positive impact on fi-

ancial returns, and that active ownership can increase shareholders' values.

Comparable and robust standards for reporting are considered essential for ensuring that ESG integration becomes widespread in general investment management. A greater degree of transparency and information about ESG data will also make their possible effect on financial returns more visible and verifiable.

The UN Environment Programme – Finance Initiative (UNEP FI) has published two reports on the relationship between responsible investment practices, including integration of ESG considerations, and what Anglo-American law tradition refers to as the «fiduciary duty».<sup>6</sup> The final report was published in July 2009 («Fiduciary II»). The issue looked at in these reports is whether there can be said to be any conflict between safeguarding ESG considerations and sound investment management, or whether fund managers can, should or must incorporate ESG considerations in order to safeguard shareholders' interests in a satisfactory manner. The first report gave the following answer:

«...integrating ESG considerations into an investment analysis so as to more reliably predict financial performance is clearly permissible and is arguably required in all jurisdictions.»

The Fiduciary II report is based on the premises of the first report. Fiduciary II gives advice on how the obligation to integrate ESG considerations should be met. Among other things it claims:

«It is an obligation on pension fund trustees not simply a right or option to state in their Statement of Investment Principles what the fund's guidelines are on responsible investment and to what extent social, environmental or ethical considerations are taken into account.»

Furthermore:

«...it is necessary for investment management agreements or the equivalent contract between pension funds and asset managers to use ESG language in order to clarify the expectations of the parties to the contract. In particular, it is important that it is made absolutely clear to beneficiaries, pension fund trustees and asset managers that ESG is regarded as a mainstream investment consideration.»

<sup>5</sup> "Norwegian Ministry of Finance: Active management and active ownership", December 2009, Mercer

<sup>6</sup> In jurisdictions based on a common law system, typical of Anglo-American law tradition, the term "fiduciary duties" is used of the manager's obligations to the owners.

### 10.3 Contribution to the development of best practice in this area

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The Ministry of Finance believes it is important to support initiatives that can help develop a clearer common understanding of what constitutes best practice for responsible asset management. At the same time it is necessary to provide a certain amount of flexibility depending, for example, on ownership, size and structure. The UN PRI (Principles for Responsible Investment) is an important initiative that in the Ministry's view combines the need for a common platform and understanding of the issues and the need for a certain amount of flexibility in execution on the part of the individual investor. As manager of the GPFG Norges Bank participated together with other leading investors in the preparatory work and design of the UN PRI. The Ministry of Finance, Norges Bank and Folketrygdfondet have signed the principles on behalf of the GPFG and GPFN. The PRI is discussed further in section 3.3 of this report.

Good access to information about actual conditions and the companies' strategies for corporate governance and environmental and social issues is necessary in order to be able to take such factors into account in investment decisions and in the exercise of ownership rights. Transparency can help counteract harmful practices, such as corruption. As manager of the GPFG Norges Bank supports initiatives that contribute to a greater degree of transparency and reporting of factors assumed to affect long-term returns. This applies to initiatives such as the Extractive Industries Transparency Initiative (EITI), Carbon Disclosure Project (CDP) and Forest Footprint Disclosure Project. Norges Bank has a leading role in the development of CDP Water Disclosure, which was launched in November 2009.

As much as investors expect companies to be open about their strategies and their value-creation to the investor, investors must also be open about their strategies and their management – both to their owners, but also to companies and society at large. The Ministry of Finance makes an annual report to the Storting on the management of the Government Pension Fund, which includes reporting on the Ministry's responsible investment practices. In March 2010 the Ministry published a strategy document showing the breadth of its work on responsible investment, the means it uses and its future goals. It is the Ministry's ambition to continue to develop this strategy

in order to incorporate good corporate governance and environmental and social factors into more aspects of the investment strategy and management. This is in line with our obligations as a member of the UN PRI. Norges Bank publishes quarterly as well as annual reports on the management of the Fund, including active ownership. There is also transparency in investments in the Fund and on all voting at annual general meetings. Recommendations from the Council on Ethics to exclude companies from the GPFG are made public. A list of the companies that have been excluded or are under observation is available on the Ministry of Finance's website.

In managing the GPFG, given the Fund's size and long-term horizon, it is important to help ensure that markets are efficient and well-functioning. This is a special area of focus in Norges Bank's ownership strategy. Norges Bank in 2009 led an initiative to strengthen parts of the European covered bonds market, which was hit hard by the financial crisis. Together with a number of other major investors, Norges Bank established the Covered Bond Investor Council (CBIC) to improve liquidity and information in the market for covered bonds, after the financial crisis had undermined investor confidence in these kinds of securities. A well-functioning covered bond market is crucial for banks' long-term financing ability, in addition to financing of mortgages and the public sector in Europe.<sup>7</sup>

The Ministry of Finance considers it particularly important in a long-term perspective to support the building of standards that can help to clarify and raise corporate standards in issues that affect our values and our long-term financial returns. This is also connected with our role as a universal owner, with a need to improve the quality of the investment universe and contribute to sustainable development. It will be in our interest as a long-term and diversified owner that as many companies as possible are well managed and safeguard environmental and social factors in a responsible, sustainable manner. The most appropriate way to ensure such a development will in many cases be public regulation. In light of this the Ministry gives priority to contributing to initiatives that set standards and rules for good corporate practice in different areas.

The Ministry of Finance and the Council on Ethics for the GPFG take part in a project coordi-

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<sup>7</sup> Norges Banks' annual report on the Government Pension Fund Global for 2009.

nated by the UN Global Compact, where the goal is to develop a set of guidelines that provide guidance for responsible corporate and investment practice in conflict areas. Such guidelines are hoped to provide investors and companies a greater degree of insight into each other's experiences and perspectives, contribute to better and more efficient use of suitable tools when companies operate in such areas, as well as raise awareness and clarity about what is acceptable, responsible behaviour. The guidelines will emphasise that it is

important for a company's profitability and implicitly an investor's long-term return how the company handles the type of risk that operations in war and conflict areas often entail. The Ministry takes a positive view of the fact that the guidelines are being prepared in consultation with international representatives of companies, investors and organisations. This increases the likelihood of the guidelines being accorded weight and adhered to.

The guidelines are scheduled for release in summer 2010.

## 11 The Fund as a universal owner

### 11.1 Introduction to universal ownership

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A universal owner (UO) is defined as an owner with investments spread across a large number of companies in many industries and countries. In this way a UO indirectly owns a share of the world's production capacity. A UO will also often have a very long investment horizon. Because of its size, long-term horizon and broad social basis the GPFG falls under the UO category.

For a UO, overall economic performance over the long term determines the value of the assets to a greater extent than factors related to individual companies or sectors. This is in contrast to less diversified owners, who may have large holdings in a few companies, or who have specialised in one sector. Gjessing and Syse (2007)<sup>1</sup> look specifically at the GPFG and the UO hypothesis and write that «[...] the Fund's long-term financial interest lies in the global markets' ability to produce economic growth, and in functioning securities markets.» A universal owner therefore has a special interest in working for well-functioning, legitimate markets and reduced negative effects on the environment and society.

Universal owners have for this reason developed increasingly comprehensive strategies relating to the practical implementation of sustainable and responsible investments, and integration of so-called ESG factors<sup>2</sup> in the asset management.

### 11.2 What are externalities and how can they affect a universal owner?

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The externality concept is a good starting point for better understanding why and how a broad

<sup>1</sup> Gjessing, P.K and Syse, H. Norwegian Petroleum Wealth and Universal Ownership Corporate Governance: An International Review, Vol. 15, No. 3, pp. 427-437, May 2007. Available at SSRN: <http://ssrn.com/abstract=984337> or doi:10.1111/j.1467-8683.2007.00576.x

<sup>2</sup> ESG factors means environmental, social or corporate governance factors. Integration of ESG factors means that they are included in investment decisions on a par with more traditional financial factors.

and universal owner should focus on the long-term sustainability of the economy. In the economic literature externalities are defined as unpriced social costs or benefits from production or consumption. That a social cost is not priced means that the cost of production imposed on society is higher than the cost the producer pays. The externalities thus lead to market failure, and different consumption of a resource than if the full social cost was priced.

An example of a negative externality is child labour. The producer pays only what it costs to employ the children, not the cost to society when the health of children suffers or they have less time for education. Externalities lead to efficiency losses and lower economic growth than if they did not exist. For a UO the effects of the externalities, however, are often internalised in both the short and long term. Lower production costs in a company that uses child labour can reduce the profitability of other companies that do not use this type of labour. A lower education level today may lead to lower economic growth in the future.

A UO can benefit from reduced externalities in several ways.<sup>3</sup> One effect of more efficient use of resources is increased productivity. This provides increased value creation that a UO can take part in. Lower risk of future uncertainties in the economy as a result of externalities (such as major climate change) may reduce the risk associated with different investments. This provides lower capital costs and more viable investments.

### 11.3 Investment horizon and other aspects of universal ownership

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Challenges associated with externalities may also have a time dimension. Completely efficient markets will immediately price both the negative and

<sup>3</sup> See for example Thamotheram, R. and Wildsmith, H. Increasing Long-Term Market Returns: realising the potential of collective pension fund action, Corporate Governance: An International Review Vol. 15, No. 3, pp. 427-437, May 2007. Available at <http://www3.interscience.wiley.com/cgi-bin/fulltext/117967311/PDFSTART>

### **Box 11.1 How are externality problems solved?**

In economic theory, there are both private and public ways to solve an externality problem. According to Coase,<sup>1</sup> externalities can be internalised and the problems solved if the authorities can allocate property rights and these can be traded without transaction costs. In reality, however, many elements must be in place to meet these two conditions. For example, there will in most cases be a certain element of transaction costs. There may also be difficulties associated with the allocation of property rights.

Another private solution to the externality problem is through the merger of companies – such as a fishing company and a factory, where the factory's emissions adversely affect the catch. The potential for such privatisation of the entire external cost is relatively restricted in a global economy, but this form of internalising is reminiscent of the reality a broadly invested investor faces.

Another possible private solution to externality problems is through the legal system – a company can sue another company and claim compensation for a given negative externality, if the conditions for this are met.

Public solutions to externality problems include, among others, taxes, fees and quotas. A tax on a production that is set so that the cost of production is equal to the social cost is called a Pigou tax. Quotas are based on the social market equilibrium and are distributed to the producers. Transferable quotas introduce a market mechanism and lead, for example, to cost-effective emission reductions. If increased consumption of a resource or product is desired, subsidies can be introduced.

In practice, most of the solutions for reducing externalities involve a form of government participation.

<sup>1</sup> Coase, Ronald (1960). The problem of Social Cost. *Journal of Law and Economics* pp 1-44.

the positive effects of an externality. It is the market's ability to correctly predict the future income stream that is crucial for their ability to price externalities properly. Mispricing can occur as a result of markets failing to account for the probability of various future events (especially extreme ones). Unexpected, negative events, especially recurring unexpected negative events such as climate change, may also increase uncertainty and reduce the value of a financial investment. The Ministry of Finance participates in a project that looks at how climate change may affect different asset classes, see discussion in Box 2.1.

The UO hypothesis's implicit long-term perspective suggests that there is a limit to how widely the hypothesis will actually apply to the players in the financial markets. It has been claimed that many companies are short-sighted because there are strong forces and dynamics (for example bonus programs and other incentives) that reward short-term objectives at the expense of long-term return the way the markets are organised today.<sup>4</sup> Since owners often will benefit from a long-term horizon, this is an example of the principal-agent problem in economic theory. A UO should endeavour to reward companies on the basis of what creates the highest possible long-term profitability.

## **11.4 The Fund's strategy as a universal owner**

The GPFG is managed through investments in bond and equity markets, within the limits specified for risk and the ethical guidelines. The return of the Fund is heavily influenced by the performance of the global equity markets. The factors discussed so far provide a good reason for the Fund to engage in active ownership. The possibilities for mispricing and a different investment horizon mean that a UO may have different interests to safeguard than other investors.

Gjessing and Syse (2007) write that a UO has a vested interest in trying to «lift» the quality of the whole market and reduce future welfare losses. Since lifting the entire market will often be practically impossible, a UO may also have to make specific investment strategy choices in order to «adapt» to the market's inadequate pricing of the

<sup>4</sup> See for example Drew, M.E The Puzzle of Financial Reporting and Corporate Short-Termism: A Universal Ownership Perspective *Australian Accounting Review* No. 51 Vol. 19 Issue 4 2009.

externalities or because of a different investment horizon.

It is important to achieve an efficient division of labour between companies, authorities and owners in the approach to these challenges. While local problems<sup>5</sup> may best be resolved through active ownership and cooperation with other major owners, the global problems are more difficult to reduce.

An important prerequisite for influencing companies to change their behaviour is that such a change is also in the companies' interest, if not the results may soon become arbitrary. Where it is difficult to find a solution in isolation at the company level, a broader industry approach may be relevant. An example of successful ownership work in this context is the GPF's initiative in India which contributed to a new industry standard for combating child labour.

The most appropriate form of sustainable, long-term and predictable solutions to global problems will often be through regulation. In this case, the GPF will primarily be interested in influencing global authorities in the direction of integrating the external effects with the economy, either directly or in partnership with portfolio companies and other investors. Work on climate change or regulation of the financial markets so that risk-taking is more in line with long-term interests are good examples of issues where global solutions are most appropriate.

Also when it comes to the need for «adapting» management strategy and asset allocation it is the major, global externalities that can be expected to have a measurable effect. Adaptation could be achieved through greater use of screening criteria, for example on carbon emissions if one has good data. The integration of ESG factors in the asset management, to which the GPF has committed itself by signing the UN Principles for Responsible Investment, is a relevant approach. There are also management strategies that actively analyse ESG factors to achieve excess return.<sup>6</sup> These active managers seek to exploit the markets' potential mispricing of externalities to achieve excess returns.

To provide further practical content to the UO hypothesis is a topic that concerns many funds

<sup>5</sup> For example, discharges along a river that reduce the productivity of other users of the river or isolated problems with corporate governance.

<sup>6</sup> Among other things, PGGM, the Netherland's second largest pension fund, has come a long way here, and excess return is also the purpose of NBIM's environmental mandates.

the GPF can be compared with. Scenario thinking and a focus on the major global externalities is a useful starting point in the analysis of how universal ownership can be implemented in practice. The Ministry of Finance is, as mentioned above, participating in a project that looks at these issues in terms of climate change. Several other large investors also look at how various externalities will affect investment management in various scenarios.

### **11.5 Some limitations to the hypothesis of universal ownership**

There are some limitations associated with the UO hypothesis, especially how the hypothesis should be approached in practice. Even a diversified global owner is not invested in the entire world economy. Some local externalities will therefore be less important<sup>7</sup> in a UO context. It might also be sensible to consider the following issues:

#### *Long-term horizon*

A universal owner will normally have a long investment horizon.<sup>8</sup> If the rest of the market does not have the same long-term horizon, a UO that adapts to a long-term horizon may perhaps live through a long period of mispricing before the effect of an externality is reflected in the market. It is therefore difficult to say when a UO best adapts to a future problem area. Relative performance during an adjustment will depend on whether it takes a long time before an externality is priced correctly.

#### *Measurement and practical approach*

Lack of measurability<sup>9</sup> can also make it problematic in practice to set good goals for how to «lift» the quality or «adapt» the portfolio, especially for a substantial passive manager. Good company or sector-specific data an owner can take advantage

<sup>7</sup> Gjessing and Syse (2007) use the example of pollution that reduces agricultural production in a remote, self-supporting area. It is an important ethical and perhaps political issue - but probably not key for a manager who is to maximise absolute returns.

<sup>8</sup> According to FRR, about 40 years will, for example, elapse before climate change under certain scenarios will affect a fund's return and risk.

<sup>9</sup> Even where the effects are measurable, they will only become visible years, perhaps decades, after the activity took place (Thamotheram and Wild Smith 2007).

of does not exist for many externalities. An owner can try to influence this. The Fund's support of CDP in terms of good data on CO<sub>2</sub> emissions is one example.

Nor is it necessarily conducive to encourage company management to follow targets with a high degree of inaccuracy, or that an investor requires companies to maximise shareholder value while simultaneously refraining from making use of profit opportunities. However, it may be important for an owner to seek to help a portfolio company to credibly build short-term strategies that support a long-term goal of maximum return if the company is not able on its own to make short-term (perhaps costly) choices that support the long-term goal.<sup>10</sup> A good example of how this can be done is NBIM's various expectations documents.

#### *Cost efficiency*

It is important that thorough cost-benefit assessments be carried out on various actions related to a broad UO approach. The fact that an owner has an economic interest in reducing global market failure does not mean that it necessarily has a good business rationale for investing in this happening (Gjessing and Syse, 2007). Selective ownership initiatives and cooperation on limited issues through international meeting places like the UN PRI is probably a cost-efficient and good way to approach many challenges.

#### *Ethics beyond the financially founded*

The UO hypothesis does not address all ethical considerations an owner may wish to take. The UO hypothesis will in practice be based on forecasts and partly on qualitative assessments and therefore does not lead to any direct or indisputable financially rooted ethics. There will be situations where an owner may wish to go further in

the ethical direction than the UO hypothesis might provide a basis for – either by conviction or because the analysis and basic data are missing.

