



NORWEGIAN MINISTRY OF FINANCE

Meld. St. 23 (2015–2016) Report to the Storting (white paper)

# The Management of the Government Pension Fund in 2015





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*Recommendations of the Ministry of Finance of 5 April 2016,  
approved by the Council of State on the same day.  
(Government Solberg)*



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



## 1 Introduction and summary

The purpose of the Government Pension Fund is to support long-term considerations in the spending of petroleum revenues and government saving to finance public pensions under the National Insurance Scheme. Sound long-term management will help ensure that Norway's petroleum resources may benefit both current and future generations.

The Government Pension Fund comprises the Government Pension Fund Global (GPFG) and the Government Pension Fund Norway (GPFN). The two funds are managed by Norges Bank and Folketrygdfondet, respectively, under mandates issued by the Ministry of Finance.

In this white paper to the Storting (the Norwegian parliament), the Ministry of Finance presents performance figures and assessments of the management of the Government Pension Fund in 2015. Further development of the investment strategy for the Fund is discussed, with an emphasis on unlisted real estate and infrastructure. The work on responsible management is also accounted for.

### *The investment strategy*

The investment objective of the Government Pension Fund is to achieve the highest possible return with a moderate level of risk. There is broad political agreement that the Fund should not be used as a foreign policy or environmental policy instrument. The investment strategy builds on the Ministry's investment beliefs, as well as the purpose and distinctive characteristics of the Fund. The strategy has been developed gradually on the basis of thorough assessments. Important strategic choices are anchored in the Storting. This contributes to the sustainability of the chosen, long-term strategy, including in periods of financial market turbulence.

The investment strategies for the GPFG and GPFN are set out in the management mandates, and are expressed through, among other things, the composition of the benchmark indices. In both cases, the equity portion is set to 60 percent, reflecting a trade-off between long-term expected

risk and return. Fixed-income securities account for the remainder of the benchmark index for the GPFN. For the GPFG, up to five percent of the Fund may be invested in a separate real estate portfolio, with a correspondingly lower share allocated to fixed-income.

Norges Bank and Folketrygdfondet are permitted to deviate somewhat from the benchmark indices set by the Ministry of Finance. The scope for deviations allows the managers to exploit the distinctive characteristics of the Fund – such as long investment horizon and size – to seek a return exceeding that of the benchmark index. A further advantage is the opportunity for cost-effective implementation of the benchmark indices.

The investment strategies for the GPFG and GPFN are discussed in sections 2.1 and 4.1.

### *Positive performance in a turbulent year*

Global financial markets were turbulent in 2015. The year was characterised by low interest rates, falling oil prices and weaker outlook for emerging markets. Exchange rates fluctuated considerably over the year, as did the quarterly returns on the Fund. The GPFG achieved an annual return of 2.7 percent, measured in the currency basket of the Fund. This represents a sharp drop compared to the high returns generated in recent years. Real estate delivered the highest return, while the fixed-income portfolio generated almost no return.

The market value of the GPFG at yearend was NOK 7,471 billion after asset management costs. Measured in Norwegian kroner (NOK), the market value increased more than NOK 1,000 billion in 2015. Net inflow of new capital amounted to approximately NOK 50 billion, while returns in foreign currencies totalled close to NOK 350 billion. More than half of the increase in the value of the Fund can be attributed to the depreciation of the Norwegian krone, which does not affect the Fund's international purchasing power.

The real rate of return on the GPFG in 2015 was 1.8 percent after asset management costs. In the period 1998–2015, the GPFG has achieved an

average annual real rate of return of 3.7 percent. Every year, the Fund receives recurring income in the form of equity dividends, interest and rental income. This cash flow is expected to remain relatively stable over time, and totalled NOK 193 billion in 2015, equivalent to 2.8 percent of the Fund's capital.

The Nordic financial markets outperformed the global market in 2015. Measured in NOK, the GPFN achieved a return of 7.0 percent, with equities generating a significantly higher return than the fixed-income portfolio. The market value of the GPFN at yearend 2015 was NOK 198 billion. Annual net real return in 2015 equalled 4.7 percent.

Norges Bank and Folketrygdfondet aim to maximise return net of costs, subject to the limits stipulated in the mandates set by the Ministry. The return generated by the GPFG in 2015 was 0.45 percentage points above the benchmark index. This excess return is higher than can be expected over time, given the limited scope for deviation from the benchmark index. The highest excess return was generated by the equity portfolio. Since 1998, annual excess return has averaged 0.26 percentage points. In total, this equals about NOK 82 billion. Last year, the GPFN outperformed its benchmark index by 0.48 percentage points. This figure is in line with the average annual excess return since 1998.

The reported excess return is not adjusted for asset management costs. The return on the benchmark indices cannot be achieved without incurring costs. Estimates indicate that the asset management costs of Norges Bank and Folketrygdfondet approximate the costs of index management. The Ministry of Finance therefore considers the reported excess return a reasonable measure of the value added through active management. Measured as a proportion of capital under management, costs amounted to 0.06 percent (GPFG) and 0.09 percent (GPFN) in 2015. These figures are within the limits set by the Ministry, and low compared to the costs of other funds.

In evaluating performance, a distinction can be made between the excess return a manager achieves by taking on more systematic risk and excess return attributable to other factors. This approach may help explain excess returns ex post. Excess returns stemming from higher risk-taking in active management can in theory be achieved more efficiently by adjusting the composition of the benchmark index. Although different models are used to explain performance, these do not provide an unambiguous description of how

risk has impacted performance or what adjustments to the benchmark index are feasible. This report presents several risk-adjusted return measures. These indicate that Norges Bank and Folketrygdfondet have generated robust excess returns given the risks taken in active management.

The results achieved by the GPFG and GPFN are discussed in sections 2.2 and 4.2, respectively. The principles governing performance and risk assessment in the management context are covered in a special thematic article in chapter 7.

#### *Uncertainty about the future value of the Fund*

Measured in Norwegian kroner, the market value of the GPFG has almost doubled in the three-year period 2013–2015. The return achieved during this period is high compared to the average expected return over time and, additionally, the Fund has received substantial inflows of oil and gas revenues. Nonetheless, around half of the increase in the value of the Fund is attributable to the depreciation of the Norwegian krone, which does not increase the Fund's international purchasing power. Although the development of these variables is uncertain, several factors suggest that the Fund is likely to grow more slowly going forward.

International interest rates have been low and falling for many years. This is reflected in low yields on the government and corporate bonds held by the Fund. Declining interest rates have generated capital gains for the Fund, but the scope for further gains is limited given the current low interest rate level. Although the US Federal Reserve began raising its policy rate late last year, the Bank of England and European Central Bank have stated that rate hikes will not come until a later date.

The value of the Fund is also influenced by transfers to and withdrawals from the Fund. The GPFG is an integral part of the fiscal budget and the fiscal policy framework. The state's oil and gas revenues are transferred to the GPFG in full, while spending via the fiscal budget over time corresponds to the expected real rate of return on the Fund (the fiscal policy guideline). Spending is thus decoupled from current revenue accrual. This helps insulate the fiscal budget from fluctuations in petroleum revenues and supports a stable development of the Norwegian mainland economy.

Over the past 10–15 years, elevated production and oil and gas prices have contributed to the rapid accumulation of capital in the GPFG. Pro-



duction on the Norwegian continental shelf appears to have peaked, and oil prices have fallen sharply in recent years, reducing the state's net cash flow from petroleum activities. At the same time, petroleum revenue spending via the fiscal budget has gradually increased after the adoption of the fiscal policy guideline in 2001. In the budget for 2016, the non-oil deficit was estimated at NOK 209 billion. Measured as a proportion of the Fund capital, the spending of petroleum revenue falls well within the limits stipulated by the fiscal policy guideline. The cash flow from petroleum activities was estimated at NOK 204 billion. Oil prices have fallen further since the budget was presented last autumn.

Already at the introduction of the fiscal policy framework it was envisaged that the Fund would experience an initial phase of substantial net inflows and rapid capital accumulation followed by a prolonged period of net withdrawals and weaker growth in the value of the Fund. In the phase we are entering into, the non-oil deficit is likely to be covered in part by Fund returns in the form of equity dividends, interest and rental income. This shift has occurred a few years earlier than anticipated due to the decline in oil prices. Nonetheless, depending on the development in oil prices, production levels and the non-oil fiscal budget deficit, net inflows to the Fund may turn positive in coming years.

For an extended period, net inflows have boosted the GPFG capital year by year, including in periods of low returns. Going forward, growth in the market value of the Fund will primarily be determined by international financial market returns.

#### *Unlisted investments*

A key theme of this year's report is investments in unlisted real estate and infrastructure. The Ministry of Finance has assessed whether the proportion of the GPFG invested in real estate should be increased, and whether investment in unlisted infrastructure should be permitted. Consideration has also been given to whether one should open up for the GPFN to be invested in unlisted real estate and infrastructure. The Ministry has received recommendations from Norges Bank and an expert group (Van Nieuwerburgh, Stanton and de Bever) on the scope and regulation of such investments in the GPFG. Folketrygdfondet has given advice on the GPFN.

The Government Pension Fund is primarily invested in listed equities and bonds. The bench-

mark indices for equities and bonds can be closely tracked at low cost. The benchmark construction facilitates broad diversification to reduce risk. Performance and the risk associated with deviation from the benchmark indices can be measured on an ongoing basis. Unlisted markets do not offer the same opportunity to diversify risk through broad-based ownership and small ownership shares. Operational management is more complex, and requires different, more specialised expertise. Nor are there reliable benchmark indices for unlisted investments. Risk and return cannot be measured regularly as in listed markets, since changes in value are estimated, for example through appraisals.

In principle, unlisted investments may help increase returns or reduce risk in two different ways. Firstly, in the longer term unlisted investments may have distinct risk and return characteristics from corresponding listed investments. As a result, the average investor can expect to profit from the inclusion of unlisted investments in the portfolio, in the form of either improved diversification of risk or higher expected returns. Secondly, investors with advantages in unlisted markets can generate excess returns compared to the average investor. Potential advantages include investment horizon, size and management expertise.

#### *Real estate investments in the GPFG*

In 2008, it was decided that up to five percent of the GPFG should be invested in a separate real estate portfolio. The objectives included risk diversification and the harvesting of premiums from less liquid assets. The real estate portfolio is still being scaled up, and accounted for some three percent of the Fund at the end of 2015. Norges Bank's actual real estate investments are included in the Fund's benchmark index. A global, appraisal-based index (IPD) of unlisted real estate values has been adopted as the return objective. It is not possible to undertake investments that closely mirror the index.

Norges Bank and the expert group have recommended changes to the regulation of the GPFG's investments in unlisted real estate. In their view, the current return measure is less suited to the intended purpose, and a benchmark index composed of listed equities and bonds would be preferable. This would also enable improved management of the risk associated with the Fund's real estate investments. In its report the expert group shows that it is uncertain whether investments in

unlisted real estate have resulted in better diversification of risk or higher expected returns. It also points out that real estate valuations are currently high. Norges Bank, on the other hand, builds on different analyses than the expert group and is of the opinion that real estate investments improve the risk-return ratio over time.

The Ministry of Finance intends to set aside the current provision that up to five percent of the GPFG's capital shall be invested in a separate real estate portfolio that forms part of the benchmark index. The benchmark index will thus only include listed equities and bonds. The real estate investments are to be measured against a broadly composed index which, in principle, can be tracked closely and at low cost.

The proposed change entails that the scope and composition of the real estate investments will be decided by Norges Bank subject to the limits set in the mandate from the Ministry of Finance. It also reflects the fact that this type of management demands specialist expertise and market proximity. The expected return is uncertain and will depend on the comparative advantages of the asset manager and choice of specific investments. Moreover, this solution gives a clear division of labour between the Ministry and Norges Bank, mirroring the arrangement for other active management strategies.

To improve risk management, the Ministry of Finance plans to include unlisted real estate investments under the existing limit on deviations from the benchmark index, as proposed by Norges Bank. As a result, all strategies entailing deviations from the benchmark index will be subject to an overall risk limit.

In addition, the Ministry of Finance is preparing to cap investments in unlisted real estate at seven percent of the GPFG. Returns on real estate may at times differ from the return on listed equities and bonds. Accordingly, Norges Bank must aim for a lower proportion of unlisted real estate to avoid breaching the limit and having to liquidate holdings in the event of sharp, sudden drops in the value of listed investments. In the Ministry's opinion, a cap of seven percent allows for a long-term unlisted real estate proportion of approximately five percent of the GPFG. The Ministry considers this limit sufficient to realise any economies of scale offered by the market.

The GPFG's real estate investments are discussed in a separate section.

#### *Unlisted infrastructure investments in the GPFG*

Lack of data on unlisted infrastructure makes it difficult to assess whether such investments improve risk diversification or raise expected returns for the average investor. An additional question is whether the Fund has advantages compared to other investors for such investments.

The expert group and Norges Bank consider that the range of investment opportunities can be expanded by permitting investments in unlisted infrastructure. However, the Ministry of Finance has emphasised a number of significant factors that speak against permitting such investments.

Numerous infrastructure investments are exposed to high regulatory or political risk. Within the infrastructure sector, long-term contracts where profitability is subject to the direct influence of political authorities in other countries, through the setting of tariffs or other regulation, are commonplace. There have been several examples in recent years of authorities changing the conditions for such investments through the renegotiation of signed agreements or changes to subsidy schemes.

In the case of *unlisted* investments, the ownership share in each individual investment will generally be large. As a result, Fund investments will be more visible and more likely subject to criticism. Conflicts with the authorities of other countries on issues such as the regulation of transport, energy supply and other important public goods will generally be difficult to manage, and can entail reputational risk for the Fund. The Ministry considers that a transparent, politically endorsed sovereign fund like the GPFG is less suited to bear this type of risk than other investors. High transaction costs and low liquidity make divestments more difficult if complications were to arise.

The unlisted infrastructure market available to the GPFG is small. Infrastructure is primarily owned by public authorities, and is scarcely available to investors. Uncertain estimates indicate that unlisted infrastructure only accounts for 0.5 percent of the global investable capital market. The majority of the infrastructure market is listed. In this respect, infrastructure differs from real estate, where most of the market is unlisted. Permitting investment in unlisted infrastructure will therefore to a lesser degree expand investment opportunities for the Fund than the decision to open up for investments in unlisted real estate.