## **11.6 Conclusion**

The UO hypothesis is relatively new and although it has been the subject of academic interest, it is, at least in practice, quite unexplored. However, many of the issues are not new, but familiar from, for example environmental and resource management, the debate about the short-term horizon in business and stakeholder theory. What the UO hypothesis does is to anchor the issues theoretically and intuitively in the context of a universal owner in a financial market context. The hypothesis shows that the issues are relevant to the goal of maximum long-term risk-adjusted returns.

The Fund is a universal owner by definition and should therefore have a concrete approach to what this means in practice. Such an approach should look at the need and possibilities for reducing the short- and long-term welfare losses by «lifting» the quality of the investment universe. It should also look at the dynamic need to «adapt» to the issues through changes in the investment strategy.

The Ministry of Finance will continue the analysis into what the role of universal owner practically implies. It is important to point out that many of the challenges and opportunities the GPFG meets in this context are addressed through the Fund's work as a responsible investor. For example, the GPFG already has a broad approach to exercising ownership and produces expectations documents aimed at portfolio companies. The new observation list for exclusion may also provide an important contribution to improving the «quality» of individual companies in the portfolio. As such, the theory of universal ownership can be seen to form a superstructure for much of the Fund's work on responsible investments, and help focus and clarify priorities both in this work and in the main objective of maximum, long-term risk-adjusted returns.

<sup>10</sup>This may be a result of Akerlof's (1991) concept of naive discounting of the future, where a short-term painful decision is continually postponed and one eventually ends up in a situation that one wished to avoid, or other forms of present bias (hyperbolic discounting), known from behavioural economics.



## 12 International reporting standards

### 12.1 Global Investment Performance Standards (GIPS)

GIPS is an international standard for calculating and presenting historical investment results for companies that manage funds on behalf of a third party. Complying with the standard is voluntary, and it is based on the principle of self-regulation.

The standard was developed by the Chartered Financial Analyst (CFA) Institute in collaboration with many other organisations, and was launched in 1999. At the moment institutions in 32 different countries are administering and continuing to develop the standard. The standard is designed to instil greater confidence in the completeness and correctness of performance information. Common use of methods and principles also makes it easier to compare figures from different institutions. This benefits both managers and investors.

The standard requires the basic data to be consistent, both across portfolios and over time. This is essential if the return figures are to be complete and give an accurate picture. Valuation

must be based on market values (fair value). The portfolios must be valued at least monthly.

In calculating returns, GIPS requires the use of total return, including realised and unrealised gains plus other income. Furthermore, time-weighted rates of return that adjust for cash flows must be used. Periodic returns must be geometrically linked, i.e. the return figures for the interim periods must be linked together to find the return for the entire period.

All returns shall be calculated after deduction for actual transaction expenses. The return shall not be adjusted for estimated transaction costs. GIPS covers both gross return and net return, and recommends in presentations the use of gross return (in addition to relevant management fees for current clients), as shown in Figure 12.1.

Reporting requires, among other things, disclosure of annual return, benchmark return where such exists, market value, overview and description of portfolio groups, the currency the returns are presented in and whether the net or gross return is presented. At least five years of

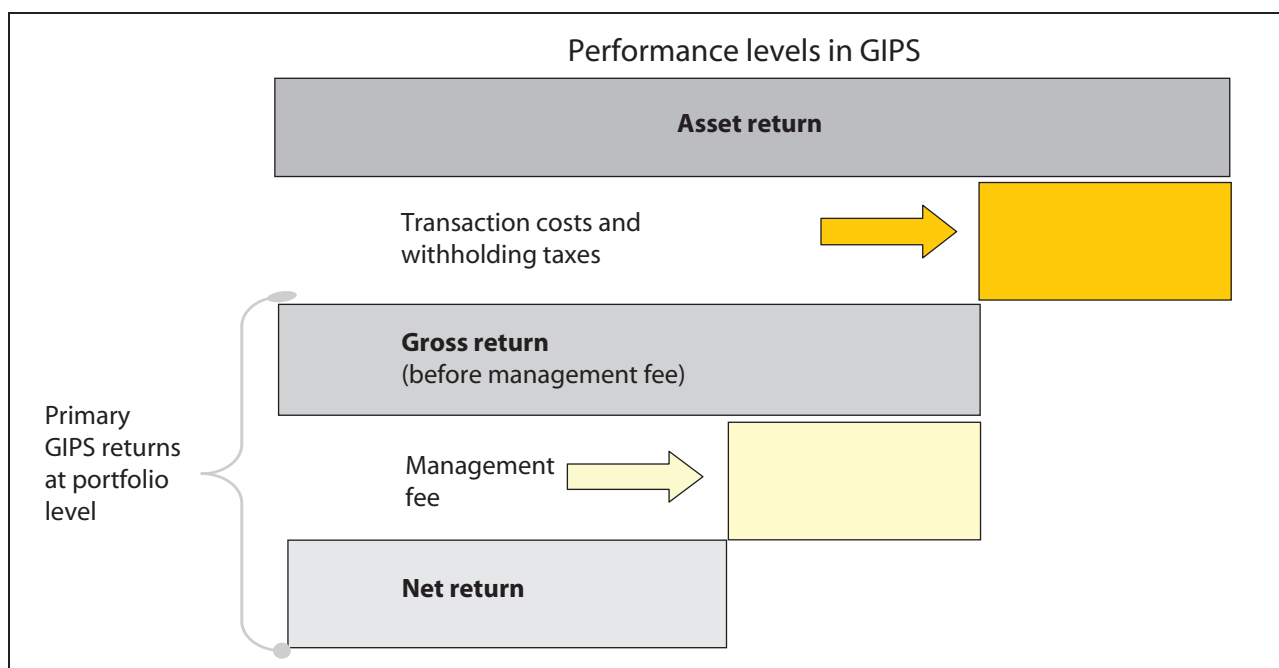


Figure 12.1 Different return levels in GIPS

Source: GIPS

GIPS-compliant annual return data, or since firm inception, are required.

The total return for the benchmark must be presented for each annual period. In addition, it is recommended that the cumulative return for both the actual portfolio and the benchmark is stated for all periods for which the returns are presented.

GIPS has special requirements for calculating returns on and reporting of investments in real estate and unlisted equities.

The standard requires that a manager must meet all requirements listed in GIPS to be able to claim that it is GIPS compliant. Both Norges Bank and Folketrygdfondet follow the GIPS standard.

## **12.2 International Financial Reporting Standards (IFRS)**

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IFRS includes principle-based accounting standards, interpretations and frameworks for financial reporting prepared by the International Accounting Standards Board (IASB).

Some of the standards contained in IFRS are known under the old term International Accounting Standards (IAS). IAS were issued between 1973 and 2001 by the Board of the International Accounting Standards Committee (IASC). The responsibility for issuing international accounting standards was transferred from the IASC to the newly established IASB on 1 April 2001. At its first meeting the IASB confirmed that previously released IAS would be part of IFRS.

IASB is an independent standard-setting body overseen by the IASC Foundation. The members

(currently 15 full-time members) are responsible for developing and issuing IFRS and approving interpretations prepared by IFRIC (International Financial Reporting Interpretations Committee).

IFRS is under continuous development and significant changes are expected in coming years. Among other things, a major change regarding financial instruments is under preparation. The framework is also being revised.

In addition to the standards, interpretations are issued to provide guidelines for problems not covered in the standards and in areas where dissimilar or unintentional practices have evolved. These are issued by IFRIC, the International Financial Reporting Interpretations Committee.

IFRS is required or permitted in more than 100 countries and has helped harmonise the globalisation of accounting standards, including through converging projects with FASB, the American standard-setting body and the Japanese standard-setting body. Pursuant to Section 3-9 of the Accounting Act, listed companies in Norway shall prepare financial statements according to international accounting standards (IFRS), while others with a statutory obligation to keep accounts can choose to follow IFRS or the other rules of the Accounting Act. For Norwegian banks, financing and insurance companies there are separate accounting rules in the regulations pursuant to the Accounting Act which in essence mean that these companies must develop financial statements according to the recognition and measurement provisions of IFRS.

Reference is otherwise made to the coverage of new rules for the management of the GPFG in Chapter 4.

## 13 GPFG compared with other large funds

### 13.1 Introduction

Globally, there are many large capital owners, funds and managers. In the 12 years since its foundation, the GPFG has grown to become one of the world's largest sovereign wealth funds, and is also among the world's largest funds in total. Figure 13.1 shows the size of the GPFG compared with a selection of other large pension and investment funds and investment managers.

The Government has high ambitions for the management of the Government Pension Fund. This makes it natural to compare the management of the GPFG with other large funds internationally. The Ministry of Finance therefore receives annual reports prepared by CEM Benchmarking Inc. (CEM) and WM Performance Services (WM). The CEM report compares the GPFG's asset allocation, return, excess return and

management costs with large pension funds, while the WM report compares excess return of pension funds, life insurance companies and sovereign wealth funds.

The reference group consists of the largest funds in the CEM survey (10 US, 3 Canadian and 3 European funds). In 2008, the median size of the reference group was NOK 660 billion, while the GPFG's average market value in 2008 was NOK 2,063 billion. The data are based on self-reporting by the funds that purchase services from CEM. The WM report shows the results of all the funds in their data and for the 15 and 50 largest funds. In 2009 the WM funds had an average market capitalisation of NOK 18 billion while the 15 largest funds' average market capitalisation was NOK 410 billion. For comparison, the GPFG's market value, calculated as the monthly average, was NOK 2,365 billion in 2009.

WM's data are different from CEM's. CEM has a larger database of funds from the entire world, but does not cover funds in the United Kingdom. The United Kingdom makes up a large portion of the funds in WM's data.

The CEM report is completed in the second half of each year. The last published report therefore contains only data up to and including 2008. The WM report is completed in the first quarter, so that the final report contains data for 2009. The reports are published on the Ministry of Finance's website ([www.regjeringen.no/spf](http://www.regjeringen.no/spf)).

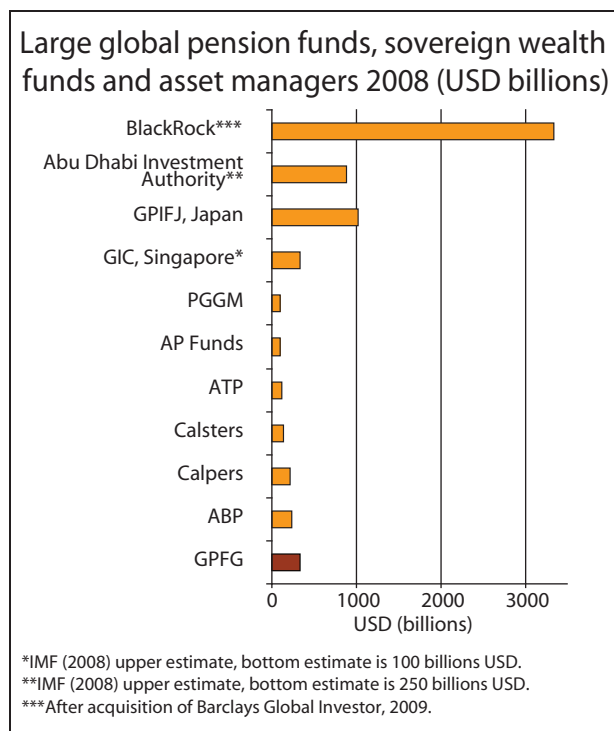


Figure 13.1 Large global pension and investment funds and investment managers.<sup>1</sup>

<sup>1</sup> Different periods of financial reporting.

Source: Fund and manager websites

### 13.2 Strategic asset allocation

One difference between the GPFG and other institutional investors such as pension funds and life insurance companies is that the GPFG does not have specific obligations or short-term liquidity requirements that directly influence strategic asset allocation. The GPFG can on this basis be said to have a very long investment horizon and a higher risk-bearing capacity than other funds it would otherwise be natural to compare the fund with.

Table 13.1 Strategic asset allocation in the GPFG and comparable funds in 2008

Asset classes	GPFG	Peers	University endowments <sup>1</sup>
Bonds	40	32	11
Listed equities	60	49	39
Real estate <sup>2</sup>	0 <sup>3</sup>	9	6
Unlisted equities	0	7	14
Infrastructure	0	1	0
Hedge Funds	0	1	23
Natural resources	0	1	5
Other	0	1	7

<sup>1</sup> Actual average asset allocation for North American university funds larger than USD 1 billion at the end of the first half of 2008.

<sup>2</sup> Real estate includes REITS (Real Estate Investment Trusts).

<sup>3</sup> Current rules for the real estate portfolio permit up to 5 per cent investments in real estate. The bond share will be adjusted downwards correspondingly.

Source: CEM Benchmarking Inc. and 2008 NACUBO Endowment Study ([www.nacubo.org](http://www.nacubo.org)).

It may therefore also be relevant to compare the GPFG with funds without clearly defined liabilities, such as North American university endowment funds.

The choice of equity allocation is the decision that has the greatest impact on the funds' returns and risk. The comparison with other funds in Table 13.1 shows that the GPFG's division between fixed-income and equity instruments is close to the average of the reference group – large pension funds. The university funds stand out with a much lower bond allocation.

The GPFG is different from other funds in that the strategic benchmark does not include smaller asset classes like private equity, infrastructure and natural resources. University funds have significant investments in such alternative asset classes. Such a strategy is feasible amongst other things because they are much smaller than the GPFG and the world's largest pension funds. However, some of the university funds are large. The size of the two largest university funds, Harvard and Yale, were USD 37 and 23 billion, respectively, by the end of the first half of 2008. Both of these funds are often cited as examples of university funds that have developed a distinctive investment strategy with a high percentage of illiquid equity investments.

### 13.3 The benchmark's rate of return up until 2008

The CEM analyses are conducted for a five year period. The investment strategy underpinning the

composition of the benchmark is based on trade-offs between long-term return expectations and risk in the capital markets. In such a perspective a five-year period is short. If the comparisons had been made for a different five-year period, the findings might have been different.

The analyses by CEM show that the average annual rate of return of the GPFG's benchmark for the five-year period until 2008 was 1.5 per cent, measured by the currency basket of the benchmark. Similarly, the reference group's median return was 2.7 per cent measured in each fund's respective currency.

Comparison of the aggregate rate of return between funds is difficult because different funds have different currency compositions and benchmark currencies. Exchange rate fluctuations mean that the rate of return will depend on the benchmark currency that is used. During the five-year period until 2008, for example, the rate of return on the Fund's benchmark measured in euro was 0 per cent, while it was 2.0 per cent measured in USD.

The difference in the benchmark's rate of return will also be the result of differences in terms of asset classes and regional composition. Up until now the GPFG has distinguished itself from other large pension funds by a higher fixed-income allocation and the fact that the Fund is not invested in real estate and private equity. CEM has calculated that if the other funds had held the same asset class composition as the GPFG over the five-year period until 2008, their annual indexed rate of return would have been reduced by 0.5 percentage point for the reference group. This difference is

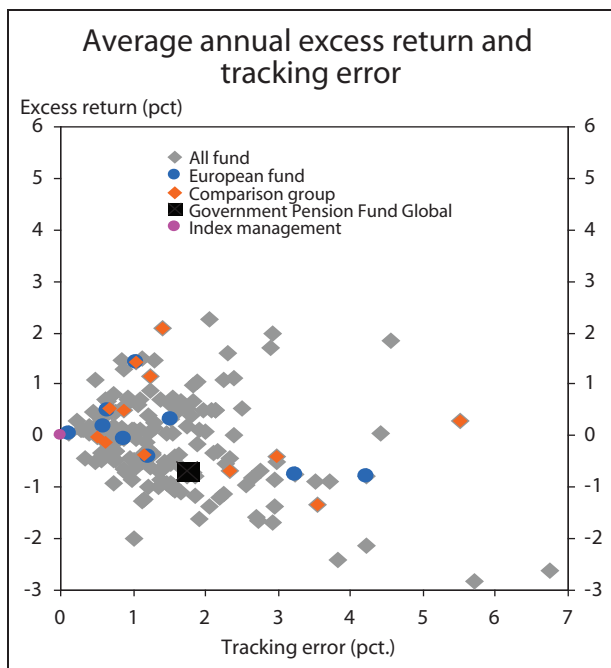


Figure 13.2 Average annual excess return and realised relative volatility for GPFG and other funds. 2004–2008. Per cent

Source: CEM Benchmarking Inc.

attributable primarily to the fact that other funds have had higher allocations to private equity and real estate. The GPFG is also different from other funds because of its diversification over many markets and currencies. Most of the pension funds in the reference groups hold the majority of their investments in their domestic markets.

### 13.4 Excess return up until 2008

A comparison over time of the actual return of the GPFG with the return of the benchmark shows the gross excess return Norges Bank has created. Figure 13.2 displays the average gross excess return and the realised relative volatility for the five-year period 2004–2008 for the GPFG and the various reference groups. The figure shows that the GPFG had a negative excess return over this period, while the average of other funds is close to zero. One can also see that the GPFG has had a somewhat higher variation in excess returns than the other funds.

CEM has estimated that in the five-year period to 2008 the GPFG achieved an average annual gross negative excess return of 0.6 percentage point. By comparison, the most typical gross excess return (median) was 0.2 percentage point in the reference group. The analyses also show that

the GPFG has had a somewhat higher realised relative volatility than the other funds.

The reference group has created excess returns in asset classes in which the GPFG is not invested. The comparison of the excess return from fixed-income and equity management with other funds provides, therefore, a better illustration as to how Norges Bank has succeeded compared to other managers. The average gross excess return from equity management over the five-year period was 0.5 percentage point, while the median for the reference group was 0.4 percentage point. The average gross negative excess return from fixed-income management over the period was -1.4 percentage points, while the median rate of return for the reference group was -0.9 percentage point. The analyses also show that variation in excess returns for both equity and fixed income management in the GPFG in the five-year period until 2008 is higher than what was typical of other funds.

### 13.5 Excess return up until 2009

Figure 13.3 shows the average gross excess return and the realised relative volatility of the last three years to 2009 for the GPFG compared with the WM sample. The figure shows that the GPFG, like the majority of the other managers, had a negative excess return during this period. The GPFG has had a somewhat smaller variation in excess returns, i.e. lower relative volatility than the other funds.

The WM analyses show that the high excess returns in 2009 placed the GPFG among the 25 per cent best funds. The significant negative excess return in 2008 means, however, that the excess return in the three- and five-year period up to 2009 approaches the most typical excess return (the median) of the other funds in the survey.

The report from WM also contains a comparison of the excess return of the equity and fixed-income portfolios with other funds. The analyses show that although equity management had significantly lower negative excess return in 2008, the equity portfolio created excess return for both the three- and five-year period to the end of 2009. In both these periods, equity management created higher excess return than the average of other funds. Excess return in the five-year period placed the GPFG among the 25 per cent best funds. In fixed income management, as in equity management, significant excess return were created in

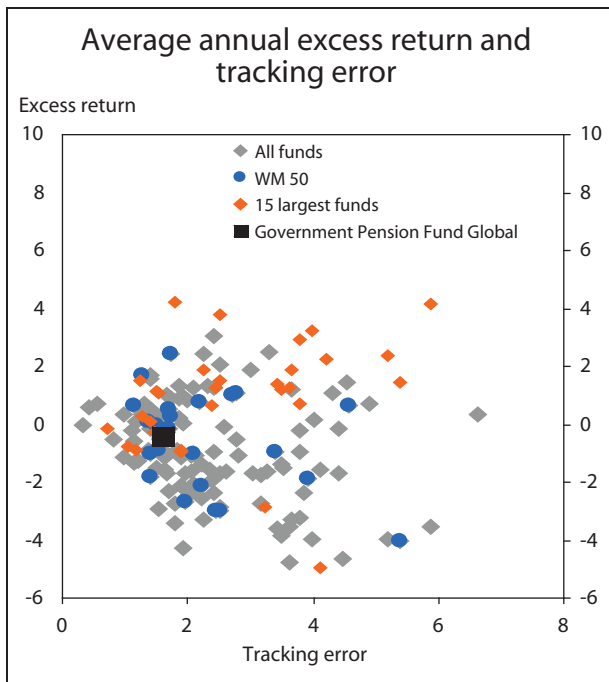


Figure 13.3 Average annual excess return and realised relative volatility for GPFG and other funds, 2004–2008. Per cent

Source: WM Performance Services.

2009. The results were also good compared with other funds. However, for the three-and five-year period to the end of 2009, fixed-income management had a negative excess return, and did somewhat worse than the other funds in WM's source data.

### 13.6 Management costs up until 2008

The CEM report shows that Norges Bank's total management costs for the GPFG in 2008 were 0.106 per cent (i.e. about 11 basis points) of average assets under management. With the exception of the GPFN, these represent the lowest management costs of all the funds from which CEM collects data. Since the total management costs largely reflect the funds' asset composition, such comparisons do not provide an adequate picture of whether Norges Bank's management is cost-efficient. For the GPFG the asset class composition is a result of the Ministry of Finance's investment strategy.

CEM has, therefore, prepared a cost benchmark based on the asset structure of the GPFG. The cost benchmark indicates what costs the reference group – the world's largest pension funds – would have incurred with the same asset struc-

ture as the Fund. The analysis shows that actual management costs in the GPFG in 2008 were 0.03 percentage point lower than the cost benchmark. This is primarily due to Norges Bank having chosen more internal management than the reference group. Internal management is considerably less expensive than external management. In addition, Norges Bank has paid less for external management than comparable funds.

### 13.7 Transparency of management

The Ministry of Finance emphasises transparency and public access in its work with the Government Pension Fund. This is important for ensuring the credibility of the Fund and the Fund's general approval.

Internationally, there has been considerable attention related to the fact that some sovereign wealth funds have little transparency about their activities and may have non-financial objectives for their investments. In particular, the recipient countries of foreign, state investments have in different forums pointed out the importance of transparency with respect to such investments.

Both the U.S. and the EU Commission outlined principles for adequate transparency in 2008. The European Commission called for annual disclosure of investments and asset allocation, disclosure of level of leverage, currency distribution of assets, the size of the fund and the source of the fund's assets and the home country's regulation and control of the fund (European Commission, 2008).<sup>1</sup> Reporting on the management of the GPFG is in line with the principles outlined by the U.S. and the EU.

Several independent sources refer to the GPFG as one of the world's most transparent funds. One example is the article «A Blueprint for Sovereign Wealth Funds Best Practices» by Truman (2008)<sup>2</sup> which gives the Fund 100 of 100 possible points for transparency. The report grades the degree of transparency in the investment strategy, investment activities, reporting and auditing. Of 34 state-owned investment funds, only

<sup>1</sup> European Commission 2008 A common European approach to sovereign wealth funds Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions COM (2008) 115 (February 27). Available at <http://ec.europa.eu>.

<sup>2</sup> Truman, Edwin M. 2008, A Blueprint for Sovereign Wealth Fund Best Practices Peterson Institute for International Economics Policy Brief No PB08-3, Washington, DC.

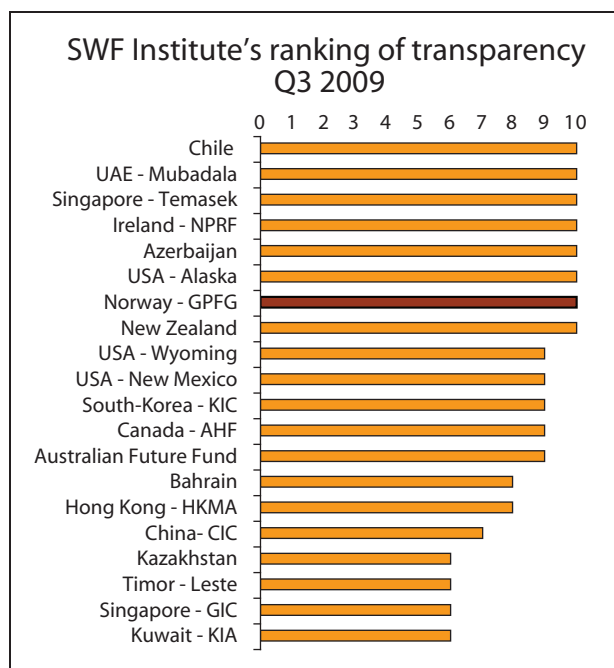


Figure 13.4 The Sovereign Wealth Fund Institute's transparency index for third quarter 2009

Source: [www.swfinstitute.org](http://www.swfinstitute.org)

the Alaska Permanent Fund in the United States and the GPF achieve the highest score. The average score in the group is 44.

The Sovereign Wealth Fund Institute (SWFI) also gives the GPF a score of 10 out of 10 on transparency. SWFI believes that a fund should have a score of at least 8 in order to call itself transparent. Figure 13.4 shows the funds that get over 6 points from the SWFI. There are only 8 global sovereign wealth funds that have 10 points in the SWFI ranking. The items included in the review are listed in Box 13.1.

### 13.8 The organisation of large government investment and pension funds

There are various models for how sovereign wealth funds and pension funds are organised, and the degree of independence of the state owners varies.

IMF (2008)<sup>3</sup> writes that there is no clear evidence that the investments of any sovereign wealth funds have been clearly politically motivated.

<sup>3</sup> IMF (International Monetary Fund) 2008, *Sovereign Wealth Funds – A Work Agenda* Washington (February 29). Available at [www.imf.org](http://www.imf.org).

#### Box 13.1 Transparency index criteria

SWFI awards funds points for transparency on the following:

- History including reason for creation, origins of wealth, and government ownership structure
- Up-to-date independently audited annual reports
- Ownership percentage of company holdings, and geographic locations of holdings
- Total portfolio market value, returns, and management compensation
- Guidelines in reference to ethical standards, investment policies, and enforcer of guidelines
- Clear strategies and objectives
- If applicable, the fund clearly identifies subsidiaries and contact information
- If applicable, the fund identifies external managers
- Own web site
- Main office location address and contact information such as telephone and fax

ed. A review of sovereign wealth funds by Balding (2009)<sup>4</sup> shows that it looks like they are governed primarily by financial objectives. Another study by Truman (2008) finds, however, that the governance model is poorly defined in many state-owned investment funds and that the manager role is also unclear or undefined in 12 of 34 cases. Truman's review also shows that investment decisions in half the funds are not independent of state or state-controlled boards. Such a practice is in conflict with the Santiago principles in general, and the principle of operational independence in investment decisions in particular. In its report on the Santiago principles the International Working Group of Sovereign Wealth Funds (IWF) describes a governance structure that divides the ownership, governance and management functions, and where the management function is politically independent. The Santiago principles express good principles of management for sovereign wealth funds. The principles are minimum standards that the current GPF framework already satisfies.

<sup>4</sup> Balding, Christopher, *Framing Sovereign Wealth Funds: What We Know and Need to Know* (January 30, 2009). Available at SSRN: <http://ssrn.com/abstract=1335556>.

## 14 Systematic risk factors in the active management of the GPFG 1998–2009

### 14.1 Introduction

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The GPFG is managed by Norges Bank in accordance with guidelines set by the Ministry of Finance. The Ministry of Finance has provided Norges Bank with a benchmark consisting of 60 per cent shares and 40 per cent bonds. In addition, the benchmark is divided into regions, countries, sectors and companies. The Ministry has also set limits for how much Norges Bank can deviate from the benchmark in the actual investments in the Fund. Divergence of this nature is called active management.

A limit has been set for how much the difference in return between the actual portfolio and the benchmark is expected to vary (so-called expected tracking error). Under certain statistical assumptions, and provided Norges Bank fully utilises the limit, the current limit for expected relative volatility of 1.5 per cent means that the difference in the return between the actual portfolio and the benchmark is expected to be less than 1.5 percentage points in two out of three years.

The three professors Andrew Ang from Columbia Business School, William N. Goetzmann from Yale School of Management and Stephen M. Schaefer from London Business School have analysed the results achieved by the active management of the GPFG in the period January 1998 to September 2009.<sup>1</sup> This special topic article presents the main findings of this study.

### 14.2 Degree of active management

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The analysis by professors Ang, Goetzmann and Schaefer reveals that only 0.9 per cent of the fluctuations in the return on the actual portfolio, measured in variance, were caused by divergences made in the active management. The remaining 99.1 per cent are the result of fluctuations in

the return on the benchmark. In the period prior to 2008, 0.3 per cent of the fluctuations were the result of active management. This means that it is mainly the choice of benchmark that determines the level of risk in the actual portfolio.

Only 0.3 per cent of the fluctuations in the equity portfolio were the result of active management. This applies to the period up until the end of 2007 as well as the entire period from January 1998 to September 2009. For the fixed-income portfolio, 0.2 per cent of the fluctuations up until 2007 were due to active management. Looking at the entire period up until September 2009, 2.9 per cent of the fluctuations can be attributed to active management. This increase in the importance of active management in the fixed-income portfolio suggests that the active management of the fixed-income portfolio has entailed exposure to systematic factors that generally made only a minor contribution to the fluctuations, but entailed major fluctuations for brief intervals.

### 14.3 Risk factors

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Studies on historical returns have shown that it is possible to improve the results achieved by a portfolio relative to a benchmark over time through exposure to systematic risk factors. Sometimes exposure to these factors will yield gains; at other times it will entail losses. Over time, however, the gains will be greater than the losses.

Ang, Goetzmann and Schaefer have analysed the excess return of the GPFG using a set of the most studied and accepted risk factors identified by research. The factors that have been investigated can be categorised as factors that affect the return on fixed-income securities and factors that affect the return on shares. The fixed-income factors are term (TERM), credit (CREDITAa, CREDITBaa, CREDITHY), currency carry trades (FX-CARRY) and liquidity (LIQUIDITY), while the share factors are market value compared with book value (VALGRTH), size (SMLG), momen-

<sup>1</sup> "Evaluation of Active Management of the Norwegian Government Pension Fund – Global", 2009 by Andrew Ang, William N. Goetzmann and Stephen M. Schaefer.



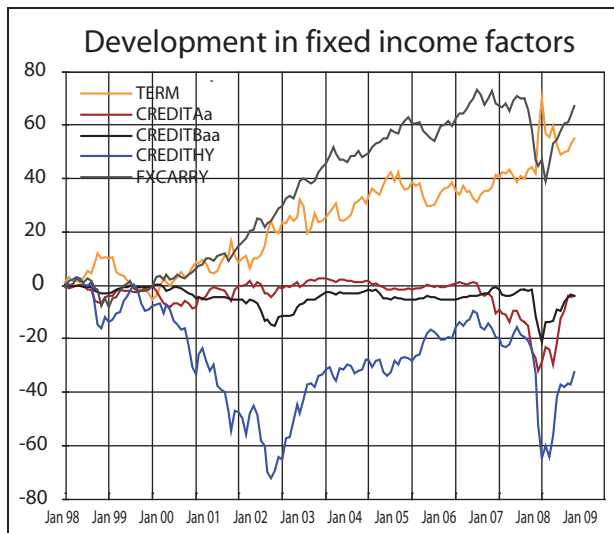


Figure 14.1 Accumulated returns attributable to fixed-income factors. Per cent

Source: Ang, Goetzmann og Schaefer (2009)

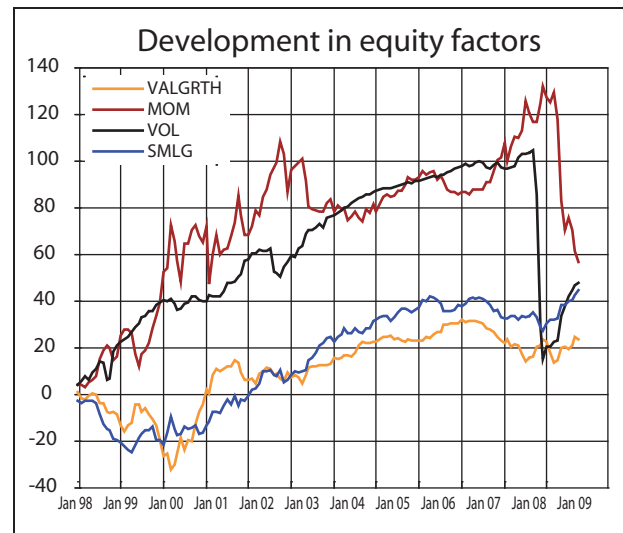


Figure 14.2 Accumulated returns attributable to share factors. Per cent

Source: Ang, Goetzmann og Schaefer (2009)

tum (MOM) and volatility (VOL). See chapter 7 on risk factors for a more detailed description of the factors.

Figure 14.1 shows accumulated return of fixed-income factors in the period January 1998 to September 2009. Correspondingly, figure 14.2 shows accumulated return of share factors, and figure 14.3 shows the developments in the liquidity factor.<sup>2</sup> The volatility factor is used in both the analysis of the equity portfolio and the analysis of the fixed-income portfolio.

The analysis of how exposure to the different risk factors has affected the Fund's excess return was performed using regression analysis. This is described in more details in the report by Ang, Goetzmann and Schaefer.

## 14.4 Total portfolio

Figure 3.14 C in chapter 3 shows developments in accumulated excess return from January 1998 to December 2009. Up until autumn 2007, there was relatively steady positive growth. Autumn 2007 saw the beginning of a negative development that resulted in a steep decline in autumn 2008. The return on the Fund in 2008 was 3.4 percentage points poorer than the return on the benchmark. From the second quarter of 2009, the trend has

<sup>2</sup> The liquidity factor is not measured as a series of return data and is therefore slightly different to the other risk factors in the report.

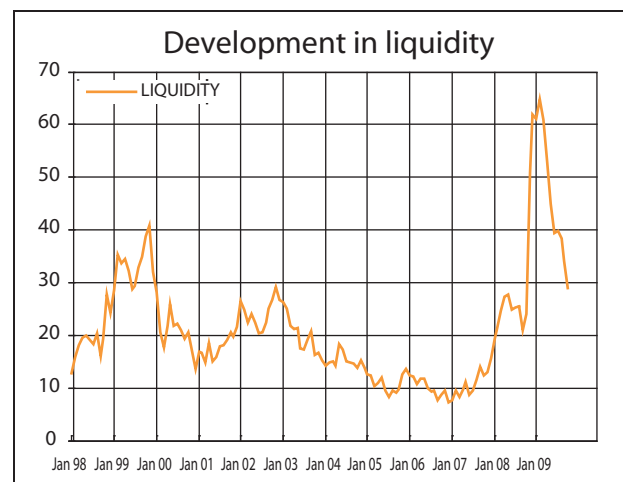


Figure 14.3 Developments in the liquidity factor. Difference in interest between the most recently issued and most liquid US ten-year government bonds and previously issued ten-year government bonds, measured in basis points.