Both the expert group and Norges Bank have discussed potential management advantages and the distinctive characteristics of the Fund. Such benefits are difficult to quantify. Norges Bank has just a few years' experience in the unlisted space, and the real estate portfolio is still being built up. The Ministry is of the opinion that more experience should be gained in this area before any expansion to include additional types of unlisted investment.

Following an overall assessment, the Ministry of Finance is not prepared to permit the GPFG to be invested in unlisted infrastructure at this stage.

The GPFG has a financial target, and is not an instrument for promoting state investment in developing countries or renewable energy. There is no financial rationale for permitting infrastructure investments in these selected sub-markets only. The level of risk within these sub-markets is higher than that of other unlisted infrastructure investments. A desire to invest on a non-financial basis should be pursued through other means than the GPFG. There are already several public schemes to promote investments in developing countries and renewable energy. Furthermore, the Storting has asked the Government to prepare the establishment of a limited company mandated to invest in partnership with the private sector in companies that develop and utilise green technologies. The Government will revert to this question in its revised budget for 2016.

Unlisted infrastructure investments in the GPFG are discussed in a separate section.

#### *Unlisted investments in the GPFN*

Folketrygdfondet has recommended allowing the GPFN to be invested in unlisted infrastructure and real estate. In its view, access to a wider range of investment opportunities will help diversify risk and increase returns net of costs.

The GPFN is invested primarily in Norway. The rest of the Nordic region accounts for a smaller portion of Fund investments. The investment strategy for the GPFN, unlike that of the GPFG, does not seek the widest diversification of investments possible. In isolation, permitting investment in unlisted real estate and infrastructure may help diversify risk. However, improved diversification of risk may also be achieved by other, simpler means. The state already has substantial real estate and infrastructure holdings in Norway. Accordingly, there is little rationale for the state investing part of

the GPFN in unlisted real estate and infrastructure to improve risk diversification.

The Norwegian market for infrastructure investments is small and underdeveloped. Any investments in infrastructure by the GPFN will most likely result from the sale of such assets by central or local government. Such a transfer of ownership will leave the state's overall risk level unchanged, and usually generate significant transaction costs.

Unlisted investments normally require different, more specialised expertise than listed investments. It is uncertain whether Folketrygdfondet can realise economies of scale or has other advantages for such investments.

Following an overall assessment, the Ministry of Finance is not prepared to permit the GPFN to be invested in unlisted real estate and infrastructure.

Unlisted investments in the GPFN are discussed in chapter 5.

#### *New reporting and risk management requirements for the GPFG*

The Government aims to promote the greatest possible transparency in the management of the GPFG. The Fund is currently viewed as one of the world's most transparent. Transparency is both of independent value and vital for the governing and supervision of the Fund.

The scope for deviations from the benchmark index was increased somewhat on 1 February 2016, as proposed in last year's white paper and endorsed by the Storting. In conjunction with this, the Ministry of Finance has introduced a new limit on risk and more detailed reporting requirements relating to the risk assumed by Norges Bank in its active management. Norges Bank's Executive Board is now required to cap the negative excess return which in extreme cases may be expected from the Bank's active management strategies.

Transparency facilitates a broad discussion and understanding of the management of the Fund, and provides a foundation for evaluating Norges Bank's management performance. Transparency may also strengthen the ability to pursue profitable long-term strategies in periods with performance below that of the benchmark index. The mandate now requires, inter alia, reporting on investment strategies, the sources of positive and negative excess returns, and the results achieved under all investment strategies entailing substantial costs or high relative risk. Furthermore, the Executive Board of Norges Bank has to issue a

public assessment of its management performance. The new reporting requirements apply starting with the 2015 annual report.

Reporting and risk management requirements are discussed in section 3.4.

#### *Responsible management*

The Government Pension Fund has overarching financial objectives, but also aims to be a responsible investor. Strong long-term financial returns depend on well-functioning markets and a sustainable development. This applies particularly to large, diversified, long-term investors whose returns are primarily linked to value creation in the global economy.

The mandates for the GPFN and GPFG refer to internationally recognised responsible management standards. Norges Bank and Folketrygdfondet exercise ownership rights on behalf of the two funds. Important instruments in this context include the promotion of international standards and research, company dialogue, clarification of expectations and the submitting of proposals and voting at general meetings. In February 2016, Norges Bank published an expectation document on human rights.

The Ministry of Finance has adopted ethically motivated guidelines for the observation and exclusion of companies from the GPFG. Certain criteria exclude companies based on their products, for example tobacco, weapons and coal. Other exclusion criteria are based on conduct, such as serious human rights violations and severe environmental damage. The Council on Ethics recommends companies for exclusion or observation, and the final decision rests with Norges Bank. Until 2015, such decisions were made by the Ministry of Finance. Four companies were excluded in 2015.

In 2016, two new criteria have been included in the guidelines for observation and exclusion, reflecting the Storting's feedback on the report on the Fund for 2014 and on the National Budget 2016. One criterion targets conduct resulting in unacceptable greenhouse gas emissions at an aggregate company level. The other criterion is product-based, and targets mining companies and energy

producers who derive 30 percent or more of their revenues from thermal coal or base 30 percent or more of their operations on thermal coal.

As part of the GPFG's responsible management efforts, separate mandates have been adopted for environment-related investments. Around NOK 54 billion was invested under these mandates as at the end of 2015. In recent years, the returns under the environment-related mandates have been lower than the return on the Fund as a whole.

Responsible management is discussed in chapter 6. The discussion includes an evaluation of the new division of responsibility for observation and exclusion of companies from the GPFG.

#### *Two government commissions*

In January 2016, the Government appointed a commission mandated to assess the equity portion of the GPFG. The equity portion is the decision with the greatest impact on the Fund's overall long-term risk and return. The commission is to submit its report by 15 October 2016. The Ministry of Finance intends to circulate the report through a public consultation. An assessment will also be sought from Norges Bank. The Ministry aims to discuss the question of the GPFG's equity portion in the report on the Fund to be published in the spring of 2017.

Norges Bank has developed a competent organisation and delivered sound long-term operational results in the management of the GPFG. Nevertheless, the evolution of the investment strategy and growth in assets under management are making new demands on Fund governance. Last year, the Government initiated the appointment of a new deputy governor at Norges Bank with a particular responsibility for asset management. Further, a commission was appointed to review the Norges Bank Act (the Central Bank Act) and the Bank's governance structure. The mandate includes a review of the management of the GPFG. The commission will present its recommendations in the spring of 2017.

The two commissions are discussed further in sections 3.5 and 3.6.

## 2 The Government Pension Fund Global: strategy and performance

### 2.1 The current investment strategy

#### 2.1.1 Background

The state saves its net cash flow from petroleum activities in the Government Pension Fund Global (GPFG). Saving in the Fund is fully integrated with the fiscal budget; see Box 2.1. The annual withdrawal from the Fund covers the non-oil deficit in the fiscal budget. Over time, the deficit shall equal the expected real rate of return on the GPFG. The fiscal policy framework supports the Fund's long time horizon.

The objective for the investments of the GPFG is to achieve the highest possible financial return, given a moderate level of risk. The investment strategy is expressed in the management mandate for the GPFG issued by the Ministry of Finance. Norges Bank carries out the operational management of the Fund in accordance with the mandate.

The Government is committed to ensuring the highest possible transparency in the management of the GPFG. Transparency is both an important general principle and a prerequisite for widespread confidence in the management of Norway's national savings. Important decisions are endorsed by the Storting. This approach facilitates consistent adherence to the long-term investment strategy, also during periods of financial market turbulence.

#### 2.1.2 The academic foundation

The investment strategy is derived from the purpose of the Fund and its distinctive characteristics, the investment beliefs of the Ministry and the comparative advantages of the asset manager. The strategy has been developed over time based on research, practical experience and technical assessments. The strategy is summarised in Figure 2.2.

The investment strategy is premised on financial markets largely being well-functioning. Accordingly, new publicly available information is

rapidly reflected in financial asset prices. Competition between market participants is high. Hence, systematically outperforming the general market or average investor in well-functioning markets will be difficult. To the extent that some investors may have distinctive characteristics or advantages which allow them to achieve an excess return over time, this requires market knowledge and proximity.

A further key element of the strategy for the GPFG is that risk can be reduced through broad diversification. Fund investments are currently distributed across equities, fixed-income securities and real estate in numerous countries. Within each country, investments are spread across different sectors and companies. Such diversification reduces exposure to events that impact individual stocks or markets.

However, it is not possible to eliminate all risk through diversification. According to financial theory, investors can expect to be compensated for accepting risk that cannot be eliminated through broad diversification, referred to as systematic risk. This expected excess return is termed a *risk premium*. An example is the return achieved in stock markets. Investors will expect to be compensated for bearing stock-market risk in the form of a higher return than on a risk-free capital investment. However, the size of the excess return – or equity premium – is uncertain and may vary over time. Investors will similarly expect compensation for the risk of a borrower defaulting on its obligations (credit premium).

Investors have differing time horizons and capacity to bear risk. An investor's choice of portfolio composition determines the expected risk and return level. An investor must accept additional risk in order to achieve a higher expected return over time. Increased risk also means larger fluctuations in the value of investments and a higher loss probability. The proportion invested in equities has the greatest impact on overall risk and return of the GPFG.

**Box 2.1 The framework for accrual and spending of petroleum revenues**

The accrual of capital in the GPFG is largely a conversion of oil and gas resources on the Norwegian continental shelf into foreign financial assets. This conversion separates the net petroleum revenues from the state's other income. There are, at the same time, considerable variations in such revenue streams, and they will eventually cease. Figure 2.1 illustrates the relationship between the GPFG and the fiscal budget.

A key objective of the GPFG and the fiscal policy guideline is to facilitate permanently high value creation and stable development in the

mainland economy. To this end, the state's net cash flow from petroleum activities is transferred to the Fund in full. An amount is withdrawn from the Fund annually pursuant to a resolution passed by the Storting to cover the non-oil budget deficit. This approach makes petroleum revenue spending in the fiscal budget a visible part of an integrated budget process. As long as the state does not accumulate debt by borrowing to fund expenditure, the GPFG's capital will reflect true financial saving on the part of the state.

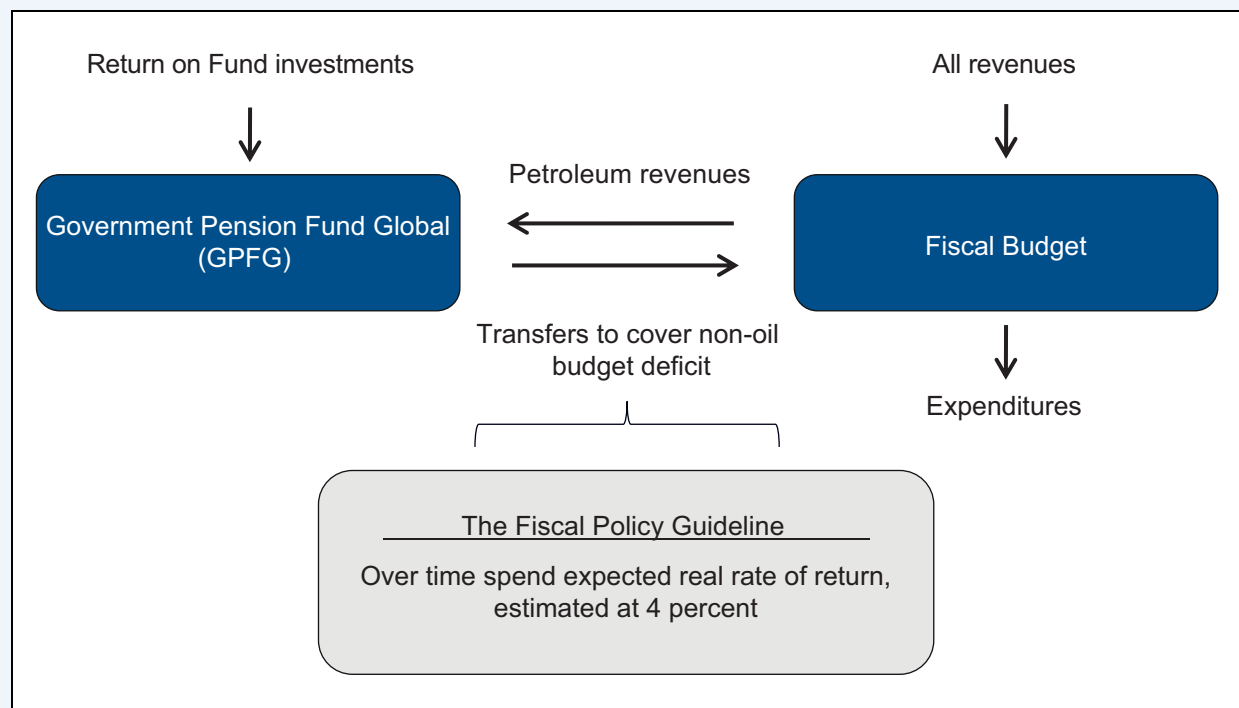


Figure 2.1 The relationship between the GPFG and the fiscal budget

Source: Ministry of Finance.

The fiscal policy guideline is aimed at phasing petroleum revenues gradually into the Norwegian economy, more or less in line with developments in the expected real rate of return on the GPFG, which is estimated at four percent. Decoupling spending from accrual shelters the fiscal budget from petroleum revenue fluctuations. At

the same time, wealth is preserved over time, thus serving to safeguard welfare for future generations. Whilst the capital of the Fund can only be spent once, the real rate of return may fund a permanently higher level of government expenditure. The fiscal policy guideline supports the long time horizon of the Fund.

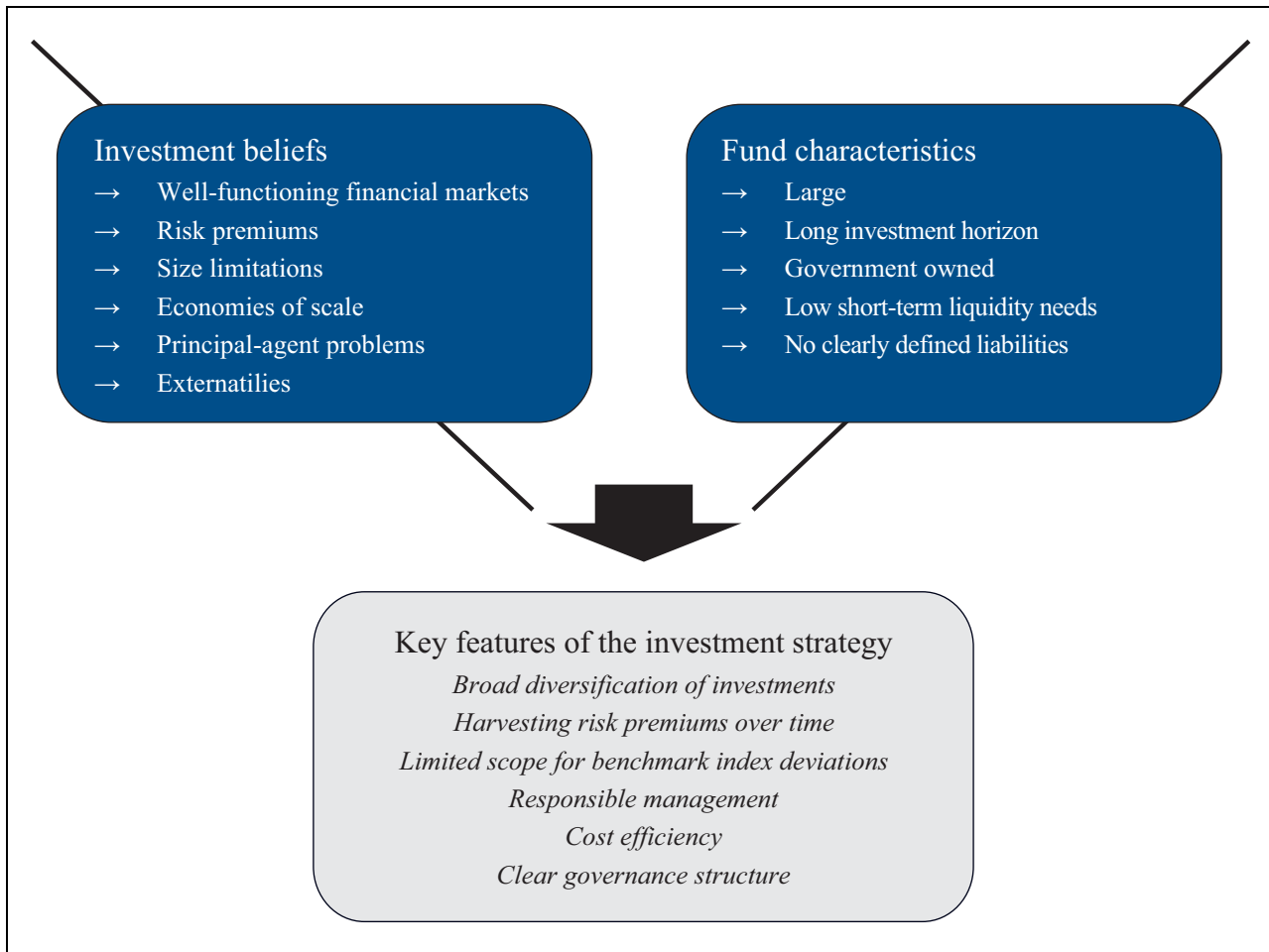


Figure 2.2 Overview of investment beliefs and distinctive characteristics of the Fund underpinning the investment strategy for the Government Pension Fund Global

Source: The Ministry of Finance.

The state is a large, long-term investor through the GPF. The Fund continues to receive substantial petroleum revenue inflows, and has no clearly defined liabilities. It is considered unlikely that the state will make large, unanticipated withdrawals from the Fund. The size of the Fund allows for economies of scale to be exploited in management.

However, the size of the Fund presents various challenges. For example, a large fund may find it difficult to make major portfolio adjustments within a short space of time. It may also prove difficult to scale up individual investment strategies, implying that some strategies will be unavailable to the GPF.

The distinctive characteristics of the Fund mean that it is better placed than many other investors to accept risk that requires a long time horizon. This is utilised to, inter alia, harvest the expected excess return from investing in equities.

Delegation of authority is commonplace in the financial sector. For example, the shareholders in

a listed company elect a board of directors which in turn makes management responsible for the day-to-day operations. Investors delegate important decisions to managers. Delegation may result in situations where different stakeholders have conflicting interests and asymmetric information. These are often referred to as principal-agent problems. Good governance and supervision may help alleviate such problems. Among other things, good corporate governance can help ensure that management acts in accordance with investor interests.

The GPF has an overarching financial objective, but shall also be a responsible investor. For a large, long-term fund like the GPF, with ownership shares in several thousand companies worldwide, responsible management may be in the Fund's own interest. An individual company may profit by ignoring serious harm to others (externalities). For the GPF, however, such a gain may be accompanied by lower returns on other parts



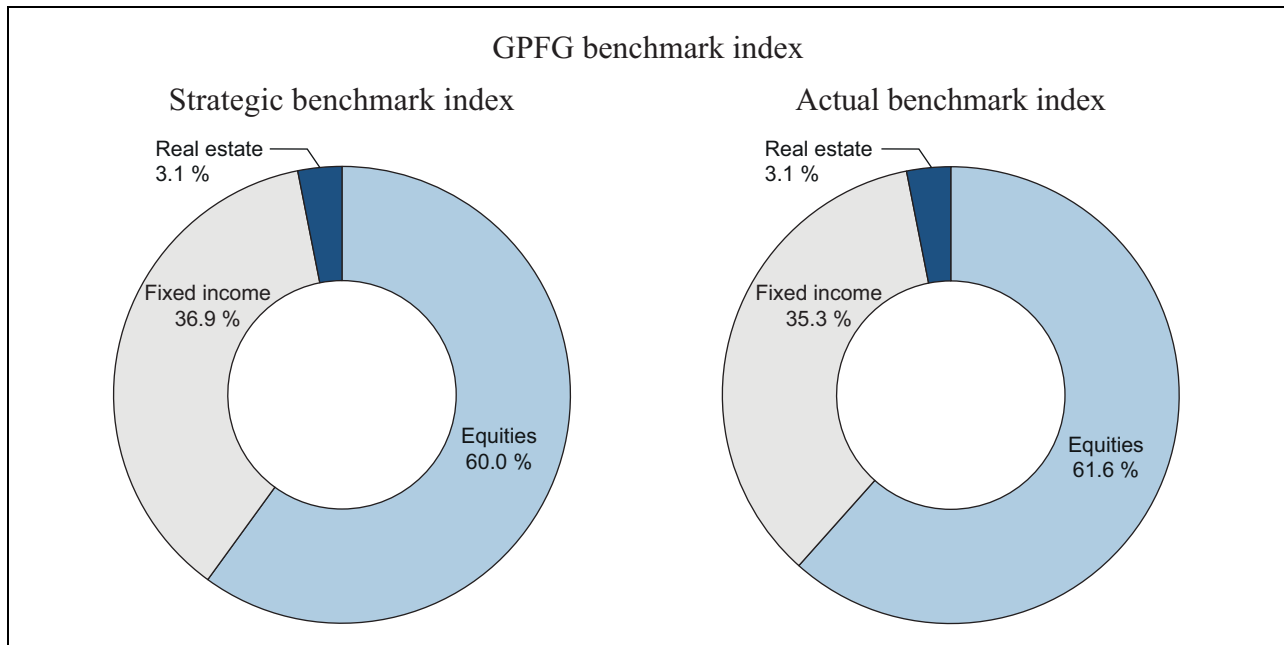


Figure 2.3 Composition of the strategic and actual benchmark indices for the GPFG at yearend 2015

Sources: Norges Bank and the Ministry of Finance.

of the portfolio, now or in the future. Strong financial returns over time are considered dependent on well-functioning markets and a sustainable development. Responsible management is discussed further in chapter 6.

### 2.1.3 Main features of the investment strategy

The management mandate from the Ministry of Finance expresses the long-term investment strategy for the Fund, including a strategic benchmark index comprising equities, fixed-income and real estate. Equities and fixed-income investments have separate benchmark indices composed exclusively of listed equities and bonds. For real estate, a return target has been adopted which is intended to reflect developments in the unlisted real estate market.

The strategic benchmark index defines a fixed equity portion of 60 percent. The equity portion has been selected on the basis of the long-term trade-off between expected risk and return. The real estate portfolio is in a development phase, and may account for up to five percent of the Fund under the present mandate. Fixed-income securities account for the remainder of the strategic benchmark index. The Fund's overall risk level is primarily determined by the equity portion.

Stock and bond prices fluctuate considerably, and will often develop differently over time. Given these constant price changes, maintaining a fixed

equity portion is considered inexpedient, not least because this would entail frequent transactions and unnecessary transaction costs for the Fund. The mandate for the GPFG therefore stipulates an actual benchmark index which may deviate from the strategic index subject to a specified limit. Figure 2.3 shows the composition of the strategic and actual benchmark indices as at yearend 2015.

If the equity portion in the actual benchmark index is materially higher or lower than the strategic allocation, this may alter the risk and return characteristics of the benchmark. A rule has therefore been adopted on the rebalancing of the equity portion in the actual benchmark index when deviations from 60 percent exceed four percentage points. Rebalancing also gives the investment strategy a certain counter-cyclical element, in that over time the Fund purchases the asset class which in relative terms has fallen substantially in value and sells the asset class which has risen strongly in relative terms. Rebalancing has historically helped boost the return on the GPFG.

The underlying equity and fixed-income benchmarks are based on broad, global indices from leading index providers. The indices provide an unambiguous, detailed description of how the Fund may in principle be invested across different sectors, individual companies and bonds.

The benchmark index adopted for the Fund's equity investments is based on an index prepared

by FTSE Russell, and includes all countries, apart from Norway, classified by the index provider as developed markets, advanced emerging markets or secondary emerging markets. The fixed-income benchmark is based on indices provided by Barclays. It comprises 70 percent government bonds and 30 percent corporate bonds, excluding Norwegian securities.

The distribution of equity investments across countries and geographical regions is based on the size of the listed stock markets in the countries included in the index. The same applies to corporate bonds. In the case of government bonds, the starting point is the relative size of the economies as measured by GDP. The distributions have been adjusted in some areas to take into account factors such as ensuring a broad geographical diversification.

The indices for equities and fixed-income instruments incorporate thousands of individual equities and bonds, and entail diversification of investments across numerous securities. This helps improve the risk-return ratio of the Fund. The index providers have adopted detailed rules on the inclusion of securities in the indices. This also means that suppliers have made some subjective choices as to how markets are represented in the indices.

Investment risk and return in the GPFG largely follow developments in global markets for listed equities and bonds. This index-tracking strategy facilitates a broad distribution of investments with the desired risk level at low administrative cost. The distinctive characteristics of the GPFG, such as its long time horizon and size, can also be exploited to achieve a higher return.

Deviation from the benchmark index requires market knowledge and proximity. Hence, the implementation of such strategies has been delegated to Norges Bank, which is permitted to deviate somewhat from the benchmark index subject to restrictions set in the mandate from the Ministry of Finance. The Bank utilises the scope for deviations from the benchmark index to achieve broader diversification, to tilt the portfolio towards systematic factors and in the selection of securities. The limits are also used to meet requirements in the mandate relating to environment-related investments and fiscal strength of the government bond portfolio. The scope for deviations is specified in terms of expected tracking error, i.e. how much the return on the GPFG is expected to deviate from the benchmark index in a normal year.

The mandate also lays down additional investment guidelines. For example, Norges Bank may invest outside Norway only, only in tradable bonds and only in equities which are listed or where the company board has expressed an intention to seek such a listing on a regulated and recognised market place. The Fund may only own up to 10 percent of the voting shares in one company. There are also provisions on risk, responsible management and environment-related investment mandates. Norges Bank is required to report on a wide range of matters, and management performance is measured against the actual benchmark index.

At the end of 2015, the GPFG's equity investments encompassed more than 9,000 securities, while the fixed-income portfolio included bonds from 1,278 different issuers. Overall, investments were linked to 78 countries.

The mandate also stipulates that Norges Bank shall invest up to five percent of the Fund in real estate. The unlisted space accounts for over 80 percent of the investable real estate market, although in this part of the market risk cannot be widely diversified through broad ownership and small ownership stakes. Unlisted investments generally require investors to be more active and involved in the operation and development of assets. The market value of such investments is normally established by appraisals, making it more difficult to measure risk and return on an ongoing basis. Norges Bank's experiences with unlisted real estate and the Ministry of Finance's plans for changes to the framework for the unlisted investments of the Fund are discussed in chapter 3.

The mandate tasks Norges Bank with seeking the highest possible return after costs, measured in the currency basket of the Fund. The currency basket corresponds to the currency composition of the benchmark index for equities and fixed-income. The management assignment is consistent with the objective of cost-efficiency. At the same time, the aim is to secure high net returns, not low costs as such. Comparisons with other large funds show that Norges Bank's asset management costs are low as a percentage of capital under management.