Source: Ang, Goetzmann og Schaefer (2009)

been reversed, with the Fund performing much better than the benchmark.

For the period as a whole, Ang, Goetzmann and Schaefer find that active management has yielded a return that was on average 0.02 percentage points better than the return on the benchmark per month. Statistically, this difference is too small and the period too short to be able to conclude whether the excess return is due to skill-

ful management or merely random. Ang, Goetzmann and Schaefer therefore conclude that the overall excess return is marginal, but positive.

Ang, Goetzmann and Schaefer point out that the active strategies that Norges Bank has adopted basically entail exposure to systematic factors. The analysis shows that the Fund has overweighted fixed-income securities with a credit rating of Aa and underweighted fixed-income securities with a credit rating of Baa. The Fund has also been overweighted in securities with low liquidity, overweighted in shares in companies with a high market value compared with book value (growth companies) and overweighted in shares in small-cap companies. In addition, the Fund has sold volatility, which is equivalent to having sold insurance against greater fluctuations in the market.

By studying the developments in the active management results since 1998, Ang, Goetzmann and Schaefer have calculated that more than two-thirds of the variations in the Fund's overall excess return can be explained statistically by the risk factors. The equity and fixed-income portfolios were analysed using the factors considered most relevant for each asset class. According to this analysis exposure to systematic risk factors explains scarcely a third of the developments in the results achieved by the equity management and about half of the developments in the results achieved by the fixed-income management.

Ang, Goetzmann and Schaefer also point out that exposure to these systematic factors was not adequately communicated prior to 2008. If the factor exposures had been communicated and the sample space of factor returns had been known the losses in 2008 would not have come as a surprise, given the developments in these factors. In the same way that one would expect the Fund to lose money when the stock markets fall, it would also be natural to expect the Funds to incur losses relative to the benchmark when the fluctuations in the market increased and liquidity was reduced.

### **14.5 Fixed-income portfolio**

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In the period January 1998 to September 2009, the average return on the fixed-income portfolio was very similar to the return on the benchmark. In the period prior to 2008, the return on the actual fixed-income portfolio was 0.01 percentage point higher per month than the benchmark, but this figure is too small to statistically conclude that the performance is a result of skilful management.

Using the period from January 1998 to September 2009 to analyse the fixed-income portfolio, Ang, Goetzmann and Schaefer find that 54 per cent of the fluctuations in the excess return are due to developments in systematic factors. Retrospectively it has therefore been possible to identify the exposure to the different factors. Analysing the period prior to 2008, a significantly smaller proportion of the fluctuations in the excess return could be ascribed to developments in the systematic factors. At the beginning of 2008, it would therefore have been difficult to estimate the exposure to the factors. Nevertheless, the analyses by Ang, Goetzmann and Schaefer show that throughout 2008 and 2009 it would have been possible to estimate the various factor exposures by making a new estimate every month, based on developments to date. Assuming this kind of approach and assuming that the sample space for the return attributable to the factors was known, the losses incurred by active management of the fixed-income portfolio in 2008 would not have been completely unexpected according to Ang, Goetzmann and Schaefer.

The analyses indicate that it is exposure to securities with low liquidity and exposure to the volatility factor that were the main causes of the poor results from active management of the fixed-income portfolio in 2008, and the ensuing good results in 2009. The fixed-income portfolio has also had an underweight of bonds with a long term to maturity and an overweight of investment-grade securities relative to securities with a lower credit rating.

### **14.6 Equity portfolio**

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In the equity portfolio, active management contributed 0.05 percentage to the return per month in the period as a whole and 0.06 percentage points in the period prior to 2008. The analyses show that statistically the latter figure is significantly different from zero, while the first figure is almost statistically significant.

Some 29 per cent of the fluctuations in the excess return can be ascribed to developments in systematic risk factors. According to Ang, Goetzmann and Schaefer, this shows that the active management of the equity portfolio has been based on exposure to risk factors to a lesser degree than the management of the fixed-income portfolio, but that the exposure to systematic factors is still statistically significant.

The equity portfolio has been overweighted in growth companies and small-cap companies. In addition, the portfolio has sold volatility. In the second half of 2008, this strategy performed very poorly and accounted for much of the losses incurred in the active management of the equity portfolio.

### **14.7 Internally managed assets**

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The management of the GPFG is divided into internal and external management. Internal management is carried out by Norges Bank, whereas external management is done by other managers on behalf of Norges Bank. At the end of 2009, 17 per cent of the equity portfolio and 3 per cent of the fixed-income portfolio were being managed externally. The financial crisis entailed a substantial reduction in the proportion of the fixed-income portfolio that is being managed externally.

Internal management consists primarily of strategies which are meant to exploit weaknesses in the benchmark. Company-specific strategies are also used (see section 2.3).

Since a large proportion of the fixed-income portfolio is managed internally, the results achieved by the internal fixed-income management will largely reflect the results for the total management of fixed-income assets. The main difference is that the internally managed fixed-income portfolio has less exposure to the TERM factor.

Ang, Goetzmann and Schaefer find that the results achieved by the internal active management of the equity portfolio are positive both for the period as a whole and for the period prior to 2008, with an excess return of 0.05 percentage points and 0.09 percentage points respectively. The latter figure is statistically significant. The analyses show that the excess return from the internal equity management has covaried significantly with all the share factors. The portfolio has been overweighted in growth companies and small-cap companies, underweighted in companies that have had strong price developments, and has sold volatility. Much of the covariance with the size and momentum factors observed in the internally managed equity portfolio is caused by the company-specific strategies. The excess return attributable to Norges Bank's strategies for exploiting the weaknesses in the equity benchmark has only had significant covariance with the growth / value factor and volatility.

### **14.8 Externally managed assets**

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External managers are mainly used to gain access to expertise that Norges Bank does not possess internally. Norges Bank selects these managers and gives them a mandate with a benchmark. The objective for the managers is to deliver returns that are better than the return on the benchmark within defined risk limits.

The average excess return in the externally managed fixed-income portfolio has been -0.45 percentage points per month. The number of large negative impacts from individual funds is larger than the number of large positive impacts. Typically, the large negative impacts occurred in 2008. Less than a third of the external fixed-income managers have delivered higher returns than the benchmark. The factor analysis shows that the external fixed-income mandates have been underweighted in fixed-income securities with a long term to maturity and have sold volatility.

Active management of the external equity mandates has been more successful and, according to Ang, Goetzmann and Schaefer, has increased the return on the Fund by an average of 0.09 percentage points per month compared with the benchmark. Almost two-thirds of the external equity managers have delivered a positive excess return. Nevertheless, for most of the equity mandates, the monthly fluctuations in excess return are so great that it is difficult to say statistically whether the excess return is due to skilful management or whether it is merely random. According to the analysis, the external equity management has been overweighted in growth companies and small-cap companies, and has pursued a strategy of buying shares whose prices have been rising (momentum), and has sold volatility.

### **14.9 Summary**

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The main conclusion of the report by Ang, Goetzmann and Schaefer is that active management has had very little impact on the total return on the Fund over time. Only a small part of the risk associated with the Fund is due to active management, indicating that it is the choice of benchmark that determines the overall level of risk in the Fund.

There are major differences in the results achieved by the fixed-income management and the equity management. The active management of the fixed-income portfolio has yielded close to zero excess return, taken as a whole. Overall, the

external fixed-income management has yielded a negative excess return. The management of equity assets has yielded better results with a statistically significant positive excess return in the period up until the end of 2007, and an almost statistically significant positive excess return for the period as a whole.

Since 1998, the return attributable to active management shows exposure to several systematic factors. This applies especially to the fixed-income management, but also to the equity management to a lesser degree. Most of the negative excess return within the active management post-2007 was from the fixed-income management, and in the analysis by Ang, Goetzmann and Schaefer this is explained as an outcome of the high degree of exposure to systematic factors, especially liquidity and volatility.

Ang, Goetzmann and Schaefer believe that if both the level of exposure to the various factors and the entire sample space of factor returns had been known, then the results achieved in 2008 would also have been within the predicted opportunity set of returns.

The Ministry of Finance

r e c o m m e n d s :

Recommendation of 26 March 2010 from the Ministry of Finance on the Management of the Government Pension Fund in 2010 is submitted to the Storting.

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## Appendix 1

# Glossary of terms used in the report

### *Active management*

*Active management* entails that the manager on the basis of analyses and assessments composes an investment portfolio that differs from the *benchmark* established by the owner of the assets. The purpose of deviating from the benchmark is to achieve an excess return compared with the return on the benchmark.

The Ministry of Finance has defined qualitative and quantitative limits for the GPFG and the GPFN that regulate permissible deviation from the benchmark. See also *index management*, *excess return* and *relative volatility*.

### *Actual benchmark*

The composition of the *actual benchmark* is based on the *strategic benchmark*. Variations in developments in the value of the equities between countries and variations in developments in share prices and bond quotations will entail that the equity portion and the geographical distribution of the actual benchmark will deviate from the strategic weights over time. For this reason, a so-called rebalancing regime has been established for the GPFG that entails that in certain circumstances attempts are made to bring the weights in the actual benchmark back into line with the weights in the strategic benchmark. See *rebalancing* and *strategic benchmark*.

In principle, the Ministry expects the managers at Folketrygdfondet and Norges Bank to deliver returns equal to the return on the benchmark. Nevertheless, *active management* is allowed within certain defined limits by means of which the managers strive to achieve a higher rate of return than that of the benchmark by compiling an *actual portfolio* that deviates from the benchmark. These limits are relatively moderate, meaning that the benchmark largely determines the rate of return and risk of the Fund. In active management, the benchmark will form the foundation for risk management and will be the starting point for calculating the manager's contribution to the result.

### *Actual portfolio*

Through *active management*, managers can compile a portfolio of securities that deviates from the *benchmark*. This portfolio constitutes the *actual portfolio* of the fund.

### *Arithmetic return*

Average *arithmetic return* is the mean value of all the numbers in a time series. It is calculated by adding up the return achieved in different periods of time and dividing the sum by the number of periods. If the return in year 1 is 100 per cent and the return in year 2 is -50, average arithmetic return equals 25 per cent. ( $= (100 + (-50)) / 2$ ). See *geometric return*.

### *Asset allocation*

*Asset allocation* means the distribution of the assets under management among different *asset classes*. We distinguish between strategic asset allocation and tactical asset allocation. Strategic asset allocation expresses the owner's underlying risk preferences and return expectations; in the Government Pension Fund it is expressed through the *benchmark*. Insofar as it is permitted in the investment mandate, managers can employ tactical asset allocation. This entails actively choosing to deviate from the strategic weights on the basis of assessments of the degree to which one asset class is overpriced or underpriced relative to another.

### *Asset classes*

*Asset classes* are different types or classes of financial assets, such as shares, bonds and property. The benchmark for the GPFG has three asset classes: equities, bonds and real estate (under establishment). The GPFN has two asset classes: equities and bonds.

### Correlation

*Correlation* indicates the degree and the direction of the linear dependence between two variables. If the correlation equals 1, there is a perfect degree of positive covariance between the two variables and they always change in tact with one another. If there is zero correlation, there is no covariance, whereas correlation of -1 entails that there is a perfect degree of negative covariance between the two variables.

Only in the case of perfect positive correlation will the risk associated with a portfolio be equal to the weighted sum of the risk in the individual securities. The risk reduction achieved by spreading investments across different assets in this way is known as a diversification benefit, see *diversification*.

### Covariance

See *correlation*.

### Credit risk

*Credit risk* is the risk of incurring a loss as a result of default on the part of the issuer of a security or the counterparty in a securities transaction, for example due to bankruptcy.

Credit risk and *market risk* are partially overlapping concepts.

### Currency basket

The GPGF is placed entirely in foreign securities and thus only in securities that are traded in currencies other than Norwegian kroner. The return on the GPGF measured in Norwegian kroner will thus not only vary according to market developments in the international securities markets, it will also vary according to changes in the exchange rate between the Norwegian krone and the currencies the Fund is invested in. However, the Fund's international purchasing power is not affected by changes in the krone exchange rate. In order to measure the return independently of developments in exchange rates, the return on the Fund too is measured in foreign currency. This is done on the basis of the *currency basket* of the Fund, entailing weighting of the return in the individual currencies in accordance with the distribution into different currencies in the benchmark for the Fund.

### Diversification

The ratio between the expected return and risk for a portfolio can normally be improved by spreading the investments over a larger number of assets in the portfolio. This is called *diversification*. This is why the benchmark for the Government Pension Fund is spread across a broad range of asset classes, geographical regions, countries, sectors and companies.

Spreading the investments over a larger number of assets will only improve the return-risk ratio if the returns on the various assets do not co-vary perfectly. However, the ratio can only be improved to a certain point, at which the portfolio is said to be *efficient* or optimally diversified.

### Excess return

*Excess return* is the contribution to the return on the invested funds that is attributable to active management and is measured as the difference between the return on the actual portfolio and the return on the benchmark. Excess return is sometimes also called relative return. Excess return can be positive or negative.

### Expected return

*Expected return* is a statistical measure of the mean value in a set of all the possible outcomes and is equal to the average return on an investment over a period of time if it is repeated many times. For example, if an investment alternative has a 50 per cent probability of 20 per cent appreciation, a 25 per cent probability of 10 per cent appreciation and a 25 per cent probability of 20 per cent depreciation, the expected return is 10 per cent:  $(20 \times 0.5) + (10 \times 0.25) + (-20 \times 0.25) = 10$ . Expected return can be calculated using series of historical return data or be based on forward-looking model simulations.

Normally it is only possible to achieve a higher expected return by taking higher risks. However, *diversification* allows the expected return to be maintained while reducing the risk. Some investors' risk preferences are such that they are not willing to take a higher risk without compensation in the form of a higher expected return. This is called risk aversion.

### Geometric return

Average *geometric return* – or time-weighted return – indicates the average growth rate of an investment. If the return in year 1 is 100 per cent and the return in year 2 is -50 per cent, average geometric return is  $-1 + \sqrt{(1+1) \times (1-0.5)}$ . Geometric average is thus always lower than the *arithmetic* average; cf. the example above. This is because of the compound interest effect. If a year with weak returns (for example -10 per cent) is followed by a year with correspondingly strong returns, the amount invested will not have been regained.

The larger the variation in the annual return, the greater the difference between *arithmetic* and *geometric* average.

In its quarterly and annual reports, Norges Bank reports the real return on the GPFG as a geometric average.

### Index

An *index* contains a given number of securities, which are selected on the basis of criteria defined by the index provider, and indicates the average return for the securities in the index. A variety of institutions compile securities indices, such as stock exchanges, consultancies, newspapers and investment banks. They can be based on countries, regions, market weights or sectors. Most equity indices are based on market weight where each individual security is weighted according to its relative market value (capitalisation), whereas most bond indices are based on market weights where each individual security is weighted according to the relative value of the nominal outstanding volume.

If it is possible to invest a securities portfolio in accordance with the composition of the index, the index is said to be investable. This will typically be the case for very liquid securities, such as listed equities. By contrast, an index of price developments in unlisted real estate would not be investable.

An index can be used to measure the return on a specific securities portfolio. It can also be used to measure the manager's skill in the active management. See *index management* and *benchmark*.

### Index management

*Index management*, also called passive management, means that the management of the assets is organised to ensure that the actual portfolio reflects the composition of the *benchmark* as far as is possible. If the composition of the actual portfolio is identical to the composition of the benchmark, the return on the actual portfolio will be equal to the return on the benchmark. If the indices that make up the benchmark include most of the securities traded on the market, index management will achieve the same return as the market as a whole, before deductions for costs linked to index management. The return achieved by broad exposure to general market developments is often called the beta return. See *index* and *benchmark*.

### Market efficiency

*Market efficiency* entails that the price of a financial asset, such as a share or bond, at all times reflects all the available information on the fundamental value of the asset. If this hypothesis is correct, it will be impossible for a manager to consistently "beat" the market. Active management would thus play only a minor role in terms of adding value.

An efficient portfolio is marked by the expected return being at its highest possible rate given a specific level of risk. In principle there are an infinite number of efficient portfolios, which together constitute what is called an efficient front. See *diversification*.

### Market risk

*Market risk* is the risk that the value of a securities portfolio will change as the result of fluctuations in equity prices, exchange rates, commodity prices and interest rates. It is normally assumed that an investor must accept higher market risk in order to achieve a higher expected return.

### Negative excess return

See *excess return*.

### Nominal return

Return achieved without correction for changes in monetary value. See *real return*.

### *Operational risk*

*Operational risk* is the risk of financial loss or loss of reputation as a result of breakdown of internal processes, human error, systems failure, or other losses caused by external factors that are not a consequence of the market risk of the portfolio. There is no expected return associated with operational risk. However, in managing operational risk, one must balance the objective of keeping the probability of such losses low against the costs incurred as a result of increased control, monitoring, etc.

### *Passive management*

See *index management*.

### *Rate of return*

The market value of the Government Pension Fund is the sum of the market value of all the equity and interest-bearing instruments that the fund is invested in at a given point in time. *Historical rate of return* is calculated as the change in the market value of the fund from one point in time to another, and is often called the absolute return. See *arithmetic return* and *geometric return*; see also *excess return* and *expected return*.