#### **2.1.4 Governance structure**

According to the Government Pension Fund Act the Ministry of Finance has the overall responsibility for the management of the GPFG, whilst Norges Bank is responsible for the operational management. A management mandate issued by the Minis-

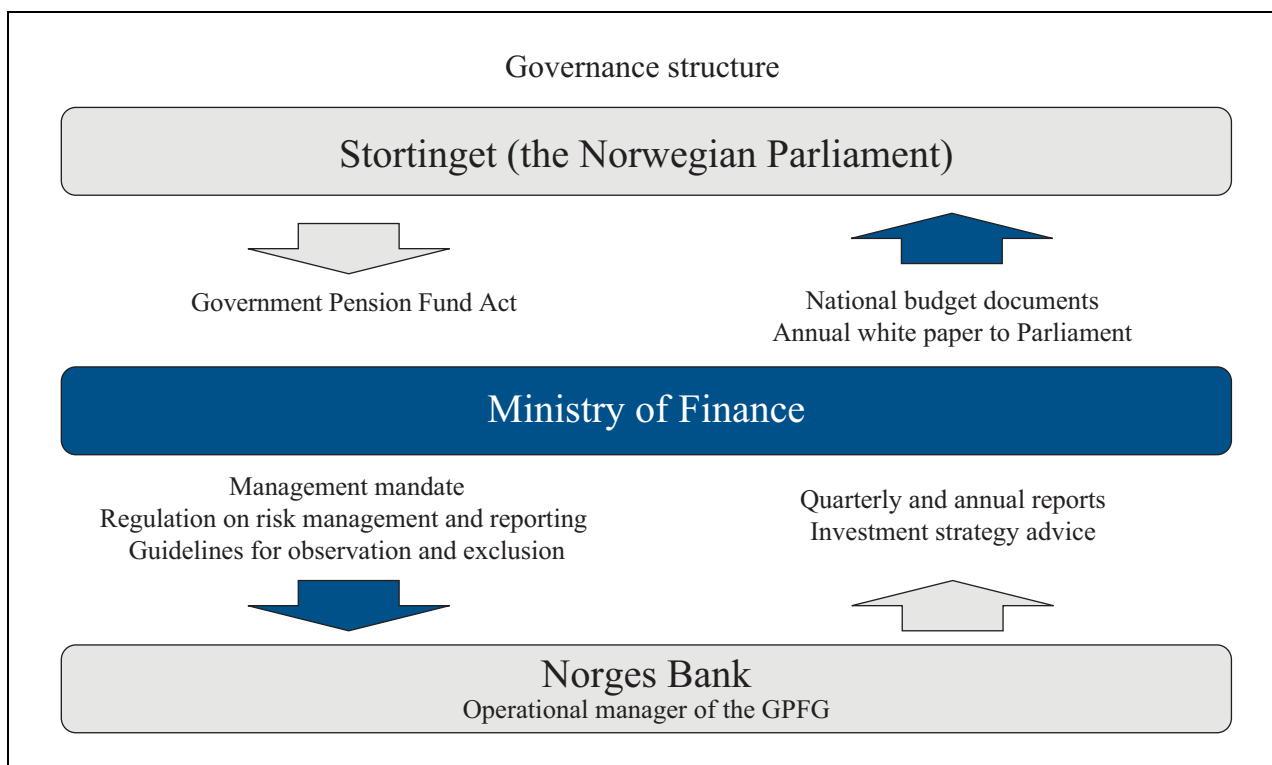


Figure 2.4 Governance structure of the GPF

Source: Ministry of Finance.

try sets out the investment strategy and the limits on the Bank's management. A clear, robust governance structure is important for the implementation of the strategy and to reduce potential conflicts of interest, also known as principal-agent problems.

The governance structure must on the one hand ensure that the asset owners – represented by the Government and the Storting – support the strategy and risk profile of the Fund. On the other hand, sufficient authority must be delegated to allow ongoing operational management decisions to be made close to the markets in which the Fund is invested. This balance is sought by ensuring that the Government and the Storting endorse major strategic choices prior to implementation, including through the deliberation of the Storting of the annual white paper on the Government Pension Fund. The mandate issued to Norges Bank by the Ministry stipulates general principles and regulations.

The management of the GPF is based on the assignment of different roles to the Storting, the Ministry of Finance, the Executive Board of Norges Bank and Norges Bank Investment Management (NBIM). A clear division of roles between the various administrative governance levels, from the Storting down to the individual portfolio manager, also clarifies responsibilities. Tasks and

authorisations are delegated downwards in the system, whereas performance and risk are reported upward; see Figure 2.4. Regulations necessarily become more detailed further down in the hierarchy. Each part of the system has its own supervisory unit which receives reports from and supervises its subordinate unit. The exception to this principle is that the Executive Board of Norges Bank is subject to the supervision of the Supervisory Council, a governing body appointed by the Storting that also appoints the Bank's auditor.

Over time, there should be an interaction between the Fund's governance system and investment strategy. The investment strategy must take into account the distinctive institutional characteristics of the governance structure. For example, the need for political endorsement makes it difficult to introduce investment strategies that require frequent and rapid decisions on matters affecting the overall risk level of the Fund. On the other hand, the governance system must also be capable of adapting to new investment forms that seek to exploit the distinctive characteristics of the Fund to further improve the trade-off between risk and return. One example in this regard is increased delegation in connection with the GPF's unlisted real estate investments.

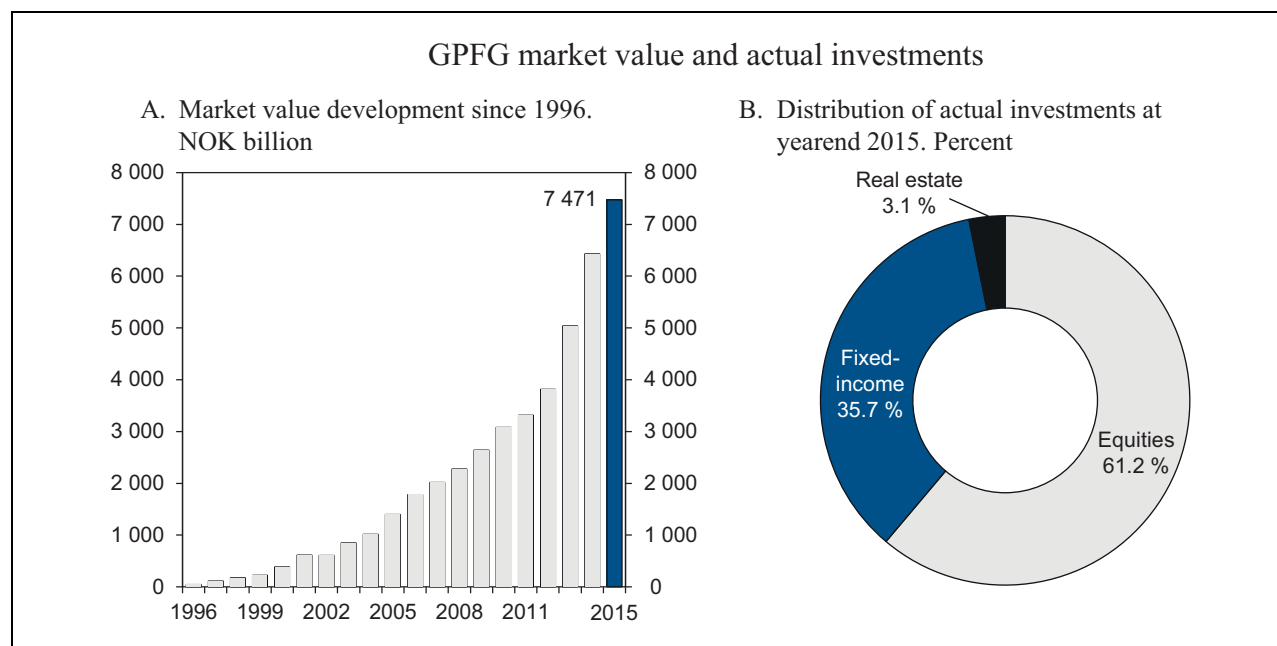


Figure 2.5 Development in the market value of the GPFG since 1996 and distribution of actual investments at the end of 2015

Sources: Norges Bank and Ministry of Finance.

## 2.2 Performance

Norges Bank's annual reporting for 2015 encompasses several publications in addition to the ordinary annual report. The Bank has published an expanded report on responsible investment and, for the first time, a separate report on performance and risk. These publications and further information are available on the Bank's website.

This section discusses the main points and the Ministry of Finance's assessment of the performance achieved. The Bank will issue an expanded report on the real estate investments in April.

### 2.2.1 Market developments

In 2015, financial markets were characterised by falling oil prices and weaker expectations for emerging-market economic growth. Elements of uncertainty included the growth prospects of the Chinese economy. Exchange rates also fluctuated considerably during the year. In the summer of 2015, the US Federal Reserve indicated a willingness to raise interest rates, but weaker economic growth both in the US and internationally delayed the rate hike until December. Government bond yields with long maturities remained low in most developed economies throughout the year, contributing to low bond returns.

The global stock market return was around two percent measured in local currencies.<sup>1</sup> Strong stock market performance in the first quarter was followed by two quarters of negative returns, although performance picked up somewhat in the final quarter. The return in developed markets was approximately three percent, while the return in emerging markets was around minus five percent measured in local currency. In addition, depreciation of several emerging-market currencies implied that the return difference was even greater measured in common currency.

### 2.2.2 Market value

At the end of 2015, the market value of the GPFG totalled NOK 7,471 billion after deducting for asset management costs. The investments comprised NOK 4,572 billion in equities, NOK 2,668 billion in fixed-income securities and NOK 235 billion in real estate. Investment in green bonds amounted to approximately NOK 7 billion. Figure 2.5 shows the distribution of the Fund's investments in equities, fixed-income securities and real estate, as well as the development in the market value of the Fund over time.

<sup>1</sup> Measured by means of the MSCI ACWI IMI global equities index.

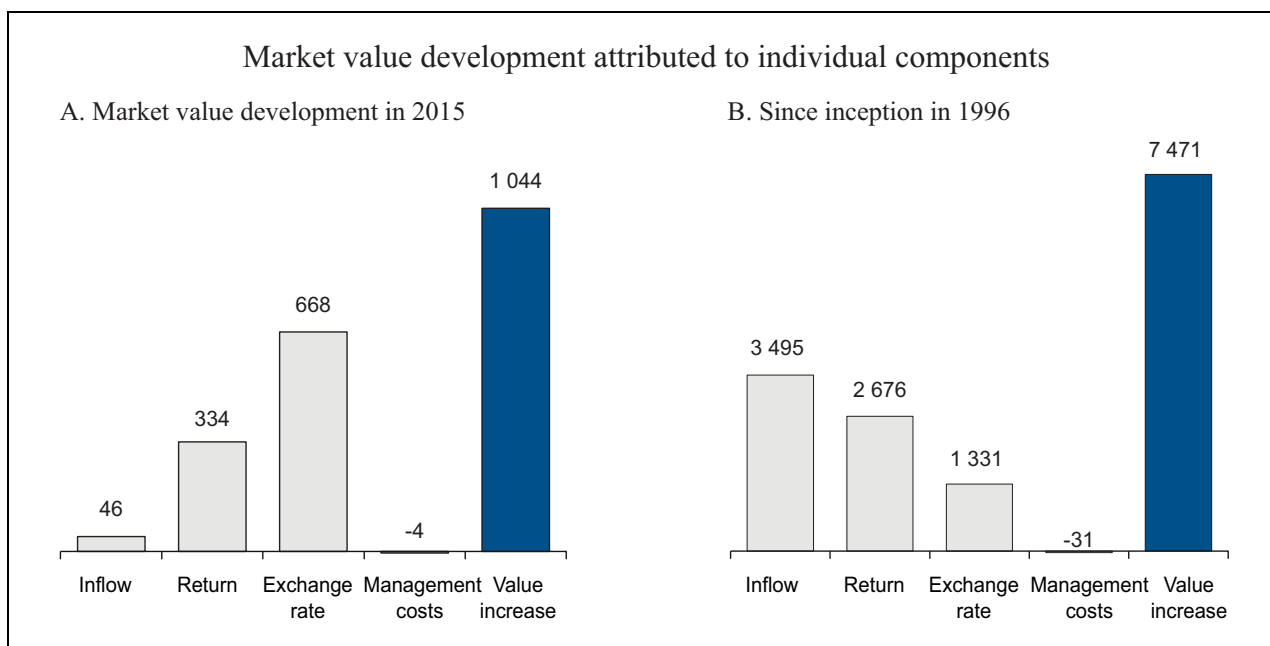


Figure 2.6 Development in the market value of the GPFG in 2015 and since inception in 1996. NOK billion  
Sources: Norges Bank and Ministry of Finance.

In 2015, the market value increased by NOK 1,044 billion; see Figure 2.6. More than half of this increase is due to depreciation of the Norwegian krone (NOK). Since inception, the Norwegian krone depreciation has boosted the Fund's value by NOK 1,331 billion. A weaker krone does not influence the Fund's international purchasing power. It is to be expected that exchange rates fluctuate over time.

The Fund received net inflows of NOK 46 billion in 2015, the lowest annual inflow since 1999. According to the National Budget 2016, 2016 is forecasted to be the first year in which some of the Fund's current returns will have to be used to cover the non-oil deficit in the fiscal budget.

### 2.2.3 Aggregate return

The return figures in this section are measured in the currency basket of the Fund. Norges Bank is mandated to seek the highest possible return in the currency basket, which also reflects the Fund's international purchasing power.

In 2015, the aggregate return on the Fund was 2.7 percent before the deduction of asset management costs; cf. Table 2.1. Since 1998, the GPFG has achieved an average annual nominal return of 5.6 percent. The annual return on the Fund as measured in other currencies is specified in Appendix 2.

The equity portfolio produced a return of 3.8 percent in 2015. Investments in Asia and Oceania delivered the highest returns, followed by European and US shares. The return in emerging markets was significantly lower than that in developed markets. Since 1998, the equity portfolio has generated an average annual return of 5.7 percent.

The fixed-income portfolio achieved a return of 0.3 percent in 2015. Corporate bonds and inflation-linked bonds produced the highest return, whilst securitised and government-related bonds delivered a negative return. The fixed-income portfolio has generated an average annual return of 4.9 percent since 1998.

The return on the real estate portfolio totalled 10.0 percent in 2015. The listed real estate investments generated a return of 7.8 percent, whilst the unlisted real estate investments produced a return of 10.8 percent. Of the aggregate real estate investment return, 4.1 percentage points constitute net rental income, 0.1 percentage points represent currency effects and the remainder comprises changes in the value of properties and debt. Transaction costs reduced the return by 0.2 percentage points. The Fund's first unlisted real estate investment was made in the first quarter of 2011. The average annual return on the real estate portfolio from 1 April 2011 up to and including 2015 was 6.9 percent.