### *Real return*

*Real return* is the achieved nominal return adjusted for inflation. It therefore indicates the return in constant prices. See *nominal return*.

### *Relative return*

See *excess return*.

### *Relative volatility (tracking error)*

The owners of the assets will normally define limits for how large a risk the manager can take in his active management. A common method is to compile a *benchmark* and set quantitative limits for how far the actual portfolio can deviate from the benchmark. The Ministry of Finance has defined limits for Norges Bank and Folketrygdfondet in the form of a limit on *expected relative volatility*. This is the expected standard deviation of the difference in the return between the *actual portfolio* and the benchmark. The limit for Norges

Bank is 1.5 percentage points expected relative volatility, the limit for Folketrygdfondet is 3 percentage points. Over time – and somewhat simplified – this means that if the entire limit is used, the actual return will deviate from the return on the benchmark for the GPFG by less than 1.5 percentage points in two out of the three years and by less than 3 percentage points for the GPFN.

### *Risk*

*Risk* is a measure that indicates the probability of an incident occurring and the consequences it will entail (for example, losses or gains). There are various dimensions of risk. One important aspect is the distinction between risks that can be quantified and risks that are harder to quantify. An example of the former is the *market risk* associated with investments in the securities market. An example of the latter is the operational risk inherent in a portfolio. *Standard deviation* is one way of quantifying risk. See *market risk*, *operational risk*, *credit risk*, *systematic risk* and *standard deviation*.

### *Risk premium*

Many market players do not wish to take a larger risk than necessary – they are risk averse. This means that for a given return they will choose the investment alternative that entails the least risk. Market players will expect a higher return for investing in higher risk securities. This is called the risk premium.

For example, a higher average return is expected on equity investments than on investments in fixed-income securities, because equities entail a higher risk. There are a number of recognised, systematic risk factors, such as company size, liquidity, momentum, etc.

### *Sharpe ratio*

Developed by Nobel laureate William Sharpe, the *Sharpe ratio* is used to measure risk-adjusted performance. It is defined as the ratio between expected real return minus the risk-free real interest rate and expected volatility. The Sharpe ratio thus measures the trade-off between expected real return minus risk-free interest and volatility. If two securities are compared to the same risk-free interest rate, the security with the greatest Sharpe ratio will yield the best trade-off between return and risk.



### Standard deviation

*Standard deviation* is a commonly used measure of the risk associated with a portfolio. It indicates how much the value of a variable – the return – can be expected to fluctuate. The standard deviation of a constant value will be 0. The higher the standard deviation, the larger the fluctuations (volatility) or risk compared with the average return. Linking the standard deviation to a probability distribution illustrates the probability of a portfolio decreasing in value by x per cent or increasing in value by y per cent during a given period.

With a normally distributed return in the securities markets, 68 per cent of the cases will be below one standard deviation of the average rate of return. In 95 per cent of the cases, the return will be below two standard deviations. Nevertheless, empirical studies of the rate of return on the securities markets indicate that very low and very high returns occur more frequently than would be expected if the rates of return were normally distributed. This phenomenon is called “fat tails» since this distribution pattern entails more weight in the tails of the curve than in the bell-shaped normal distribution curve. See *risk*.

### Strategic benchmark

The Ministry’s basic investment strategy for the Government Pension Fund is expressed in the strategic benchmarks for the GPFN and the GPFG. These benchmarks define strategic asset allocation, which entails a particular distribution of the Fund capital among different types of assets and different geographical regions.

The strategic benchmark currently consists of 60 per cent shares and 40 per cent bonds. A real estate portfolio representing 5 per cent of the Fund is gradually being built up, which will entail a corresponding reduction in the bond portion. The benchmark is also divided into three geographical regions, with Europe weighted heaviest.

The benchmark includes several thousand companies and bond loans, selected on the basis of the criteria the index providers use for inclusion of securities in the benchmark. The Ministry has chosen FTSE as provider of the benchmark

for equities, which consists of equities included in the FTSE Global Equity Index Series All Cap. The index consists of a given number of national indices weighted according to market value. The Ministry has chosen Barclays Capital as provider of the benchmark for bonds, which consists of the bonds included in the Barclays Global Aggregate and Barclays Global Real indices. The index consists of a fixed number of sub-indices based on currencies and sectors with weights based on nominal outstanding amount. See *actual benchmark*.

### Systematic risk

*Systematic risk* is that part of the risk that is linked to developments in broad, well-diversified securities portfolios. The opposite of systematic risk is unsystematic or security-specific risk, which is risk that can be diluted by investing in a large number of securities. Because it can be avoided through diversification, exposure to unsystematic risk does not increase the *expected return*.

Systematic risk reflects the uncertainty inherent in the economy and will always exist. Investors cannot diversify away from economic downturns, credit crunches, inadequate liquidity and market collapses, etc. However, investors can refrain from investing (or only invest a smaller portion) in securities such as equities, for example, which fall relatively more in value in bad times. Higher systematic risk is compensated for in the form of a higher *expected return*.

Systematic risk is measured in *beta*. A beta value of 1 represents the average systematic risk in the market. A representative market index, such as, for example, the benchmark for the GPFG, will thus have a beta very close to 1. A portfolio with a beta over 1 will generally have a more variable return, but higher expected risk than a portfolio with a beta of 1. The inverse is true for a portfolio with a beta below 1. See *risk premium*.

### Volatility

Variation in return. Measured as the *standard deviation*.

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## Appendix 2

# Evaluation of the active management in the Government Pension Fund Global (GPFG)

*Letter from Folketrygdfondet to the Ministry of Finance, dated 29 January 2010*

Reference is made to the Ministry of Finance's letter dated 18 December 2009 regarding the evaluation of the active management of the GPFG. The Ministry comments in the letter that it had set up a wide-ranging process related to evaluation of the active management of the GPFG. The Ministry has ordered feedback from three parties regarding this project: from a group of internationally-renowned experts (Andrew Ang, William N. Goetzmann and Stephen M. Schafer), from the consulting firm Mercer and from Norges Bank. In the letter, the Ministry of Finance asked that Folketrygdfondet comment on the relevance of the three items of feedback regarding active management of the Government Pension Fund Norway (GPFN). The Ministry pointed out that it would therefore be natural to look at any differences between the GPFG and the GPFN, for example concerning characteristics, the investment universe, ownership stakes and characteristics of the marketplace.

The GPFN's investment universe is geographically limited to Norway, Denmark, Sweden and Finland. The benchmark divides the mandate into 85 per cent Norwegian securities and 15 per cent Nordic securities. The GPFN is a large investor in the Norwegian capital market, while the GPFG invests in a far larger market. We see the varying size of the markets, the portfolios' share of the market, and special aspects of the Norwegian capital market as the most important differences between the GPFG and the GPFN. Several of the issues brought up in the three items of feedback are affected or reinforced by these differences.

We find the material presented in the media very valuable, and this provides a good basis for assessing important aspects associated with institutional asset management. In this letter, we will comment on the relevance of the feedback mentioned, with main emphasis on management of the GPFN's stock and bond portfolio in Norway. We will initially look at the differences and quali-

ties of the investment universes, and will describe the active management and ownership follow-up of the GPFN today. We will also mention aspects of a passive management strategy that make it difficult to execute, and challenges associated with taking consideration of systematic factors in the reference index.

### The investment universe

The market for Norwegian securities is a small part of the international capital market. Norwegian shares that are included in the FTSE All-World stock index represent 0.38 per cent of this index. The share of Norwegian issuers on the Barclays Capital Global Aggregate bond index is 0.30 per cent.

At the end of 2009, the market value of listed shares on the Oslo Børs and Oslo Axess markets was NOK 1,446 billion, while the value of the main Oslo Børs index (OSEBX) was NOK 682 billion. The main index is the benchmark for the GPFN's Norwegian equity portfolio. When calculating share indices for use as a benchmark for actual portfolios, it is common to only include the part of the stock market that is subject to free trade (free float), while it is common to include all stocks for share indices that are intended to represent the development of the market. The great difference between the market value of all listed companies and the value of the main index are one of the characteristics of the Norwegian stock market. The reason is that an unusually large share of the Norwegian stock market, measured in both value and number of companies is not subject to free trade, compared with other markets. 49 out of a total of 53 companies on the OSEBX have limitations on free float, representing 46.4 per cent of the value. In comparison, only 52 of the 537 U.S. companies included in the FTSE All-World share index have limitations on free float; the free float adjustment here only represents 3.4 per cent of

the value. For the United Kingdom, the figures are 19 out of 101 companies, and 5.3 per cent of the value.

At the end of the year, the GPFN's Norwegian equity portfolio was about 9.3 per cent of the benchmark for Norwegian shares, while the GPFN's Nordic equity portfolio was 0.28 per cent of the benchmark for Nordic shares. The corresponding share for the GPFG (as of 30.09.2009) was 1.75 per cent in Europe, 0.68 per cent in Asia and Oceania, and 0.66 per cent in America. The GPFN's benchmark for Norwegian shares now includes 53 companies and 139 companies in the benchmark for Nordic shares, while about 7,300 companies are part of the GPFG's benchmark.

The same differences also apply to the fixed-income portfolios. At the end of 2009, the GPFN's Norwegian fixed-income portfolio was about 5.9 per cent of the value of the benchmark for Norwegian bonds. There were 61 bonds in the benchmark for Norwegian bonds issued by a total of 13 different issuers at the end of 2009. The benchmark for Nordic bonds covers 277 bonds. By way of comparison, there were about 10,600 bonds in the GPFG's benchmark.

Oslo Børs is characterised by having a very skewed corporate structure, as shown by the five largest companies in the OSEBX making up 55.8 per cent of the composition of the index. This share is somewhat higher for listed Norwegian shares overall (Oslo Børs and Oslo Axess): 57.6 per cent. Internationally, the corporate structure is far more diversified. In the United Kingdom the five largest companies represent 27.3 per cent, while the figure is 24.5 per cent in Germany.

There is also a narrow industry structure on the Oslo Børs, where the energy sector makes up 44.5 per cent of the index, and the materials sector 12.3 per cent. There is a high (and fluctuating) share of foreign investors on the Oslo Børs. The liquidity is generally weak among the smaller companies on the Oslo Børs. At the end of 2009, a total of 180 companies were listed on the Oslo Børs, and a further 30 companies were listed on the Oslo Axess.

The fact that the energy sector and other cyclical enterprises make up a large share of the companies on the stock exchange and that the corporate structure is very concentrated serves to make the Norwegian stock market one of the more volatile stock markets in the world. This company and industry concentration can be well diversified through participation in the international markets. This is not possible for investors

who have limited access to international markets, and the element of unsystematic (company-specific) risk for a Norwegian equity portfolio is therefore great. This last factor also applies to indices that represent developments on the Oslo Børs.

### **Active management of the GPFN**

The task of Folketrygdfondet is to achieve the highest possible return over time, relative to the benchmark and the risk limits set by the Ministry of Finance. It is a goal of Folketrygdfondet to achieve a return that is better than the return on the benchmark. An attempt is made to achieve this through an active management strategy. An active management strategy is understood to mean a conscious investment choice that contributes to a different portfolio composition than the benchmark. Folketrygdfondet attempts to make such active investment choices based on company and security selection and by exploiting changes in systematic risk factors.

We believe that the characteristics of the Norwegian stock market (like company size, liquidity and volatility), and the size of the GPFN and the long investment horizon mean that return-oriented and responsible investment activities require active management. Over 42 years of fixed-income management and 19 years of active stock management, Folketrygdfondet has acquired value in excess of the benchmark return. During the past 11 ½ years (until the last accounts submitted on 30.06.2009), we have achieved an annual excess return of 0.47 percentage points for the entire GPFN, and an annual excess return for Norwegian shares of 1.85 percentage points. The excess return is also positive when including the second half of 2009.

In its management of the GPFN, Folketrygdfondet has placed emphasis on active investment decisions based on quantitative and qualitative assessments of individual companies, sectors, market development and macroeconomic issues. Folketrygdfondet benefits from being able to operate with a stable framework and regulatory conditions that make it possible to make countercyclical investments in periods characterised by strong optimism or pessimism. This has contributed to the active management of the GPFN differentiating itself from many other active managers, in that it is possible to maintain a long-term investment horizon without being forced to make unwanted disposals. A management organisation with great competence, clear lines of responsibility

ty, well-defined investment strategies, good decision-making processes, good portfolio follow-up and responsible exercise of active ownership is required to execute such a strategy.

Folketrygdfondet has found it appropriate to apply the same active investment strategies to its management of the Nordic securities portfolio where this has been natural. In addition, the active management of the Nordic portfolio has provided useful experiences and feedback for the management of the Norwegian portfolio.

As a long-term financial investor and owner on the Oslo Børs, it is important to us that the market works well and is monitored adequately. Passive management requires correct pricing of the companies on the stock exchange. Passive managers are often called freeloaders in this context, benefitting from the behaviour of different active managers. We see it as a natural job for a large investor to have an opinion on the pricing of the securities on the stock exchange. Such participation requires active management. The presence of active managers will further contribute to a market that functions better.

The Ministry of Finance has defined a frame for active management, measured through an expected relative volatility of 3 percentage points for the fund. We would like to point out that it is important that such a risk frame is related to the long-term investment horizon Folketrygdfondet is operating with. This is important, among others, to prevent Folketrygdfondet in critical market conditions from making disposals that appear undesirable in a long-term perspective.

We have noted that the Mercer report on active management points out that it is common to evaluate large funds with liquid equity and fixed-income portfolios over a three-year period, but that illiquid asset classes are usually evaluated over longer periods of time. We would like to point out that less liquidity in the Norwegian market than is the case internationally draws in the direction of a longer evaluation horizon than three years.

### Ownership

As an investor with a large ownership stake (independent of whether the management is passive or active) in Norwegian companies, Folketrygdfondet has a particular ownership responsibility in the companies in which we have invested, to both secure our financial assets and to contribute to a well-functioning financial market. This is rein-

forced by about half of the shareholders of Norwegian companies not attending annual meetings. Folketrygdfondet has set ownership principles and ethical guidelines for the investment activity, and a guiding principle over the years has been that active ownership is an integrated part of investment activity. Our experience is precisely that good ownership follow-up requires an understanding and knowledge of, among others, the companies' operations, value creation strategies, framework conditions, and corporate governance. This is necessary in order to act with credibility and expect to achieve results in the exercise of ownership. The competence used in such a context is built up in the management organisation over a period of many years, achieved by constantly following the companies' development, and by being engaged in a dialogue with the companies and relevant market actors. Mercer's report «Active management and active ownership» lists a number of issues that have been mentioned as advantages for owner follow-up with active management. It is our view that owner follow-up is better when those who perform the owner follow-up are also responsible for making active investment decisions regarding deviations from the benchmark.

### The management costs

The costs associated with management of the GPFN are low; an estimated 7.6 basic points in 2008. A comparison from the Canadian analysis firm CEM Benchmarking shows that similar funds have costs of 16.3 basic points. The costs can be divided in four: security selection, transaction execution, checks and owner follow-up. The low trade speed of the portfolio, resulting from the active and long-term management style of Folketrygdfondet, means that the costs associated with transaction execution are low, and less than if the portfolio had been passively managed like an index fund, where there are constant transactions, as a result of changes to the index. For checks and owner follow-up, we presume that the costs will be approximately the same size through passive management as with the present active management. For the first point, security selection, the issues that arise as a result of a lack of liquidity will mean that management of the GPFN must be based on active decisions, independent of whether the management will be passive or active. This means that there will be little difference between active and passive management of the GPFN, from a pure cost perspective, also on this

point. On whole, this means that the costs for the GPFN will mainly be the same, regardless of whether the management is active or passive.

### **Challenges associated with passive management**

The GPFN's portfolio makes up such a large share of the benchmark that there are several issues of importance to the choice of management strategy. It is our view that the opportunity to perform passive management, i.e. seek to maintain an index-adjacent portfolio in the Norwegian market is limited and will encounter a number of practical issues. In the following, we will point to several examples illustrating this.

We have analysed a number of these purely practical issues, taking the GPFN's Norwegian equity portfolio and the benchmark as our starting point. The corporate structure in the OSEBX is reviewed every six months. We have looked at situations where we have made an assumption that the portfolio had the same composition as the index before the index changes. We have presumed that with passive management, the GPFN has dealt with index changes by attempting to execute these changes to the portfolio as quickly as possible, and by the GPFN in the time after the index change representing 10 per cent (the GPFN's share) of normal trade in the share until the index growth is achieved. With such an assumption, several of the index changes during the past few years will create problems in that normal trade in the company is very limited. Our analysis is based on the index composition at the end of 2006, and we have studied the effect of six index revisions until December 2009. Our analysis indicates that this issue alone requires a level of expected relative volatility as a frame of about 1.0 percentage points for the Norwegian stock portfolio with passive management. For some of the companies that have entered and exited the OSEBX several times, we see that the liquidity is barely limited by normal trade indicating that it can take up to 1.5 years to buy or sell an index block for a portfolio of the size of the GPFN, even if all trade is taken as the basis. If we are responsible for 10 per cent of normal trade, this means that it can take up to 15 years to buy or sell the index weight in such companies.