Table 2.1 Return on the GPFG in 2015, in the last 3, 5 and 10 years, as well as over the period 1998–2015, measured in the currency basket of the Fund and before the deduction of asset management costs. Annual geometric average. Percent

	2015	Last 3 years	Last 5 years	Last 10 years	1998–2015
<i>GPFG incl. real estate</i>					
Actual portfolio	2.74	8.62	7.21	5.34	5.64
Inflation	0.86	1.06	1.60	1.84	1.78
Asset management costs	0.06	0.06	0.06	0.09	0.09
Net real return	1.80	7.42	5.46	3.35	3.70
Excess return (percentage points) <sup>1</sup>	0.45	0.21	0.14	0.06	0.26
<i>Equity portfolio</i>					
Actual portfolio	3.83	12.26	8.77	5.56	5.68
Benchmark index	3.00	11.86	8.56	5.34	5.20
Excess return (percentage points)	0.83	0.40	0.21	0.22	0.47
<i>Fixed-income portfolio</i>					
Actual portfolio	0.33	2.39	4.15	4.13	4.87
Benchmark index	0.57	2.61	4.24	4.08	4.73
Excess return (percentage points)	-0.24	-0.22	-0.09	0.04	0.14
<i>Real estate portfolio</i>					
Actual portfolio <sup>2</sup>	10.00	10.73	6.91		

<sup>1</sup> Excess return on the Fund's equity and fixed-income portfolios.

<sup>2</sup> The first real estate investment was made in the first quarter of 2011. The five-year return is the annualised return since 1 April 2011.

Sources: Norges Bank and Ministry of Finance.

#### *Real return and net current revenues*

The real rate of return after asset management costs was 1.8 percent in 2015; see Figure 2.7. The average annual net real rate of return since January 1998 is 3.7 percent.

The GPFG received net current revenues of NOK 193 billion in 2015, corresponding to 2.8 percent of Fund capital. This represented an increase of NOK 35 billion compared to 2014, and comprised equity dividends of NOK 107 billion, interest income of NOK 78 billion and NOK 7 billion in rental income from unlisted real estate.

#### **2.2.4 Management excess return**

Norges Bank is permitted to deviate from the benchmark index stipulated by the Ministry of Finance subject to the limits set in the management mandate for the GPFG. The purpose of such deviations is to achieve excess returns and to improve the risk-return ratio of the Fund. In 2015, the return on the Fund's equities and fixed-income portfolio was 0.45 percentage points higher than the return on the benchmark index; see Figure 2.8. The excess return amounted to around NOK 30 billion. Since January 1998,

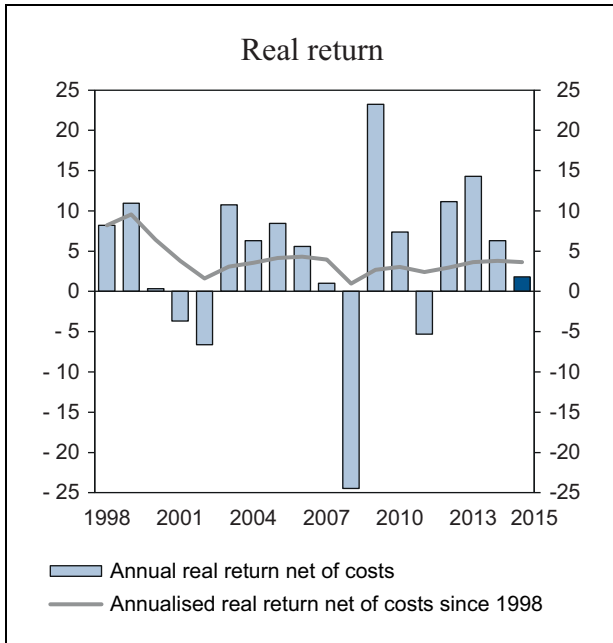


Figure 2.7 Real rate of return on the GPFG after the deduction of asset management costs, measured in the Fund’s currency basket. Percent

Sources: Norges Bank and Ministry of Finance.

Norges Bank has outperformed the benchmark index by an average of 0.26 percentage points a year. The total excess return over this period amounts to approximately NOK 82 billion.

The Ministry of Finance considers gross excess return to be a reasonable estimate of net

value added through Norges Bank’s management activities. The ratio between these quantities is discussed in a separate thematic article; see chapter 7.

*Equities and fixed-income securities*

In 2015, Norges Bank’s management secured a return on the equity portfolio which was 0.83 percentage points higher than the return on the benchmark index adopted by the Ministry. The return on the fixed-income portfolio was 0.24 percentage points lower than the return on the benchmark index.

According to Norges Bank, the total excess return on the Fund in 2015 (0.45 percentage points) stems from the following sources:

- The *internal reference portfolio set by the Bank* reduced the return by 0.12 percentage points. The internal reference portfolio is based on the benchmark index defined by the Ministry of Finance, but is tailored to exploit the distinctive characteristics of the Fund and, over time, improve the trade-off between risk and return. A particular factor contributing to the low return was a higher proportion of emerging-market government bonds relative to the benchmark index. Another negative factor was a higher proportion of so-called value companies in the equity portfolio, i.e. companies with low prices relative to key figures such as earnings and book equity.

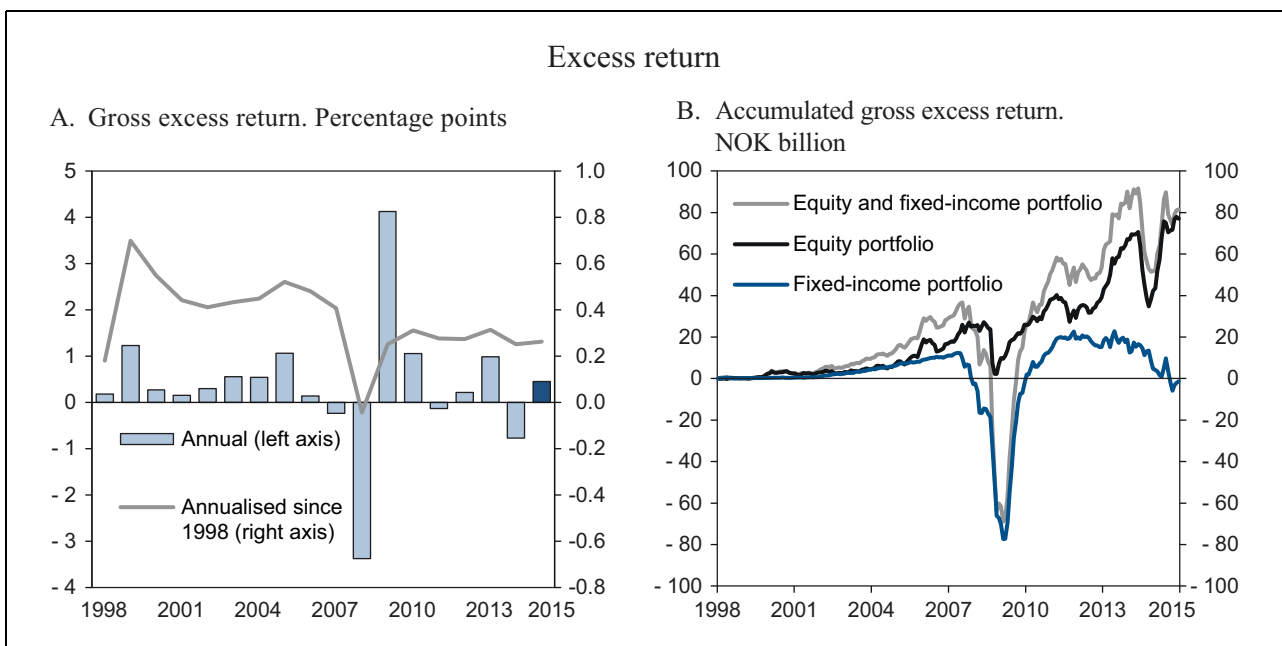


Figure 2.8 Gross excess return from Norges Bank’s active management in 2015 and since 1998

Sources: Norges Bank and Ministry of Finance.



- *Allocation strategies* made a positive contribution of 0.15 percentage points. Examples of such strategies include a higher or lower equity portion than implied by the benchmark index, over- or underweighting of individual countries or sectors, and selecting a different duration for fixed-income investments than in the benchmark index.
- *Security selection* increased the return by 0.24 percentage points. Selection of securities entails investing a larger or smaller proportion of the Fund in individual companies or individual bonds than implied by the benchmark index, based on fundamental analysis of the companies. The Bank employs both internal and external managers to perform such security selection.
- *Market exposure* made a positive contribution of 0.14 percentage points. This includes the Bank's strategies for efficient securities trading. The need for securities trading arises in connection with, for example, changes in the composition of the benchmark index, injection of new capital and other strategies employed by the Bank.
- *Securities lending* also contributed positively, with 0.05 percentage points. Such revenues are payments Norges Bank receives for lending securities to other investors.

#### *Real estate*

The return on Norges Bank's real estate investments is measured against a global real estate index, the IPD index. MSCI prepares an annual comparison commissioned by the Ministry of Finance. The IPD index is only available with a time lag, since it is based on reported figures from a large number of real estate investors. Accordingly, no report is at present available for 2015.

The most recent available report relates to 2014. In 2014, the return on the GPF's unlisted real estate investments was 0.6 percentage points higher than the return on the IPD index when all return figures are converted into Norwegian kroner. The real estate investments of the GPF achieved a higher increase in property value than the real estate included in the IPD index, whereas average rental income was somewhat lower. Exchange rate fluctuations made a negative contribution. The report is available on the Ministry of Finance's website.

#### *Environment-related investment mandates*

In 2009, it was decided to establish specific mandates for environment-related investments within the GPF. The investments form part of the active management performed by Norges Bank within the limits stipulated in the mandate. The market value shall normally be in the range of NOK 30 – 60 billion. At yearend 2015, the investments totalled NOK 53.8 billion, and were spread across 224 companies. Norges Bank has given an account of the investments in its report on responsible investment, published in February 2016.

The environmental mandates entail that the Fund invests a greater relative proportion in environment-related companies and industries than implied by the benchmark index. This reduces Norges Bank's scope for deviation from the benchmark index. Most of such investments are in listed equities, but in 2015 Norges Bank also established mandates for investments in so-called green bonds.

The return on the environmental mandates was 1.1 percent in 2015, compared to 3.8 percent on the equity investments and 2.7 percent on the Fund as a whole. In the period 2010–2015, the average annual return on the mandates is calculated at 2.8 percent, compared to 9.5 percent on the equity investments and 7.6 percent on the Fund in total. The effect of the environment-related investments on the overall return on the Fund depends on the characteristics of the investments reduced to free up capital for such mandates, but the environment-related investments have when taken in isolation reduced the return both in 2015 and since 2010.

#### **2.2.5 Risk-adjusted return**

The limit on expected tracking error permits Norges Bank to adopt a different level of risk than implied by the benchmark index in order to secure an excess return. Deviations from the benchmark index may entail somewhat higher or lower absolute risk for the GPF compared to the benchmark index. In financial literature, models and measures are used to assess whether an investor has been compensated for the risk assumed in active management. The Sharpe ratio and information ratio are two commonly used measures of risk-adjusted returns.

Table 2.2 Absolute and relative risk measures for the GPFG, in the last 3, 5 and 10 years, as well as over the period 1998–2015. Figures based on monthly observations

	2015	Last 3 years	Last 5 years	Last 10 years	1998–2015
<i>GPFG excl. real estate</i>					
Absolute volatility (percent )	8.88	6.80	7.11	8.93	7.58
Tracking error (percentage points)	0.32	0.40	0.38	0.90	0.72
Sharpe ratio difference	0.05	0.01	0.00	-0.02	0.01
Information ratio	1.39	0.51	0.37	0.12	0.39
<i>Equity portfolio</i>					
Absolute volatility (percent )	13.67	10.24	11.65	15.12	15.13
Tracking error (percentage points)	0.36	0.47	0.45	0.75	0.82
Sharpe ratio difference	0.06	0.02	0.00	0.01	0.03
Information ratio	2.28	0.80	0.49	0.36	0.67
<i>Fixed-income portfolio</i>					
Absolute volatility (percent )	2.86	2.64	2.57	3.53	3.38
Tracking error (percentage points)	0.50	0.54	0.47	1.43	1.08
Sharpe ratio difference	-0.07	0.01	0.10	-0.06	0.00
Information ratio	-0.49	-0.41	-0.19	0.03	0.13

The literature also employs models to explain historical results where a distinction is made between returns achieved by the manager through the exposure to systematic risk and returns stemming from other deviations. Such methods are associated with considerable uncertainty; see the discussion in section 7.4. The Ministry of Finance regularly reviews the management of the GPFG, analysing and evaluating risk-taking attributable to active management.

#### *Sharpe ratio*

The Sharpe ratio measures the return achieved in excess of the risk-free rate relative to total portfolio risk, as measured by fluctuations in the aggregate return on the portfolio.

A high Sharpe ratio means that the investor has been well compensated for the assumed risk, but provides no insight into the absolute return level. If the manager's deviations from the benchmark index entail low aggregate risk in the portfolio,

a lower return than that of the benchmark index can produce a high Sharpe ratio.

In 2015, the calculated Sharpe ratio was 0.32 for the GPFG's portfolio of equities and fixed-income securities and 0.27 for the benchmark index. The difference between the two figures is 0.05; see Table 2.2 and Figure 2.9A. This indicates that in 2015 Norges Bank's active management helped secure a better compensation for the portfolio aggregate risk than would have been achieved by investing in line with the benchmark index. However, the calculation is based on a limited number of observations, and is therefore uncertain.

In the period 1998–2015, the Sharpe ratio was 0.49 for the GPFG's portfolio of equities and fixed-income securities and 0.48 for the benchmark index. The difference between the two Sharpe ratios is small, primarily owing to the deviations implemented in active management being small. The actual portfolio has demonstrated somewhat larger return fluctuations than the benchmark index, but has also achieved a somewhat higher

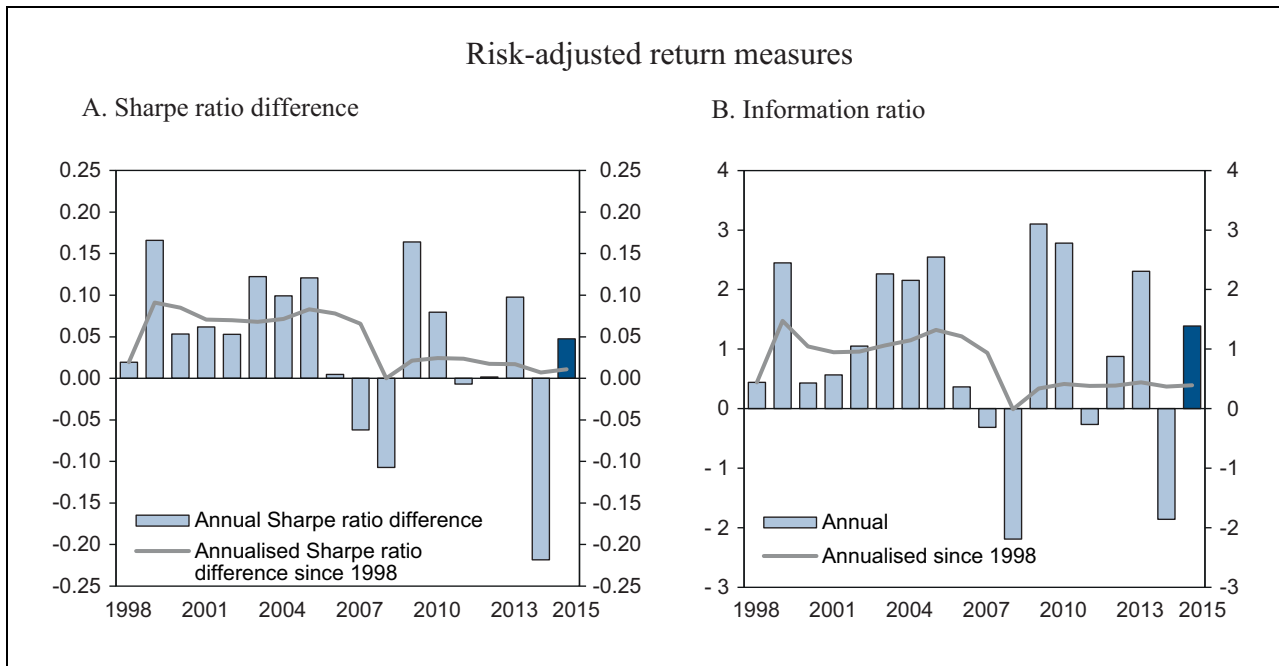


Figure 2.9 Sharpe ratio difference and information ratio for the GPFG's equity portfolio and fixed-income portfolio

Sources: Norges Bank and Ministry of Finance.

return. Thus, the risk-return ratio has been approximately equal.

#### Information ratio

Whereas the Sharpe ratio measures the return achieved in excess of the risk-free rate relative to aggregate portfolio risk, the information ratio measures the excess return achieved in proportion to the relative risk assumed. The mandate restricts Norges Bank's deviations from the benchmark index by means of a limit on expected tracking error. The information ratio is therefore relevant in assessing Norges Bank's active management.

In 2015, the information ratio was 1.39 for the equity and fixed-income portfolios, 2.28 for the equity portfolio and -0.49 for the fixed-income portfolio. Norges Bank's management in 2015 helped secure compensation for the relative risk taken in the equity portfolio as measured by the information ratio, but not in the fixed-income portfolio. The calculation is based on a limited number of observations, and is therefore uncertain.

In the period 1998–2015, the information ratio was 0.39 for the equity and fixed-income portfolios, 0.67 for the equity portfolio and 0.13 for the fixed-income portfolio; see Figure 2.9B. Norges Bank's management contributed to the Fund being compensated for the relative risk taken during this period, however, the Fund

received a higher reward for the risk taken in the equity portfolio than in the fixed-income portfolio.

#### 2.2.6 Risk and limits

##### Absolute volatility

Norges Bank has calculated that the *expected fluctuations* in the Fund's equity and fixed-income investments totalled 10.4 percent at the end of 2015, or about NOK 780 billion, measured by standard deviation. Assuming a normally distributed return figure, the fluctuations are expected to exceed one standard deviation in one out of three years. Moreover, according to estimates from the Bank, the Fund may lose around 24 percent of its value over a period of one year if the market experiences a sharp downturn. This amounts to almost NOK 1,800 billion.

Analyses of *historical fluctuations* based on monthly figures show that the standard deviation of the GPFG's equity and fixed-income investments totalled 8.9 percent in 2015, while the standard deviation of the return on the benchmark index was 8.8 percent. Hence, Norges Bank's active management has contributed to somewhat higher fluctuations in the return on the Fund than in the return on the benchmark index.

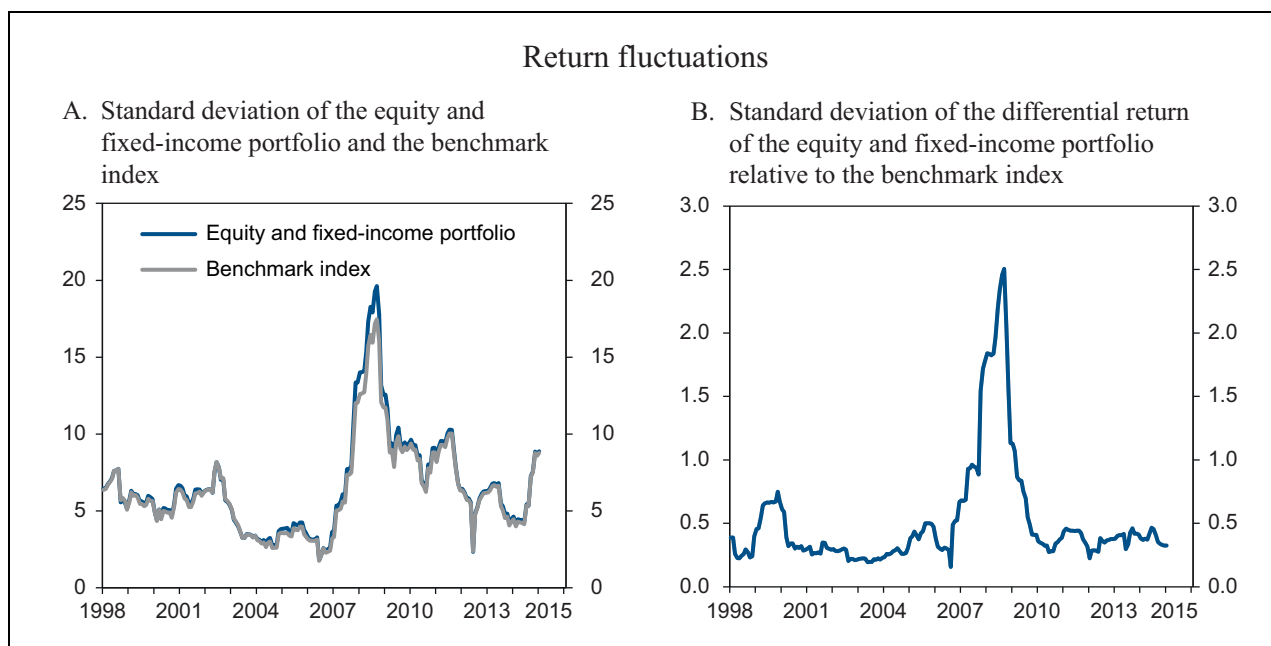


Figure 2.10 Rolling 12-month standard deviation of the return on the equity and fixed-income portfolios and the benchmark index as well as the standard deviation of the differential return. Percent

Sources: Norges Bank and Ministry of Finance.

The standard deviation of the return on the Fund's equity and fixed-income benchmark indices has varied over time and increased during periods of elevated market uncertainty. Typically, the fluctuations have been somewhat higher than in the benchmark index; see Figure 2.10A. However, analyses show that 99.4 percent of the fluctuations in the return on the Fund are due to fluctuations in the return on the benchmark index. The deviations from the benchmark index implemented by Norges Bank explain only 0.6 percent of the return fluctuations.

#### Relative risk

In 2015, Norges Bank utilised only part of the scope for deviations from the index, and the Bank has estimated the *expected tracking error* at year-end at 0.3 percentage points. Based on the development of the relative return delivered in 2015, the *realised tracking error* for the equity and fixed-income investments has also been estimated at 0.3 percentage points. Figure 2.10B shows the development of the realised tracking error over time.

Expected tracking error is affected by both the composition of the Fund's investments and prevailing market conditions. Simulations prepared by the Bank based on the deviations from the benchmark index at the end of 2015 and 10 years of historical prices show that the tracking

error would have varied between 0.26 and 0.50 percentage points if three-year rolling periods had been used.

Norges Bank has estimated the tracking error utilisation of various strategies. The calculations show that the internal reference portfolio set by the Bank utilises 0.19 percentage points of total tracking error, allocation around 0.13 percentage points, security selection 0.14 percentage points and strategies for effective market exposure 0.07 percentage points. Low covariation means that the sum of the individual contributions is greater than total tracking error.

Tracking error measures variation under normal market conditions. Other measures are more relevant for extreme market conditions. Norges Bank has estimated that the negative excess return from active management in the worst 2.5 percent of cases amounts to about 1 percentage point measured on an annual basis (expected shortfall). The estimate is based on market developments over the past 10 years.

#### Credit risk

The bonds included in the benchmark index of the GPFG have been accorded a credit rating by at least one of the leading rating agencies. The purpose of credit ratings is to indicate how likely it is that the borrower will be able to meet the inter-

est costs and repay the loan. The portion of bonds with a credit rating of AAA<sup>2</sup> or AA increased in 2015, from 56 percent to 59 percent.

Norges Bank is permitted to invest in bonds with low credit ratings – so-called high-yield bonds – but these are not included in the benchmark index for the GPFG. Asset management shall be organised with a view to ensuring that such bonds represent no more than five percent of the market value of the fixed-income portfolio. This ensures that Norges Bank is not forced to sell bonds which are downgraded. At the end of 2015, high-yield bonds accounted for 0.7 percent of the Fund's fixed-income investments, the same proportion as at the beginning of the year.

Credit risk in the portfolio was reduced somewhat during the year, measured in terms of credit rating.

#### *Individual investments*

The role of the Fund is to be a financial investor. It seeks to diversify risk across many different securities. The Ministry of Finance has therefore stipulated that the Fund can hold a maximum of 10 percent of the voting shares of any one company in the equity portfolio. At yearend 2015, its largest ownership stake in one single company in the equity portfolio was 9.2 percent. The market value of the Fund's largest investment in a single company, measured in Norwegian kroner, was NOK 51 billion.

#### *Limits defined by Norges Bank*

In addition to the limits stipulated in the mandate laid down by the Ministry of Finance for the management of the GPFG, there is also a requirement for the Executive Board of Norges Bank to define supplementary risk limits for the management of the GPFG. The limits set by the Executive Board are available on the Bank's website.

Norges Bank has chosen to invest a smaller portion of the Fund in some companies than implied by the benchmark index. In the equity portfolio, the overlap with the benchmark index at the end of 2015 was 82.8 percent. This implies that the total underweighting in individual companies rep-

resents 17.2 percent of the value of the equity portfolio. The funds released through underweighting can be used to increase the ownership stakes in other companies in the index, or to invest in companies not included in the index. Norges Bank has invested in about 1,500 companies that are not part of the index. This serves, when taken in isolation, to further diversify investments relative to the benchmark index. Among other things, investments have been made in companies whose market values or liquidity are too low to qualify for inclusion in the index, as well as in companies in emerging markets.

#### **2.2.7 Costs**

The mandate for the GPFG implies that the actual asset management costs of Norges Bank are covered up to an upper limit, which for 2015 was fixed at 9 basis points of the average market value of the Fund. One basis point equates to 0.01 percent. For 2016, the limit has been reduced to eight basis points. Norges Bank is also compensated for performance fees to external managers.

Asset management costs, excluding performance-based fees to external managers, amounted to NOK 3.4 billion in 2015. This corresponds to 4.8 basis points of the average market value of the Fund, up from 4.7 basis points in 2014.

*Overall* asset management costs increased to NOK 3.9 billion in 2015, from NOK 3.2 billion in 2014. According to Norges Bank, the main reasons for the cost increase were Norwegian kroner depreciation, an increase in the number of employees and higher external management costs due to an increase in the number of mandates and externally managed assets. Measured as a proportion of capital under management, the total costs amounted to 5.7 basis points in 2015, down from 5.9 basis points in 2014. Operational and administrative costs are incurred by subsidiaries established in connection with the Fund's real estate investments. Pursuant to the accounting rules applicable to Norges Bank, these costs are deducted from the return on the real estate portfolio and are not included in the reimbursement of management costs. In 2015, these costs amounted to NOK 95 million, up from NOK 83 million in 2014.

#### *Allocation of costs to strategies*

In its report on performance and risk published on 16 March 2016, Norges Bank has sought to allocate the Fund's costs to different investment strategies. The allocation shows that the cost of

<sup>2</sup> Standard & Poor's rating scale for credit quality is AAA, AA, A, BBB, BB, B, CCC, CC, C, D, with AAA as the top rating. Bonds with a credit rating from AAA to BBB, inclusive, are deemed to have high creditworthiness and are termed "investment grade" bonds. Bonds with a lower credit rating are deemed to have low creditworthiness and are termed "high yield" bonds.

### Box 2.2 Real estate management costs

Net real estate management costs amounted to approximately NOK 3.7 billion last year. The costs are split into different components. The vast majority of these costs are deducted when calculating the return on the real estate portfolio, as in a listed real estate company or real estate fund.

*Property costs* relate to the daily operation and maintenance of the buildings in the portfolio. This includes activities linked to letting, cleaning, electricity, environment, health and safety and janitorial services, billing and ordinary tenant follow-up. In 2015, these costs totalled NOK 2,224 million, including NOK 1,329 million reimbursed by tenants.

*Asset management costs* primarily comprise fees paid to real estate managers responsible for managing one or several buildings and implementing action plans to achieve the highest possible return at the lowest possible risk. In 2015, such costs amounted to NOK 651 million.

*Holding structure costs* are costs incurred by wholly or partly owned real estate companies with no employees. The costs relating to wholly owned companies primarily consist of audit and accounting fees, while the costs linked to partly owned companies also include the Fund's share of payments to minority shareholders in the US, payment to a partner in the United Kingdom to compensate for structural benefit to the GPF, non-refundable value added tax and other costs. In 2015, the holding structure costs were NOK 174 million.