Low liquidity in many of the companies on the Oslo Børs means that rebalancing to bring the share of stocks back to the defined starting point of 60 per cent will in isolation also be especially demanding with passive management, by it not

being possible to increase or reduce the weight of all of the companies at an equal speed. A rebalancing of the GPFN's portfolio to the level executed in 2008/2009, after the strong fall in shares that followed the financial crisis, will require an even greater risk frame when using passive management. We have presumed that the two issues mentioned will require a frame of a total of 1.5 percentage points of expected relative volatility for the Norwegian equity portfolio if this portfolio is passively managed.

A passive management strategy will mean practical challenges in the management of the bond portfolio too. The GPFN uses the same supplier of benchmark indices for the interest portfolios as the GPFG. In its report, Norges Bank commented that changes to the composition of the benchmark are made at the end of each month. New bond loans in the market are issued on an ongoing basis and are included in the benchmark at earliest at the end of the month in question. As a result of low liquidity in the bond market, it is demanding to sell an existing portfolio in order to include new loans that we see enter the index. A passive approach to this issue entails significant transaction costs, and a lapse of the opportunity to reap possible rewards when they are issued. We also see that several loans that are included in the index are directly placed with international actors (for example a British pension fund). As it is not possible to fully invest directly in the loans that are part of the benchmark, the portfolio will consist of other securities and other issuers than the benchmark. This entails a high need for diversification, which in itself indicates active management of the portfolio.

Finally we would like to point out that a special aspect of the passive management of the GPFN, which is a large actor in the market, is other investors' opportunity to exploit the knowledge of passive strategies. If a large share of a market is passively managed, other actors will be able to use this to make adaptations at the same time during index changes, and before passive investors.

The size of the GPFN in the Norwegian equity and fixed-income market makes it difficult to execute a passive management strategy. We believe that the challenges are so great that we do not recommend a passive strategy.

### **Further details on systematic factors**

The report from the three professors (Andrew Ang, William N. Goetzmann and Stephen M.

Schafer) concludes that the GPFN's return is mainly a combination of passive management and exposure to known systematic factors, like liquidity and volatility. They recommend that the manager, NBIM, construct indices for applicable factors and that the client, the Ministry of Finance, set the exposure in the benchmark to the different factors.

For the Norwegian stock market, empirical studies show that factors that explain the return on shares do not fully concur with the factors that are observed in the major markets around the world. For the Norwegian stock market, company size and liquidity provide the best explanation, together with general developments in the market, in that small companies appear to make a positive contribution to the return, compared with big companies; and less liquid companies also making a positive contribution, compared with large companies. To the extent that factors in the Norwegian markets deviate from the factors in the global market and/or are unstable in size and composition, the challenges increase in composing investable benchmarks that exploit these risk premiums.

The fact that the factors company size and liquidity appear to help explain the return on shares in Oslo can be used as an argument for making adaptations to the benchmark for Norwegian shares. The OSEBX stock index uses precisely these two criteria, liquidity and size, as requirements for inclusion in the index. This means that the OSEBX has less exposure to companies with low liquidity and to small companies than that represented by the whole market.

In internal analyses we have looked at the qualities of alternative compositions of the benchmark for Norwegian shares, with a view to market weight the two factors small companies and low liquidity. These analyses indicate that the practical issues related to a lack of liquidity as a result of the size of the GPFN's portfolio are reinforced by expanding the benchmark to include more companies. In isolation this means a need for a somewhat higher limit for expected relative volatility. If also executed in the portfolio, an increase in the number of companies will entail higher costs associated with owner follow-up and checks. We will investigate the effects associated with size and liquidity in the Norwegian stock market further and may return to the Ministry with a recommendation to make changes to the composition of the benchmark. We also want to perform a similar investigation of the benchmark for Norwegian bonds.

However, we see general challenges associated with executing the kind of model recommended in the professors' report by weighting certain factors differently from the market weight, and we would like to point out that the benchmark should ideally be maintained by the client, not the manager. It is important to avoid benchmarks being constructed in such a way that the distribution of roles and responsibilities between the Ministry of Finance as client and Folketrygdfondet as asset manager is unclear. We therefore advise against the manager maintaining and constructing factor indices, as suggested in the professors' report. We also want to point out that we identify special challenges associated with management of the Norwegian markets if the Ministry of Finance is to point out the relevant factors to weight differently than indicated by the market weights, to the extent that such factors depend on how economic policy is directed.

The current legislation entails rebalancing one factor: the share of stocks. A factor-adjusted benchmark entails rebalancing as a result of several factors, and may therefore entail more frequent rebalancing. This will be especially demanding and costly in less liquid markets, like the Norwegian stock and bond markets.

### **Summary**

In this letter, Folketrygdfondet has reviewed the three items of feedback regarding the GPFN, considering the extent to which they are relevant to the present active management of the GPFN, and we have commented on the differences between the GPFN and the GPFG, among others regarding characteristics, the investment universe, ownership stakes and the characteristics of the marketplace.

It is our view that the characteristics of the Norwegian stock market, and the size of the GPFN and the long investment horizon mean that return-oriented and responsible investment activities require active management. There does not appear to be any alternative to the Fund through active management seeking to exploit the opportunities for achieving an excess return. Even practically, passive management would require active investment decisions that make it challenging to even achieve a return on the same level as the benchmark indices. Active management is further reinforced by Folketrygdfondet over long time having added value beyond the benchmark's return through an active investment choice with rel-

atively low management costs. It is also our assessment that several of the issues that were brought up in the three items of feedback to the Ministry of Finance support the strategy chosen.

However, a management organisation with extensive competence, clear lines of responsibility, well-defined investment strategies, good decision-making processes, good portfolio follow-up and responsible exercise of ownership is required to execute this strategy. It is also our view that owner follow-up is significantly reinforced when those who perform the owner follow-up also have in-depth knowledge of the companies and are responsible for making active investment decisions.

We advise against a passive management strategy, as it would be neither in the GPFN's interest nor contribute positively to the way the market functions. Neither do we see it as relevant to adjust the benchmark for systematic factors in a financial market that is not very liquid.

On this basis, the conclusions of this letter can be summarised as follows:

*A volatile Norwegian capital market with little liquidity creates other challenges for a large actor than in a far more liquid global market. Among others, this applies to consideration of the market's way of functioning.*

*Active investment decisions are required to achieve an index-adjacent portfolio, even with passive management. This also requires good competence and entails a level of cost that is approximately equal for passive and active management.*

*As a large shareholder in Norwegian companies, the ownership role is considered to be better met through active management of the portfolio.*

*Factor-based benchmark indices are considered unsuitable for a large investor in the Norwegian market. Based on few observable factors, establishing an appropriate benchmark, based on known systematic factors is not considered very realistic.*

We believe that active management of the GPFN also in the future will be the best way of creating added value. Folketrygdfondet's investment philosophy will contribute best to securing the Fund's financial assets in the long term and in a functioning financial market through responsible investment activities and good follow-up of ownership.

Yours sincerely,  
Folketrygdfondet

Erik Keiserud  
Chairman of the Board

Olaug Svarva  
Managing Director

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### **Appendix 3**

## **Overall Summary of the report «Evaluation of Active Management of the Norwegian Government Pension Fund – Global»**

*Written by the professors Andrew Ang, William N. Goetzmann and Stephen M. Schaefer*

The objective of this report is to evaluate the role of active management in the Norwegian Government Pension Fund – Global («the Fund»). The project brief called for a review of the academic research on active vs. passive (index) management and the efficiency of markets, an historical analysis of NBIM's track record, and a prospective analysis of how to use the Fund's comparative advantages to benefit the management process.

In line with the brief, the report has three main sections. The first undertakes a review of the theory and empirical evidence on the Efficient Market Hypothesis [EMH]. If markets are completely efficient, active portfolio management has little potential to add to fund performance. Therefore, in assessing the potential role of active management for the Fund, it is important to reach a view on both the theoretical basis and empirical support for the EMH. The second contains a detailed empirical analysis of NBIM's active performance in managing the Fund, identifying both the average returns in excess of benchmarks and the risks to which the Fund has been exposed. The analysis of performance differentiates between internally and externally managed funds and between different asset classes and strategies. The final part of the report looks at the implications of the first two sections for the future management of the Fund. In particular, it identifies the comparative advantages of the Fund and asks, in the light of the review of the theory and evidence on the EMH and the Fund's performance, what types of portfolio strategies and performance benchmarks should be pursued.

The most recent expressions of the EMH in academic research recognize the existence of market frictions, information costs, agency, and capital structure constraints. In this setting there is no compelling theoretical or empirical evidence to recommend a pure strategy of passive indexing although finding active managers who consistent-

ly deliver excess risk-adjusted returns to investors is rare. In evaluating NBIM's track record, we find that active management has played a very small role in its performance to date. The incremental contribution of active management has been slightly positive overall, with notable negative returns during 2008 and the early part of 2009. Analysis of NBIM's active management style indicates that a significant component of performance is explained by exposure to systematic factors which fared very poorly during the financial crisis. We believe that exposure to such factors is actually appropriate for a long-term investor since the factors earn risk premiums over the long run, however, we recommend that, to the fullest extent possible, these factor exposures taken by active management be treated as part of the Fund benchmark. We propose a new framework to implement this change. In the same way the Fund has chosen to hold a significant position in equities to capture the equity risk premium over the long run, we recommend that other factor risk premiums be accessed by the Fund to generate long-term positive performance. The proposed framework exploits the Fund's distinct long-horizon profile and allows the preferences of the asset owners to determine how much exposure to each risk factor should be taken.

### **Summary: Section I**

In simple terms, the EMH asserts that, at all times, the price of a security reflects all available information about its fundamental value. A consequence of the theory is that, if true, it is impossible for an investment manager – and hence the clients of the manager – to consistently beat the market. The underlying principle driving the EMH is that, in a large, active marketplace for publicly traded securities, vigorous competition among scores of investors will drive speculative



profits to zero. The implication of the EMH for investors is that, to the extent that speculative trading is costly, speculation must be a loser's game. Hence, an indexing strategy is bound eventually to beat a strategy that uses active management, where active management is characterized as trading that seeks to exploit mispriced assets relative to a risk-adjusted benchmark. In the world of the EMH, there are no mispriced assets because the invisible hand of the marketplace moves faster than any single agent.

In Section I of the report we review the extensive theoretical and empirical literature on the EMH. Our review of theory indicates that the EMH has been refined over the past several decades to reflect the realism of the marketplace, including costly information, transactions costs, financing, agency costs, and other real-world frictions. The most recent expressions of the EMH thus allow a role for arbitrageurs in the market who may profit from their comparative advantages. These advantages may include specialized knowledge, lower trading costs, low management fees or agency costs, and a financing structure that allows the arbitrageur to undertake trades with long verification periods. The actions of these arbitrageurs cause liquid securities markets to be generally fairly efficient with respect to information, despite some notable anomalies. As a result, the balance between indexation and active management is a choice variable for which the optimum depends on general beliefs about the existence and potential of manager skill, the pricing opportunities afforded within a given market, the time preferences and risk aversion of the investor, and the expertise and incentive contract of the specific manager.

Our review of the empirical tests of the EMH is divided into two parts: tests on prices and tests on investment managers and institutions. Tests of the theory using past price behavior in the stock and bond markets have occasionally produced evidence contrary to the conclusion of efficiency, suggesting that the EMH may not hold for all markets and all times. The logical foundation for these tests is a pricing model that represents the «fair» price of a security in terms of its exposure to a set of common risk factors. The simplest of these models is the Capital Asset Pricing Model [CAPM], and the most commonly used in recent times is a multi-factor model called the Arbitrage Pricing Theory [APT]. The APT holds that the investor will be compensated by higher returns for accepting the risk implied by exposure to these factors.

Both the CAPM and the APT stress the important role that risk factors play in determining the expected future return of investment in an asset. Tests of the EMH in this framework are implicitly joint tests of the pricing model and market efficiency, however. Much recent debate has focused on whether such violations should be interpreted as inefficiency, or simply the inability of researchers to correctly identify and specify the risk factors relevant to the market. Regardless, violations of the EMH based on pricing tests are of potential interest to the Fund because they may indicate sources of returns – whether these are factor-based or based on the pricing inefficiency.

If the benchmark is solely a market-weighted portfolio consisting of all traded securities, then active management (defined as deviations from these market weights) may be useful in accessing factor risk premiums which are not captured by market exposure. In the context of the APT this could also be interpreted as passive exposure to additional risk factors. Theory and empirical evidence suggests that investors are compensated for taking systematic risks – such as investing in «value» stocks vs. «growth» stocks and volatility risk – over the long term. In the presence of these multiple systematic risk factors, empirical tests overwhelmingly reject that the market portfolio is efficient and other static or time-varying combinations of assets result in higher reward-to-risk ratios.

The back-tests of trading strategies seeking pure alpha have suggested a wide array of potentially profitable investments. However, for a number of reasons these provide limited guidance to the Fund going forward. They represent simulated, not actual, returns and do not account for actual transactions costs, fees, and price impact. They also suffer from potential data-mining biases. Changing market conditions, including time-varying arbitrage activity, make it difficult to extrapolate future performance. Finally, many anomalies are not scalable and cannot be implemented in the large position sizes relevant to the Fund.

The second part of Section I reviews tests of the EMH using information on managers and institutions. These are more relevant to the Fund since they reflect the necessary role of an investment intermediary. Unfortunately, many of the studies of managerial skill focus on retail mutual funds, whose cost structure and value proposition differ markedly from the Fund's, and thus may not be a useful benchmark. Recent theory and empirical evidence suggests that some fund managers may have talent and out-perform market benchmarks before fees.

However, the evidence does not support the conclusion that superior ability filters through to the ultimate investors in those funds. In the mutual fund industry, after-fee returns and alphas are, on average, zero or negative. While the average mutual fund typically underperforms a passive portfolio on an after-fee risk-adjusted basis, there is evidence that some managers are better than others.

Turning to the non-retail sector, there is some evidence of positive post-fee risk-adjusted returns in hedge funds where highly paid managers actively trade marketable securities. One caveat is that the quality and duration of these data, as well as the changing institutional marketplace for hedge fund services make it difficult to extrapolate such conclusions to future performance. By contrast, there is little convincing evidence of superior risk-adjusted returns to private equity and venture capital. Although some studies suggest skill persistence, the current data are not conclusive on this point. In the real estate sector there is simply not enough information to evaluate whether managers have added value on a risk-adjusted basis.

In other institutional investment sectors, such as large-scale endowments, pension funds and sovereign funds, there is even less evidence about the capability of active management to generate positive risk-adjusted returns. Some U.S. endowments performed exceedingly well prior to the recent crisis using alternative investments as the basis for their strategy. It is often noted that a long-horizon perspective allowed these endowments to focus on alternative asset classes. Most research suggests that pension fund managers are not able to identify top managers *ex ante* and the managers that serve the pension fund sector show little evidence of skill on a risk-adjusted basis. The few studies of sovereign fund trades in public securities provide evidence that, while stock prices respond positively when a sovereign fund invests, the long-term performance of these investments is not particularly good.

In summary, the EMH has been refined over the past several decades to reflect information, transactions, financing and agency costs. Tests of the theory on prices have produced violations suggestive of the potential for active management to add value to a multi-asset portfolio, but finding consistent out-performing active managers is difficult.

## Summary: Section II

Section II evaluates NBIM's historical track record of active management. It is based on quan-

titative analysis of data provided by NBIM and meetings with NBIM personnel to discuss their general strategy and philosophy of active management. We analyze quantitative data on performance for the whole Fund, the two asset class divisions fixed income and equities, and internal and external active management within each asset class division for the period from January 1998 to September 2009 at the monthly frequency.

In our view NBIM is set up to provide two services to its client, the people and future generations of Norway. First, it offers «passive» returns based on the benchmark from the Ministry of Finance. The components of this benchmark are determined by the desire to efficiently diversify the overall portfolio. The benchmark takes the form of a portfolio allocation by region and asset class and is intended to be a potentially tradable portfolio of securities, as opposed to a hypothetical benchmark. As such, it represents a realistically feasible alternative to active management. NBIM seeks to offer this benchmark return in an operationally secure and transparent manner at lowest possible cost to the client.

Second, NBIM offers active management that seeks to add positive, risk-adjusted return over the benchmark net of fees. NBIM pursues this goal through a combination of internal and external management, and a philosophy of outsourcing many aspects of its back-office operations. Thus, it has internal portfolio managers and traders as well as a number of external investment managers whom it engages via specific mandates tied to pre-determined benchmarks.

NBIM implements active management in two main ways. The first is the decision to deviate from long-term strategic loadings on factors (e.g. a temporary shift from the target allocation to equities) and second, the decision to hold securities in weights that differ from factor benchmark weights based on fundamental analysis. These roughly correspond to timing and selection, where the default, or the baseline case, is the Fund benchmark. This approach is employed for both internally and externally managed funds. Fundamental analysis and factor exposure operate quite differently: the former looks at investment opportunities from the «bottom-up» by finding attractive companies and securities and then aggregates to the portfolio level whereas the latter is a «top-down» investment technique that first chooses different factors and then implements them by trading securities. Given NBIM's stated approach to generating value, it is natural to ask

whether NBIM has the capability of internally generating value as well as identifying external managers who add value. Our quantitative analysis addresses this question.

We define the «active return» of a fund, i.e., the part of the return that measures the contribution of active management, to be the difference between the return on the portfolio and the return on the corresponding benchmark. Thus, if the Fund were to hold the benchmark, the active return would be zero.

An alternative measure of the contribution of active management is the intercept, or «alpha», in a regression of returns on the benchmark. This measure and the average active return will be equal when the beta of the portfolio relative to the benchmark is one. In the case of the Fund the betas are in most cases very close to one but we nevertheless focus on the active return rather than alpha since a deviation in beta from one is also an active decision by the manager.

We address the question of whether the fund has been successful in its active management activities. Figure 3.1 plots cumulated active returns on the overall Fund, which are cumulated sums of the monthly active returns from the beginning of the sample (January 1998). Units on the y-axis are in percentages. The cumulated active returns generally trend upwards strongly and start declining precipitously at the beginning of 2008. Thus, there seems to be a break around the beginning of 2008. In our analysis we investigate the sample period up to December 2007 (the «pre-2008 sample») separately from the whole sample, where the last few months include the global financial crisis. Mindful of the biases which may result from conditioning on a particular «end-point», we also conduct analysis using information up to each date in the sample only.

Table 3.1 below reports the average value of the active return for the total Fund and for the fixed income and equity sub-portfolios. Over the whole sample the active return on the total portfolio had a mean of 0.02% per month and the p-value, which tests whether this is equal to zero, is 0.57. Thus we cannot find any statistical evidence of

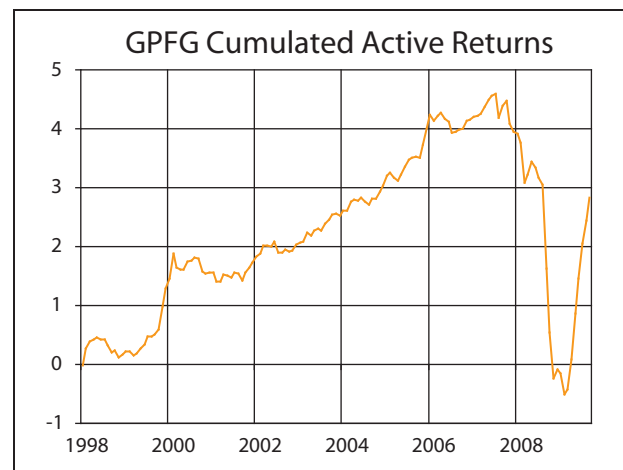


Figure 3.1 Cumulated Active Returns on the Overall Fund

significant active outperformance over the sample taken as a whole. In contrast, prior to 2008 the mean active return was 0.03% per month and this is highly significant. Note that even though this is statistically significant, the absolute value of the active return added to the fund, and thus the economic contribution, is relatively small.

Within the overall portfolio, the results for fixed income and equity are quite different. For fixed income, the mean active return is zero for the full sample and 0.01% per month for the period prior to 2008. Neither is significantly different from zero and so there is no evidence that active fixed income management has added value. In contrast, the corresponding results for equity are 0.05% per month for the full sample and 0.06% per month for the pre-2008 period. While both are still relatively small, the latter is highly significant and the former marginally significant. Active management of the equity portion of the Fund has, in a small way and on average, added value since the inception of the Fund.

We next address the question of how much impact active management has had on the overall risk taken by the fund. Table 3.2 below reports the fraction of the overall variance of fund returns that is attributable to variability in the benchmark

Table 3.1 Average Returns to Active Management

	Total fund		Fixed Income		Equity	
	Full Sample	Pre-2008	Full Sample	Pre-2008	Full Sample	Pre-2008
Mean	0.02%	0,03%	0.00%	0.01%	0.05%	0.06%
P-value	0.56	0,01	0.98	0.45	0.08	0.02

Table 3.2 Variance Attribution of Fund Returns

	Total fund		Fixed Income		Equity	
	Full Sample	Pre-2008	Full Sample	Pre-2008	Full Sample	Pre-2008
Benchmark Return	99.1%	99.7%	97.1%	99.8%	99.7%	99.7%
Active Return	0.9%	0.3%	2.9%	0.2%	0.3%	0.3%
Total Return	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

and to active management (the active return). As in Table 3.1, results are given for the total Fund and for the fixed income and equity sub-portfolios and for both the whole period covered by the data (January 1998 to September 2009) and the period up to December 2007.

The results are striking and among the most important in this report: for the full sample, including the crisis, the active management activities of the Fund account for less than one percent of the overall variance. Excluding the crisis, this figure falls to a miniscule 0.3%. For the fixed income sub-portfolio, where many of the most extreme events in the crisis have been located, the figure including the crisis is still only 2.9%. The implication of this result is that, compared with the choice of benchmark, active management has an almost trivially small impact on the overall risk of the Fund. Table 3.2 shows that, to a first approximation, the Fund is more similar to an index fund than an actively managed fund.

In fact, we find that a significant part of even the very small component of the total Fund return represented by active return is linked to a number of well-recognized systematic factors. Thus the contribution of active management to the overall return that is genuinely idiosyncratic is extremely small indeed.

Our choice of factors is affected by three considerations. First, we select factors that are recognized as having significant pricing effects by the academic literature and industry practice. Second, the set of factors must be parsimonious and third, the factors must have benchmarks that as far as possible can be traded in large size relevant to the Fund and exist since January 1998 (start of the Fund returns). The ten factors that we use are shown in Table 3.3 below.

These factors capture the main systematic factors that have been identified in the literature as having significant explanatory power for the variation in the returns or their mean value, or both. The factors span the main dimensions of risk in financial markets, apart from the return on the market portfolio which is captured in the benchmark.

Table 3.4 shows the partial correlation between the factors listed in Table 3.3 and the active return in fixed income (left-hand panel) and equity (right-hand panel). For fixed income the equity related factors of VALGRTH, SMLG, and MOM are excluded. Similarly the fixed income related factors TERM etc. are excluded for the equity sub-portfolio.

The results reveal a highly important feature of the Fund's active returns. Both the fixed in-

Table 3.3 Factors used in Analysis of Active Returns

TERM	Difference between long- and short-maturity U.S. Treasury bond returns
CREDITAa	Difference between Aa and Treasury bond returns
CREDITBaa	Difference between Baa and Aa bond returns
CREDITHY	Difference between high yield and Baa bond returns
FXCARRY	Captures the carry trade of investing in currencies with high interest rates and shorting currencies with low interest rates
LIQUIDITY	Reflects periods of high and low liquidity
VALGRTH	Difference in returns between "value" stocks and "growth" stocks
SMLG	Difference in returns between small and large stocks
MOM	Captures the momentum effect of going long U.S. stocks with past high returns and short stocks with past low returns
VOL	Captures differences between implied and realized volatility

Table 3.4 Exposure of Active Returns to Systematic factors

	Fixed Income		Equity	
	Partial Corr	P-value	Partial Corr	P-value
TERM	-0.21	0.01		
CREDITAa	0.35	0.00		
CREDITBaa	-0.33	0.00		
CREDITHY	-0.01	0.92		
FXCARRY	-0.04	0.64		
LIQUIDITY	0.35	0.00		
VALGRTH			-0.56	0.00
SMLG			0.41	0.00
MOM			0.02	0.80
VOL	0.37	0.00	0.28	0.00

come and equity active returns are strongly related to many of the factors and this implies that a significant fraction of even the very small active return component of total returns could be replicated by a small number of portfolios constructed to mimic the behavior of the factors in Table 3.3. In fact, approximately 70% of all active returns on the overall Fund can be explained by exposures to systematic factors over the sample. It is appropriate that the Fund has exposure to these factors: these are associated with risk premiums that the Fund, as a patient investor, can seek to harvest over time, just in the way that, with an exposure to the market portfolio, it has sought to harvest the equity risk premium.

An important question for the risk management of the Fund is whether the very low active returns in 2008 could have been anticipated. The question is not whether they could have been accurately predicted – the answer to this is almost certainly «no» – but whether the possibility of such damaging returns could have been envisaged and, further, whether the probability of this event could be calculated.

One way to answer this question is to fit a multi-factor model to returns, i.e., to estimate the sensitivity of the active returns to the factors in Table 3.3. What we find, perhaps surprisingly, is that using only data that would have been available at the time just prior to the period of very bad active returns in 2008, the very poor results following the collapse of Lehman could have been predicted to a significant extent conditional on the realizations of the factors in Table 3.3. This is true both using estimated factor exposures as of December 2007 for the whole fund and estimating factor expo-

sure as data became available through 2008. There is some evidence that NBIM may have successfully altered factor exposures during the crisis and so avoided losses, particularly in the equities portfolio, that could have been more severe had the factor exposures remained constant in 2008 and 2009 at their December 2007 levels. Our inference, however, is based on an interpretation of the returns data over that period, rather any specific knowledge that these actions took place.

The key factors responsible for the strongly negative returns in the overall Fund, and especially in the fixed income portfolio, during the financial crisis are those reflecting liquidity and volatility. Factors such as liquidity and volatility have experienced infrequent but large negative returns in the past and recognizing this, together with the extent of the Fund's exposure to these factors, would have contributed significantly to assessing the Fund's overall risk exposure. Thus, we find the behavior of the Fund's active losses in 2008 and part of 2009 were broadly in line with what should have been expected given its exposure to liquidity, volatility, and other factors. Put another way, if the factor exposures pre-2008 and during the financial crisis had been communicated and the asset owner had some knowledge of the potential drawdowns of these factors, the Fund's losses in 2008 would not have been surprising and would have been within expected loss limits.

Section II also evaluates the Fund's risk budgeting process based on the behavior of the realized tracking error. The amount of active risk since 1998 has been 0.25% per month, which is substantially below the limit of 0.43% per month in the Fund's regulations. The tracking error limit

was exceeded post-2007, but this was probably due to estimating forecasted variances with only historical data observed to date. A large part of the increase in tracking error post-2007 is due to increased volatility in the factor exposure of active risk.

The Fund's risk management is based on a process by which the asset owner contracts with its fund manager, NBIM, on a diversified portfolio representing an agreed benchmark, and then the fund manager is given boundaries with respect to the annual deviation of its return from the return of this portfolio, i.e. tracking error. The risk boundaries themselves are not targets. Thus, there is no expected amount of deviation from the benchmark and the risk-budgeting process. This in fact, implicitly rather than explicitly, defines a system of risk limits. This ambiguity, in our view, has two drawbacks. First it may lead to excessive risk aversion on the part of NBIM: without a target, it is difficult to take the manager to task for under-investing in active opportunities, but not the contrary. Second, it is not robust to changes in market conditions; periods of high volatility may cause the manager to trade when market risk increases. We recommend a tracking error target or bands rather than a strict risk limit. We also further recommend that the tracking error concept only be used for market portfolios comprising liquid, tradable securities. We explore this further in Section III.

In evaluating the externally managed funds, we quantitatively investigate only the active management of the external managers and qualitatively comment on the selection of the external mandates by NBIM. We know little about the way in which the mandate benchmarks are chosen and so, while it is possible that some of these choices also reflect active decisions by NBIM, we are unable to say whether these decisions add value. Our analysis of externally managed funds therefore focuses on their active returns, i.e., the return relative to the mandate benchmark. Overall external equity management has enjoyed a modest level of success but the active returns of external fixed income funds have been very poor. Although the fees paid to external funds are low, the large exposures of active external returns to systematic factors suggest that active external management has not reflected a large component of unique management ability.

In summary, active management has not detracted from the value of the Fund and accounts for only a very small amount of its overall risk ex-

posure. Prior to 2008, active management contributed a small but highly significant portion to overall Fund returns. However, much of the behavior of the Fund's small active return can be explained in terms of systematic factors. Our recommendation is that these exposures are, in general, appropriate but that they should be brought into the benchmark and that the Fund's average exposure to these factors should be a «top-down» decision rather than emerging as a byproduct of «bottom-up» active management. These issues are discussed in Section III.

### Summary: Section III

Section III assesses whether and to what extent the Fund has comparative advantages that justify investing significant resources in active management. This includes an evaluation of the opportunities, challenges and specific capabilities with respect to currently managed and new asset classes. In addition to this assessment, it proposes strategies that use the Fund's comparative advantages, and characterizes these strategies in terms of distributional characteristics, verification horizons, management feasibility compensation structures, and modes of evaluation.

We recognize several distinctive features of the Fund that contribute to its ability to fulfill its mission. First, the transparency and long-term mandate gives the Fund an advantage in ensuring responsible management and provides the on-going basis for evaluating strategic decisions and measuring performance. Second, the large size of the Fund is an advantage that provides scale economies, the ability to influence corporate management, and potential access to the world's best investment managers and staff. Third, the Fund's long-term horizon and lack of immediate cash liabilities gives it a comparative advantage in accessing investment opportunities with long verification horizons. Fourth, NBIM as a Norwegian-based asset management entity organized within the central bank (Norges Bank) with a strong public service ethos represents a comparative advantage in that it helps mitigate the problem of agency which is the central challenge of delegated investment management. Finally, the use of segregated accounts for external managers allows NBIM detailed information for continuously monitoring its financial position and assessing its risk exposures.

We also note that each of these distinctive features has potential drawbacks. Public transparen-

cy and accountability necessitates active communication to align expectations about the Fund policy and explain performance results. This may lead to less risk-taking by management. The large scale of the Fund has drawbacks as well. Size makes it difficult to beat the market since every major decision is likely to have an adverse price impact. The need to diversify globally leads the fund into markets with higher transaction costs. The large scale necessitates the use of intermediaries and service firms, which represent further cost.

This assessment of the comparative advantages of the Fund provides the basis for a review of the current management approach and an assessment of potential strategies that utilize these advantages.

Our analysis suggests that NBIM takes a fundamental, bottom-up approach to active management focused on security selection. We are not strong advocates of this approach as a way to add value above and beyond factor-based benchmarks, as the empirical evidence (reviewed in Section I) in support of the contribution to returns via superior security selection is limited. However, assuming the costs of this style of active management are low, such activities do not detract from returns even though they may make a small overall contribution to Fund performance. Fundamental analysis may be beneficial for some other aims that the fund wishes to pursue such as socially responsible investing.

With respect to describing and evaluating strategies that utilize the Fund's comparative advantages, we suggest that the Fund focus more attention on factor risk. We recommend a more top-down, intentional approach to strategic and dynamic factor exposures. This approach relies on expected equilibrium compensation for taking non-diversifiable risk. It is similar to collecting an insurance premium for bearing risk associated with those factors. The foundation of our proposal is the identification and construction of multiple factors that bear risk premiums and the transfer of these factors into the fund benchmark, rather than treating them as the byproduct of other active management strategies.

This approach is designed to utilize the Fund's comparative advantages. First, it relies upon the Fund's long-term outlook and lack of current liabilities. Factor premiums, like the equity risk premium of stocks, may exhibit consistent profitability only over long horizons, however they do not rely on identifying mispriced securities. The fac-

tor approach also utilizes the advantage of the governance structure of the Fund, in that there exists a transparent mechanism for setting the exposure to risk premiums – like the equity premium – and a common public understanding of the relationship between a policy decision and a market realization. It is natural and appropriate that the owners decide on the systematic exposure to well-established factors. This exposure needs to be communicated and included in the benchmark to the greatest extent possible. Finally, the factor approach utilizes the excellent capabilities of NBIM as developers and monitors of investable benchmarks. In practice, the top-down factor-based approach could be viewed as an extension of the Fund's asset allocation policy and NBIM's current operations. The Fund's asset allocation is determined by assessing the risk and return of investing in debt and equity. Consideration of additional factors is a natural extension. NBIM has clear competence in building indices and tracking them. Thus, NBIM is well suited to undertaking this task.

The need to implement the factor benchmarks in-house is driven by the lack of consistent, investable benchmarks for equity and fixed income factors around the world. NBIM should have major advantages in keeping implementation costs low. We argue that the factor benchmarks will provide clarity with respect to the source of return and the exposure to risk. In Section III we show how the risk-return profile of the factor-based allocation strategy can be described in terms of a probability distribution. Similar tools can be used to gauge the public's risk aversion with respect to different factors and after identifying the amount of desired exposure to each factor, the factor exposure is brought explicitly into the fund benchmark.

There are several major technical consequences of moving factor exposures into the benchmark of the Fund. First, the optimal benchmark is time varying and has non-market weights. These tilts away from market weights represent the loadings on factor risk premiums. Second, the benchmark is «passive» in the sense that it is constructed according to a set of rules and its composition is predetermined through the definitions of the factors. But, it is «dynamic» in the sense that their composition is changing more often than a standard S&P500 or FTSE portfolio. Third, and most importantly, the desired amount of factor exposure is set by the asset owner.

The top-down factor approach does not eliminate the potential use of active management. Rath-

er, we define active management in terms of two decisions. First, the decision to deviate from long-term strategic loadings on factors (e.g. a temporary shift from the target allocation to equities) and second, the decision to hold securities in weights that differ from factor benchmark weights. These roughly correspond to timing and selection, where the default, or the baseline case, is determined by factor portfolios that comprise the Fund benchmark. Components of active management will be defined and measured in these two dimensions.

With respect to the current risk monitoring processes, we recommend setting a target for tracking error rather than a boundary, and we further recommend target flexibility that allows for changing market conditions. Tracking error as a risk budgeting and risk management tool should only be applied to a universe of liquid securities. For purposes of internal evaluation of the costs and benefits of active management, and capabilities with respect to timing and selection we recommend maintaining an internal record of decisions about both dimensions of active management. We also recommend that the factor benchmarks themselves be measured against a customized, market-weighted portfolio.