*Investment management costs* are costs incurred by Norges Bank in connection with the

operation of the organisation which manages and invests in unlisted real estate on behalf of the Fund. This item includes personnel costs, IT costs, consultancy and legal services, the cost of office premises and a proportion of Norges Bank's overhead costs. The costs accrue at two levels in the organisational structure. The highest level constitutes costs incurred by Norges Bank Real Estate Management, which manages the real estate investments. In 2015, these amounted to NOK 333 million. The next level comprises operating companies with employees in Luxembourg, Tokyo and Singapore. The costs at this level are comparable to the costs incurred by Norges Bank Real Estate Management. In 2015, management costs in operating companies totalled NOK 52 million.

*Tax costs* constitute an important cost component in the Fund's investments. In 2015, the Fund had a payable tax cost of NOK 100 million in connection with its real estate investments, as well as a deferred tax cost of NOK 452 million.

*Interest costs* accrue on some real estate investments which are partly financed by external debt. This cost was NOK 666 million in 2015.

*Transaction costs* are one-off costs linked to the purchase or sale of real estate, and include stamp duty and other taxes and fees to local authorities. This item also includes the cost of analyses conducted prior to investment (due diligence). In 2015, stamp duty and other taxes and fees linked to transactions totalled NOK 83 million, while other transaction costs amounted to NOK 245 million.

achieving efficient market exposure equated to 2.2 basis points in 2015. This includes most costs relating to the holding of securities. Costs attributable to the internal reference portfolio and allocation totalled 0.4 basis points, while real estate management costs amounted to 0.5 basis points. Security selection costs equalled 2.6 basis points, split into internal (0.8 basis points) and external management (1.8 basis points).

#### Unlisted real estate

The Ministry of Finance emphasises that costs associated with unlisted investments must be

reported to allow comparison of the return with listed investments. In the case of unlisted real estate investments, this entails the deduction of several cost components when calculating the return achieved by the real estate companies. Such costs would also be deducted when calculating the return on a real estate fund or the profit of a listed real estate company.

The Fund's unlisted real estate investment costs generally accrue and are distributed in the same way as in comparable organisations which invest in and manage real estate.



### International cost comparison

The Canadian company CEM Benchmarking Inc. has compared the Fund's costs in 2014 with the costs of over 300 other funds. The comparison shows that the GPFG is among the funds with the lowest costs in the survey, when costs are measured relative to assets under management. One reason for this is that the GPFG has few investments in high-cost asset classes, such as unlisted equities and real estate. Moreover, the majority of the Fund is managed internally, by Norges Bank, and the external management element is small. CEM has also found that Norges Bank's internal management is cost-effective compared to the management activities of other funds. The report is available on the Ministry's website.

### Cost developments over time

Excluding performance-based fees, asset management costs measured in Norwegian kroner have increased over time; see Figure 2.11. Some costs depend on the size of the Fund and will therefore increase when the value of the Fund grows. Norges Bank has expanded its personnel in connection with, inter alia, the real estate investments. Together with a general increase in salaries, this has resulted in higher internal costs. Some of the costs of the Fund are incurred in other currencies than Norwegian kroner. Consequently, the krone depreciation over the past two years has contributed to an increase in costs measured in Norwegian kroner. Over time, however, this increase has been smaller than the increase in the market value of the Fund, thus implying that costs have declined as a proportion of capital under management.

#### 2.2.8 The Ministry's assessment

The financial markets fluctuated considerably in 2015. The Ministry is satisfied with the fact that the GPFG achieved a positive return in a challenging year. The return on the real estate investments was particularly high, but the return on the fixed-income portfolio was low. Interest levels remained low at yearend, and bonds are thus expected to continue generating low returns going forward.

The return on the equity and fixed-income portfolios was 0.5 percentage points higher last year than the return on the benchmark index. This excess return is higher than is to be expected over

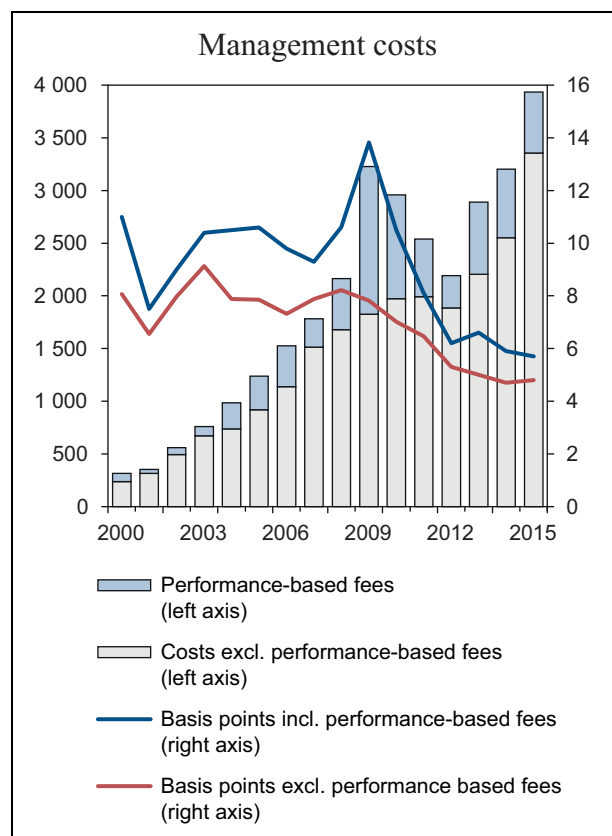


Figure 2.11 Developments in GPFG asset management costs. Measured in NOK million (left axis) and in basis points (right axis). One basis point = 0.01 percent

Source: Norges Bank.

time given the scope for deviations from the benchmark index and the proportion of the limit utilised by Norges Bank. The Ministry is focused on performance development over time. The Ministry is satisfied with the fact that the average annual gross return since 1998 is approximately  $\frac{1}{4}$  percentage points higher than the average return on the benchmark index.

Unlisted real estate investments remain a relatively new investment area for the GPFG, and expertise and experience need to be acquired over time. Investments in unlisted real estate also require a different management approach from investments in listed equities and bonds. The Ministry is focused on results over time, and the history of real estate investments is too short to draw firm conclusions as to the success of management efforts. However, the Ministry is satisfied with the fact that the return on the real estate investments has been high in recent years, both in absolute terms and compared to the return target.

On 1 February 2016, the Ministry of Finance adopted expanded requirements relating to



Norges Bank's reporting on and management of risk; see section 3.4. The annual report for 2015 is the first report prepared in accordance with the new mandate requirements. Norges Bank has published an expanded report on the performance and risk of the GPFG, and will publish a separate report on the real estate investments in April. For the past two years, the Bank has also published a special report on responsible investment. It also publishes further information on its website. An expanded reporting regime supports further transparency about the management of the Fund.

The Ministry is satisfied with the fact that asset management costs are low compared to those of other funds when measured as a proportion of capital under management. This indicates that Norges Bank is successfully exploiting economies of scale in its management. Nevertheless, the costs are substantial in absolute terms, and it is important to consider whether management can be made more efficient. Costs may rise somewhat as the proportion of real estate investments in the Fund increases, and may also be affected by changes in the value of Norwegian kroner.

## 2.3 Third party verification

### 2.3.1 Review of return data

In the management mandate, the Ministry of Finance requires Norges Bank to follow International Financial Reporting Standards (IFRS) in its financial reporting, and has specified that performance measurement must be based on Global Investment Performance Standards (GIPS). The Spaulding Group verifies that return data comply with GIPS. A separate GIPS report is available on Norges Bank's website.

At the request of the Ministry, the Spaulding Group also verifies return data for the GPFG. The verification calculations for the financial year 2015 show no deviations from the return data reported by Norges Bank. The report is published on the Ministry's website.

In accordance with the governance model, the Supervisory Council of Norges Bank monitors and supervises Norges Bank's compliance with the rules adopted for the management operations. The Supervisory Council elects the Bank's external auditor and approves its annual accounts.

Since 2013, the percentage return on the GPFG investments has been included in the

notes to the Bank's annual accounts. Accordingly, the external auditor of the Bank carries out necessary reviews to verify the return calculations, before the Supervisory Council approves the accounts.

The agreement between the Ministry of Finance and the Spaulding Group relating to verification of return figures applied up to and including the 2015 financial year. The Ministry has no plans to enter into a new agreement with external consultants, since the return calculations are now verified by the Supervisory Council with the assistance of the Bank's external auditor.

### 2.3.2 Assurance engagement

The Supervisory Council of Norges Bank commissioned the Bank's auditor (Deloitte) to perform an assurance engagement relating to risk management and compliance framework for real estate investments in the GPFG.

The review comprised an assessment of three main areas:

- The Executive Board's governance and compliance framework, including the setting and evaluation of risk tolerance and investment objectives and their surveillance.
- The risk management and compliance structure of Norges Bank Real Estate Management (NBREM), including the division of roles and responsibilities, policies, procedures and escalation processes, monitoring of financial and reputational risk and evaluation of expertise and experience.
- Reviews and assessments of investment opportunities (due diligence) and investment decisions, including criteria for evaluation of investment opportunities, due diligence guidelines and monitoring of investment results and returns.

In the assurance engagement, NBREM encompasses the part of Norges Bank Investment Management (NBIM) pertaining to unlisted real estate investments, including NBREM's management and relevant parts of Norges Bank's governance structure such as the Executive Board and CEO of NBIM.

In the auditor's view, the framework for risk management and compliance has been designed and implemented in accordance with the assessment criteria laid down for the review. It was pointed out that the evaluation was based on the current scale of real estate investment.

The auditor pointed out that the real estate operation is undergoing considerable development, and that the risk management framework – including policies and procedures – will have to be updated as the operation increases in size and the risk picture changes. In the context of this ongoing development, NBREM is working on measures including the following:

- strengthen portfolio analysis and monitoring
- clarify the responsibility of NBREM's risk management and compliance function for investment risk monitoring and establish guidelines and procedures which reflect this responsibility
- complete and implement the process being developed for regular evaluation of governance

and compliance measures established by external real estate managers and investment partners

In the auditor's view, this will strengthen risk management as the operation develops.

The auditor also pointed out that the real estate operation differs materially from NBIM's other investment activities, and that the development of the real estate operation and the risks it presents may therefore necessitate an evaluation of whether the Executive Board should give greater priority to clarifying special risk management principles.

## 3 The Government Pension Fund Global: refinement of strategy and management

### 3.1 Introduction

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The investment strategy for the Government Pension Fund Global has been developed over time on the basis of thorough assessments. These assessments have focused on the expected impact of different choices on the risk-return ratio. Important decisions are endorsed by the Storting.

An important topic in this year's white paper is investments in unlisted real estate and infrastructure. The current mandate for the GPFG provides that up to five percent of the Fund shall be invested in a separate real estate portfolio. The Fund's real estate investments are still being built up, and the real estate portfolio accounted for 3.1 percent of the Fund's capital at the end of 2015. The current mandate does not permit investment in unlisted infrastructure. Real estate investments are discussed in section 3.2, including how such investments should be regulated in the management mandate. Unlisted infrastructure investments are discussed in section 3.3.

Norges Bank is authorised to deviate somewhat from the benchmark index set by the Ministry of Finance. The scope for deviations from the benchmark index was raised on 1 February of this year pursuant to the decision made by the Storting in response to last year's white paper. New risk limits and more detailed reporting requirements have also been introduced. The new requirements are discussed in section 3.4.

The Government has appointed two official commissions to report on topics related to the management of the GPFG. One of the commissions is to assess the equity portion of the GPFG; see section 3.5. The second is to examine the Norges Bank Act and the Bank's governance structure; see section 3.6.

### 3.2 Real estate investments

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#### 3.2.1 Introduction

The Ministry of Finance has assessed both whether the proportion of the GPFG invested in

real estate should be increased and how the Ministry should regulate such investments in the management mandate; see the report on the Fund for 2014. As part of these efforts, the Ministry obtained analyses and assessments from an expert group (Stijn Van Nieuwerburgh, Richard Stanton and Leo de Bever) and Norges Bank. The expert group was additionally requested to evaluate investments in unlisted infrastructure; see section 3.3. The Ministry has also engaged the analysis company and index provider MSCI to prepare a report on the composition of the global investable capital market and other topics.

The report of the expert group and the recommendations from Norges Bank were received in December 2015, and were discussed at a specialist seminar arranged by the Ministry of Finance on 17 December 2015. The Ministry also held a dialogue meeting with various specialist institutions on 21 January 2016 at which real estate and infrastructure were on the agenda.

The background materials relating to real estate and infrastructure are available on the Ministry of Finance website.

#### 3.2.2 The real estate investments

In 2008, it was decided that up to five percent of the Fund should be invested in real estate; see the report on the Fund for 2007 and the subsequent deliberation of the Storting. At that time, it was pointed out that real estate is the third-largest asset class globally. Equities and bonds constitute the two largest asset classes. The objectives were to improve the Fund's risk diversification further, harvest premiums on investments in less liquid assets and increase investment in real assets to ensure maximum preservation of the Fund's international purchasing power. In 2010, the Ministry of Finance amended the management mandate to permit the GPFG to be invested in real estate.

At the end of 2015, 3.1 percent of the Fund – or NOK 235 billion – was invested in a separate real estate portfolio. The real estate investments are still under development. The majority of the real

estate portfolio comprised investments in *unlisted* real estate (77 percent, equivalent to 2.4 percent of the GPFG).<sup>1</sup> Geographically, the unlisted real estate investments were distributed fairly evenly between the USA and European countries.

Norges Bank has adopted a strategy which aims to build a global yet concentrated real estate portfolio. This strategy entails investment in unlisted real estate in a limited number of large cities in key markets.

The unlisted real estate investments primarily comprise office properties, logistics properties and the retail sector. In most cases, Norges Bank executes unlisted property investments through partnerships (joint ventures) with established real estate investors. All investments in unlisted real estate are organised through subsidiaries in order to limit liability and risk in connection with individual investments.