We recommend that different strategies be classified according to the horizon appropriate to the length of time it typically takes for profits from the strategies to be realized. For any strategy, theory may suggest long-run profitability while in the short run there may be extended periods of underperformance. We propose three «horizon buckets» that reflect relative liquidity and the different verification periods of various strategies. Reporting and performance for each class of investment should be segregated, although the management of the portfolio would use the factor model as a framework for integrating all three. Reporting of strategies and assets held in the long-horizon category should also emphasize metrics other than just returns, especially various cash-flow-generating metrics. We point out that the lack of such a differentiation across horizons is a disincentive for NBIM to take active risks that generate positive long-horizon rewards.

To implement the process we recommend a series of steps to be taken via a transition process. This involves setting up a new division within NBIM responsible for creating, communicating, maintaining, and implementing factor portfolios and bringing factors into the benchmark for active management.

### Summary: Conclusion

The brief for this report focuses on the question of whether the Fund should be actively managed and so the key finding of our report, one that drives the majority of our recommendations, may be a surprise. It is that, to a first approximation, the Fund is actually not an actively managed portfolio.

Active returns, the difference between the fund's actual return and its benchmark, constitute only a small fraction of both the mean and the volatility of the total return. Moreover, even this small component is itself substantially explained by the Fund's exposure to a number of systematic factors such as liquidity and volatility. Overall, therefore, the returns on the Fund are similar to those that could have been earned on a fund holding the benchmarks with additional, essentially passive exposure to these factors.

An important question raised by this finding is whether this pattern of risk exposures, dominated by the benchmarks and other systematic factors, is appropriate for the Fund. Our view, supported by our review of the academic literature and our assessment of the differentiating characteristics of the Fund, is that it is. The Fund may seek to continue or even enhance its exposure to purely idiosyncratic and information-based investment strategies. There is no evidence that this activity has hurt performance and may enhance some other aims that the Fund wishes to pursue such as socially responsible investing. However, if the Fund remains well diversified it is highly likely that a significant fraction of its active return will always be driven by one or more systematic factors.

A modern interpretation of the EMH does not deny the possibility that managers might possess skill that allows them to earn excess risk-adjusted returns. Indeed, even modest levels of skill should lead to at least some part of the portfolio being actively managed. Similarly, and more importantly in this context, we should not interpret passive management, the absence of active management, as meaning that the Fund should simply hold a static portfolio that replicates a combination of major stock and bond indices. In such an asset allocation approach the investor chooses the amount of stock versus bond exposure based on the investor's risk aversion. We advocate enhancing the foundation benchmark by moving to in-house, custom benchmarks that are market weighted.



Depending on its preferences and other characteristics, the Fund may wish to acquire fixed, and possibly dynamic, exposure to other factors. The chosen level of exposure is dependent on how the Fund's tolerance for a certain factor is different from that of other market participants. For example, if it is felt that the Fund has greater tolerance to bear volatility risk – the risk that in volatile periods certain assets with high volatility risk perform poorly – then the Fund should have a positive exposure to a volatility factor. In holding such assets, the Fund is providing insurance to other investors: by holding more than the market fraction of assets with high volatility risk, the Fund allows other investors to hold a larger fraction of assets with less volatility risk and so the risk premium can be interpreted as an insurance premium that the Fund receives from other investors for reducing their exposure to assets which pay poorly when market volatility is high. Over the long run the Fund will be expected to earn a premium for supplying volatility insurance to other market participants, but during periods of high volatility the Fund will suffer relatively lower returns.

While the principle underlying this approach is the same as the principle motivating the 60%-40% equity-bond allocation, the difference is that there are other factors that are not strongly correlated to the equity premium that offer a reward for risk taking. These represent additional opportunities for return and should dominate the alternative of simply increasing equity exposure. That is, equity risk is only one dimension where the Fund earns a risk premium; the Fund should take advantage of other risk factors as well.

The key characteristics of the Fund that should influence the deviation of its investment policy from a market weight position are its absence of need for liquidity, its very long-term horizon and, at least while cash inflows continue from oil revenue, no explicit liabilities of the fund. These characteristics are important because it is along these dimensions that the Fund is most clearly differentiated from the average investor. The consequence is that the Fund should be able to earn risk premiums from taking exposure to assets that are, for example, somewhat less liquid. The long horizon also enables the Fund to ride out periods of short-term negative returns to factors that in the long run will have positive risk premiums, as predicted by theory and confirmed in data. These factors may include volatility risk, value-growth risk, credit risk, and liquidity risk.

Our main recommendation is that both the metrics used to monitor NBIM's performance and manner in which the Fund is managed become more closely aligned with the actuality of its risk characteristics. In reality the Fund's performance is largely determined by its exposure to a number of factors, especially volatility and liquidity risk, as described in Section II. We propose that the benchmarks be framed in terms of these factors – «factor benchmarks» – rather than portfolios defined in terms of geography and asset class as at present. In this framework the Fund's exposure to a particular factor is chosen by the investor, just as the current 60%-40% equity-bond asset allocation is determined now. A factor benchmark approach would also, in principle, make it easier to include, evaluate, and monitor new asset classes, such as real estate.

One important lesson from the financial crisis is that some factors, e.g., liquidity and volatility, have distributions that are highly skewed with long left tails. In other words, returns on these factors may be relatively stable for much of the time but periodically experience very large negative returns. Our analysis shows that the Fund does have exposure to factors with this payoff pattern. Because of the characteristics of the Fund, these exposures are appropriate because the fund can expect to earn risk premiums in the long run. However, to understand both the risk premiums the Fund is likely to earn from these exposures and the risks it is running in doing so, it is necessary to take a very long term view. This is true for all estimates of risk premiums: even with 100 years or data the standard error on the equity risk premium is about 2%. In fact, over the sample period considered in this study, the realized equity risk premium has been close to zero.

Moving the management of the Fund to the factor benchmark framework will be challenging, but we believe well within NBIM's capabilities. In its management of the fund to date, NBIM appears to be a highly disciplined manager in that it is able to very precisely track a benchmark. Implementing factor benchmarks involves constructing the factors, selecting the factors to be included in the overall benchmark, and determining how much factor exposure should be taken. Given NBIM's world-class capabilities with respect to constructing and maintaining investable benchmarks, these challenges can be met. The low tracking error around the Fund's benchmark testifies to the operational efficiency of NBIM's management with respect to mimicking tradable factors.

In summary, our report finds that the risks that the Fund has been running, both before and during the crisis, are broadly appropriate given its characteristics and objectives. Our proposals do not therefore suggest a major change in these risk exposures. Active management has not detracted from Fund returns, and in fact has been a small but positive addition to performance. In light of

the relative importance that factor exposures already play in the Fund's returns, we suggest that the Fund consider a framework that more explicitly recognizes the structure of its return generating process via investment in factor benchmark portfolios – and that both the way the Fund is monitored and the way it is organized on a day-to-day basis be adapted to this new framework.

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**Appendix 4****Norges Bank's active management of the Government Pension Fund Global***Norges Bank's letter of 23 December 2009 to the Ministry of Finance*

We refer to the Ministry's letter of 31 August 2009 where Norges Bank is requested to submit analyses and assessments of active management as part of the supporting documentation to be presented to the Storting (Norwegian parliament) in spring 2010. The Ministry also requested that Norges Bank prepare a business plan building on the general advice and assessments the Bank makes. In this letter and the enclosure, we present Norges Bank's view of active management and describe the key features of the strategy pursued by the Bank.

The Government Pension Fund Global is an important instrument of economic policy. It is important for stabilisation policy. When the state's petroleum revenues are invested abroad through the Fund, the Norwegian economy is shielded from the effects of fluctuations in oil prices. It also helps to give the country a more diverse industrial structure which is less dependent on petroleum activity. The Fund makes it possible to transfer parts of the wealth held by the state in the form of petroleum resources into savings and investments in global financial markets. If, averaged over the business cycle, the state spends only the expected real return on the Fund each year, future generations will also be able to benefit from this wealth. The Ministry has estimated the expected real return to be 4 per cent.

For a large, well diversified fund such as the Government Pension Fund Global, the expected return will depend on the desired level of risk. The single most important decision in the design of the strategy is the Fund's allocation to equities. The strategy established by the Ministry is based on an assessment of the Fund's long-term investment opportunities. The choice of a strategic allocation to equities of 60 per cent is believed to provide a solid return in the long term but also implies a relatively high tolerance of short-term fluctuations in return.

The Ministry expresses its long-term investment strategy through a detailed benchmark portfolio for the various asset classes in the Fund. The choice of this benchmark portfolio largely determines the return the Fund will generate over time.

Norges Bank's role is to generate the highest possible return after costs within the constraints set by the mandate from the Ministry. Through our management of the Fund, we aim to build a portfolio which achieves the best possible trade-off between expected return and risk. This is reflected both in the operational management of the Fund and in the advice we give the Ministry on the Fund's investment strategy.

An active management strategy is predicated on time-varying investment opportunities in the markets. With time-varying investment opportunities, the benchmark portfolio will not represent the "correct" portfolio at any time. Norges Bank's active decisions have a limited impact on the overall risk of the Fund. They do, however, aim to increase the return somewhat given the level of risk that the owner has decided to accept.

The Fund's owner and Norges Bank as operational manager have common interests. This is a particular strength of the management model for the Government Pension Fund Global. In financial markets there is often a conflict of interests between savers looking to make money on their investments and managers looking to make money from their clients. The Government Pension Fund Global's owner has a long-term approach which makes it possible to establish an active investment strategy that sets us apart from the average investor. Stability in the regulatory framework makes it possible to sustain periods of unexpected movements in capital markets and large fluctuations in results.

The Fund's two most important distinguishing characteristics are its long-term investment horizon and its substantial size. In the enclosure, we

show that active management can turn these characteristics to the Fund's advantage.

Norges Bank recognises that the performance of its management task requires a high level of ambition. Our goal is to safeguard and build financial wealth for future generations through a skilled investment management organisation.

Our management task can be divided into five parts. We invest new capital in the markets at the lowest possible cost. Once capital is invested in the markets, it needs to be managed in order to maintain the market portfolio in a cost-effective manner. We also attempt to increase the return through active investment decisions and through active ownership. Finally, we advise the Ministry on the long-term investment strategy for the Fund. It is Norges Bank's assessment that the mandate must include a stated objective of the highest possible return to ensure the best possible quality in the performance of all aspects of its management task.

When this objective is translated into expectations for managers, departments and individual employees, everyone will be required to contribute to raise the quality of the factor inputs into the management of the Fund. The risk management and control functions are strengthened within such a framework, and we believe that, on balance, this reduces the operational risk of the management of the Fund. An organisation that aims to be average will achieve mediocrity.

As a major shareholder in many companies, we have a responsibility to exercise our ownership rights appropriately. Successful active ownership must be based on the principles of good corporate governance. This is achieved through long-term dialogue with individual companies and builds on knowledge of each company's operations and management structure. This knowledge is generated through our active investment management. The potential for results from active ownership increases with the quality and competence of our active investment management. In given situations, active ownership can help to bring the management of a company more into line with our intentions and so realise underlying value in the company which the Fund can profit from through active management.

A passive, uninformed approach to operational decisions is an alternative without a sound theoretical or practical justification. Direct costs would be somewhat lower with this approach than with the current model. However, we would not be able to match the return on the benchmark port-

folio. As a result, Norges Bank cannot recommend a passive strategy for the management of the Fund.

The scope and orientation of active strategies will, over time, be determined by results. In 2001, Norges Bank set a target of annual value added through active management of 0.25 percentage point. This target was quite ambitious given the relative risk associated with the Fund's management. After 12 years of active management, our assessment is that the experience has largely been positive. The annualised annual excess return relative to the benchmark portfolio currently stands at 0.22 percentage point, which is close to the target. This performance confirms that active management can make an important contribution to the overall return on the Fund over time. Assuming an unchanged regulatory framework, Norges Bank will retain this target of an annual excess return of 0.25 percentage point.

Our organisation of active investment decisions has been based on a high degree of specialisation and diversification within a structure with delegated authority. We consider this to be essential for a manager hoping to succeed with active investment decisions based on analysis of companies and securities.

During the recent financial crisis, variations in our results were larger than we anticipated, and we have learned from this experience. Our annual report on the management of the Government Pension Fund Global in 2008 stated the following about our fixed income management:

«Although the portfolio was diversified across different types of bond and different regions, and the active strategies had low correlation in normal markets, the financial crisis revealed that these strategies had shared exposure to underlying systematic risk. Large positions built up in a situation when liquidity and credit premiums were low turned out to fall simultaneously in value when the market was driven by large shifts in the valuation of these risk factors.»

By underlying risk, we mean that different positions which appear to be independent can end up being driven by the same dynamics in extreme markets. In the communication of our investment strategy, we had attached considerable importance to the diversification of risk in our management and included insufficient caveats for the possibility of this independence being undermined in special situations. The scale of the financial crisis

was beyond what we could have anticipated. Since March 2009, the relative return on our management of fixed income securities has been very high, as credit premiums, liquidity premiums and fear in the market have fallen back towards normal levels. The financial crisis showed that the independence of active investment decisions needs to be assured both through quantitative risk management and through more robust qualitative evaluation of underlying risk.

Active management will expose the Fund to systematic risk factors to a greater or lesser extent. The management and control of systematic risk must therefore be part of our management task. Some systematic risk factors may result in high short-term return variability. It is important that a strategy which aims to profit from systematic risk is properly communicated, understood and anchored in the management structure. In the long term, the exclusion of such opportunities will probably be a cost for the Fund. Strategies of this kind can improve the trade-off between expected return and risk. Norges Bank must therefore take an active approach to systematic risk. We will seek to increase exposure to systematic risk factors when premiums are high, and reduce it when premiums are low, rather than the opposite.

Norges Bank currently has three main strategies for active management. We take active decisions to ensure cost-effective management of the market portfolios of equities and fixed income instruments. We refer to this strategy as management of the market portfolio. Another key area is where we take on risk in individual companies, known as fundamental, or company-specific, strategies. Active management entails exposure to systematic risk. We take an active approach to this type of risk as part of our overall portfolio management. These three main strategies for active management will be retained.

We expect the risk in the management of the market portfolio and the company-specific strategies to dominate results in the immediate future. The management of the market portfolio is expected to make a stable contribution to results in normal markets. The contribution from company-specific strategies is expected to be relatively evenly distributed around the mean. Active strategies for the management of systematic risk can improve the expected trade-off between return and risk, but can result in greater variations in results in the short term.

In 2009, the Executive Board further strengthened the framework and rules for the Bank's in-

vestment management activities, which are organised as a separate unit: Norges Bank Investment Management (NBIM). Besides the Government Pension Fund Global, NBIM also manages the Government Petroleum Insurance Fund and Norges Bank's foreign exchange reserves. The investment mandate for the Executive Director of NBIM lays down rules for what the Fund can invest in and how much risk NBIM can take in its management of the Fund. The Executive Board also establishes the principles for risk management at NBIM. These principles are based on a common framework with risks divided into four different categories: market risk, credit risk, counterparty risk and operational risk. In each of these categories, the Executive Board sets more concrete operational limits in the investment mandate for the Executive Director of NBIM. The monthly, quarterly and annual reporting from NBIM to the Executive Board reflects the guidelines in the investment mandate.

Norges Bank's view of its active management of the Government Pension Fund Global can be summarised as follows:

- The Ministry's long-term investment strategy largely determines what return the Fund will generate over time and the risk associated with the management of the Fund. Our active management aims to increase the return somewhat given the level of risk that the owner has decided to accept.
- There is no neutral reference to which we can relate passively or mechanically when implementing our assignment. The operational management of the Fund consists of a stream of many different decisions, each of which has substantial economic consequences. These decisions need to be taken on an informed and analytical basis.
- An explicit goal of achieving the highest possible return is necessary to ensure the best possible quality in the performance of all aspects of the management task. The scope and orientation of these active strategies are established by Norges Bank's Executive Board, which sets limits for the risk that the management organisation can take. These limits restrict the size of the fluctuations that can be expected in the return from active management in normal periods. These limits will also restrict fluctuations when uncertainty prevails in the markets.
- It is possible to create value by analysing individual companies and securities. To succeed in this, we need to exploit economies of scale,

cost advantages, bargaining power and capacity. Investment opportunities vary over time. Given a stable regulatory framework that ensures a long-term investment horizon, we can exploit opportunities that short-term investors cannot. This will improve the trade-off between return and risk. Long-term investment strategies must be properly communicated and anchored in the governance structure, but hold the greatest potential for active management.

- As a major shareholder in many companies, we have a responsibility to exercise our ownership rights appropriately. Successful active ownership must be based on the principles of good corporate governance. This is achieved through long-term dialogue with individual companies and builds on knowledge of each

company's operations and governance structure. This knowledge is generated through our active investment management. The potential for results from active ownership increases with the quality and competence of our active investment management.

- After 12 years of managing the Fund, our assessment is that the results of active management have largely been positive. Experience suggests that active management could make an important contribution to the return on the Fund in the long term.

Yours faithfully

Svein Gjedrem

Yngve Slyngstad

Enclosure (available on [www.regjeringen.no/spf](http://www.regjeringen.no/spf))

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