In the period between the initial investment in the first quarter of 2011 and the end of 2015, the average annual return achieved on the unlisted real estate investments was 6.9 percent, measured in the currency basket of the Fund and after transaction costs. Investment transaction costs will be significant during the portfolio development phase, and will affect the return. However, the impact of transaction costs on the return will decline over time. The 6.9 percent return is approximately 2.7 percentage points higher than the return achieved on the Fund's fixed-income investments in the same period, but around 1.7 percentage points lower than the return on the equity investments of the Fund.

The Ministry of Finance has adopted a return target for the real estate investments, defined by the IPD index prepared by the index provider MSCI. In the period between the initial investment in the first quarter of 2011 and the end of 2014, the average annual return on the unlisted real estate investments was around 0.8 percentage points higher than the return on the IPD index.<sup>2</sup> An important factor in this regard is that the Fund's unlisted real estate portfolio deviates from the composition of the IPD index, particularly because Norges Bank has chosen to invest a

larger proportion in office properties in key European and US cities than implied by the index.

The management costs for unlisted real estate investments are higher than those relating to equities and fixed-income securities. This is a general characteristic of unlisted investments. The Ministry's annual comparison of the costs of the GPFG relative to those of other large funds, which is prepared by the Canadian company CEM Benchmarking Inc., shows that the Fund's unlisted real estate costs are approximately on par with the costs of other large investors which organise their real estate management operations through subsidiaries.

In the strategy plan for the GPFG, Norges Bank expresses the expectation that the real estate portfolio will grow by the equivalent of one percent of the GPFG per year, with the aim that such investments will total approximately five percent of the Fund by the end of the plan period, i.e. the end of 2016. The strategy plan also estimates that 600 employees will be involved in Norges Bank's management of the Fund by the end of 2016, including about 200 in the real estate organisation. In a letter of 25 November 2015, Norges Bank stated that economies of scale in the operational management context imply that the increase in the number of employees will be smaller than the growth in the real estate portfolio.

### 3.2.3 Recommendations regarding real estate investments

The recommendations of the expert group and Norges Bank on real estate investments reflect a number of considerations, including:

- the proportion of real estate in the global investable capital market;
- analyses of the risk and return properties of real estate, equities and fixed-income securities;
- distinctive characteristics of the GPFG and the manager's advantages in the unlisted investment space; and
- the real estate investments of comparable funds.

#### Market size

The expert group and Norges Bank have obtained differing estimates of the size of the real estate market due to the inclusion of different financial instruments in the calculations. Norges Bank takes the view that how real estate is financed is

<sup>1</sup> Shares in listed real estate companies accounted for the remainder. The investments in listed real estate equities included in the real estate portfolio are additional to the investments in listed real estate companies implied by the equity benchmark index.

<sup>2</sup> The global IPD index features a certain time lag. The return target was amended in 2013, when the Ministry of Finance also permitted unlisted real estate investments outside Europe.

### Box 3.1 The global capital market

In an analysis prepared for the Ministry of Finance by MSCI, the global capital market available to investors is estimated at close to USD 125 trillion as at the end of June 2015. Figure 3.1 shows the market distribution across different asset classes. According to the analysis, real estate accounts for 6.8 percent of the total

investable market. Infrastructure amounts to 3.2 percent. While unlisted investments comprise the majority of the real estate market, most of the infrastructure market is listed. In aggregate, the unlisted real estate and infrastructure markets total 6.1 percent of the market. Market portfolio estimates are uncertain.

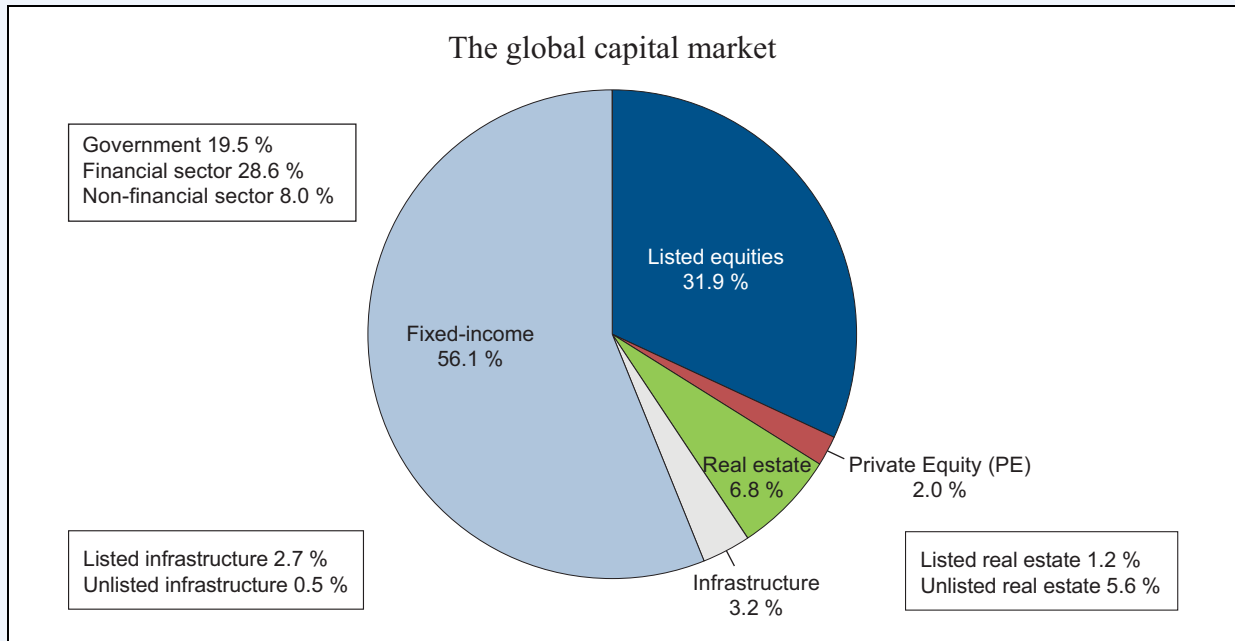


Figure 3.1 The global investable capital market distributed by asset classes, as of 30 June 2015

Source: MSCI.

The proportion of real estate in the market portfolio varies considerable from study to study, depending on the treatment of debt investments. The proportion of real estate is normally estimated based on the value of equity investments, just like estimates of the proportion of shares. The figures from MSCI are based on this defini-

tion. Some studies include investments in unlisted real estate in the form of loans from institutional investors, banks and insurance companies. With this approach, the proportion of real estate in the market portfolio is almost doubled.

irrelevant to the investment opportunities of the Fund, and estimates of real estate market size should therefore include both debt and equity financing. Applying this definition, the Bank has estimated the total value of investable real estate, both listed and unlisted, to be between 10 and 15 percent of total global financial investments. The expert group, which has looked exclusively at equity financing, has estimated that the real estate

market totals around six percent. Under the expert group's definition, debt financing of real estate is treated in the same manner as corporate debt financing, and the real estate proportion is determined in the same way as the proportion of equities.

The size of the global capital market has also been estimated by MSCI for the Ministry of Finance; see Box 3.1.

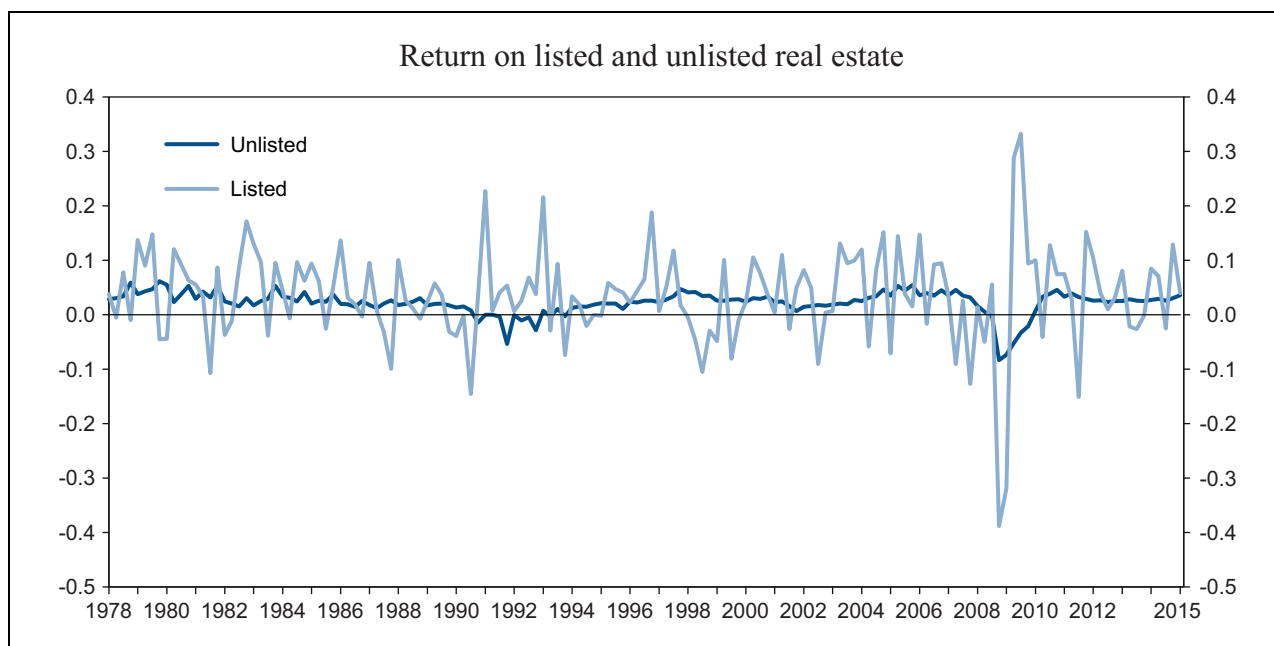


Figure 3.2 Quarterly return on listed (REIT) and unlisted (NCREIF) real estate indices. Percent

Sources: Van Nieuwerburgh, Stanton and de Bever (2015).

#### *Risk and return*

Generally speaking, limited data is available on the risk and return of investments in unlisted real estate, with the exception of the US market. Both Norges Bank and the expert group have pointed out that limited data access renders the assessment of risk and return for real estate investments difficult and uncertain.

The expert group chose to base its recommendations on its own analyses of historical returns on listed real estate. The group identified several data problems which make it difficult to compare the risk and return figures of listed and unlisted real estate indices. These include the fact that prices in unlisted indices are based on appraisals, and are therefore smoothed and feature a time lag compared to market values; see Figure 3.2. However, a review of research literature indicates that listed and unlisted real estate exhibit the same risk and return properties in the long run. The expert group therefore concluded that data on listed real estate indices constitute an appropriate indicator for the real estate market as a whole.

The analyses of the expert group show that investors in the listed real estate market have been compensated for general market risk, but that no additional excess return has been achieved. The experts pointed out the increasing integration of the real estate market with the rest

of the capital market over the past 20 years, and the resulting limited scope for making further gains through risk diversification. The expert group concluded that there is no basis for recommending a higher proportion of real estate in the GPF. Instead, it recommended that the Ministry delegate the decision on the real estate portion of the Fund to Norges Bank subject to a specified limit.

The experts also pointed out that real estate valuations are currently at historical highs in both absolute and relative terms (compared to individual properties' net operating revenue), particularly in the segment in which Norges Bank is invested. Accordingly, any expansion of the real estate portfolio should in the view of the expert group be implemented gradually. The valuation assessment is not based on a comparison with other asset classes such as equities and fixed-income securities.

Norges Bank's recommendations relating to real estate are based on both a review of research and the Bank's own risk and return analyses. The adopted starting point is data for unlisted investments. In its research review, the Bank examined studies which have calculated optimal portfolio composition. While these studies demonstrate considerable variation in estimates of the optimal real estate portion, the portion is normally between 10 and 20 percent. Norges Bank also stated that the assessments in most of the studies,

and the Bank's own analyses, indicate that real estate investments would improve the risk-return ratio of the Fund.

Further, Norges Bank takes the view that the link between economic growth and the return on unlisted real estate investments is positive and stronger than the link between economic growth and the return on equities. The Bank has stated that this may explain why real estate investments appear to support better risk diversification in the long term.

#### *Comparative advantages in unlisted real estate*

Distinctive characteristics and advantages can allow a higher return to be achieved on investments in unlisted markets than the average investor can secure. According to Ang, Brandt and Denison (2014), leading global investors in unlisted markets who have distinctive characteristics such as large capital stocks and a long time horizon have good opportunities to hold less liquid assets and develop advantages through internal management.

Both the expert group and Norges Bank have pointed out that the GPF and its manager have, and can probably develop further, distinctive characteristics and advantages in the management of unlisted real estate investments, compared to other investors.

According to Norges Bank, the GPF's distinctive characteristics allow it to submit bids that are not contingent on financing, and to take the time needed to develop individual properties. The Bank also pointed out the limited likelihood of unlisted investments having to be sold due to large unexpected withdrawals from the Fund.

The expert group referred to examples from comparable funds which have reported a substantial excess return over time relative to listed investments. Reference was also made to studies which have found that investors who have substantial capital under management and build up internal expertise can achieve both lower costs and higher returns than smaller investors. Potential explanations include that large funds have better opportunities to attract and retain more skillful managers, more resources available for analysis and monitoring of investment objects, or better access to investment opportunities. Both the expert group and Norges Bank have stated that the GPF has characteristics which are well suited to the development and exploitation of this type of economy of scale.

#### *The investments of comparable funds*

The expert group and Norges Bank have pointed out large variations in the real estate investment proportions of different institutional investors. The expert group referred to an article based on the CEM database which concluded that large pension funds maintained a listed and unlisted real estate portion of around six to seven percent in the period 1990–2011. Norges Bank referred to reports from CEM Benchmarking and its own review which indicated an average real estate allocation among institutional investors of around 10 percent, with long-term investors having a somewhat higher proportion.

#### *Recommendations from Norges Bank and the expert group*

Norges Bank has recommended that the GPF's real estate portion should be increased from five to 10 percent, and that a range of five percentage points around this target should be adopted to prevent market developments from forcing undesirable adjustments. The expert group did not recommend a particular fixed proportion of real estate, but concluded that decisions concerning increases in the scale of real estate investments should be delegated to Norges Bank subject to a cap of 10 percent.

### **3.2.4 Current regulation of real estate investments**

In the mandate to Norges Bank, the Ministry of Finance has specified a strategic benchmark index comprising the benchmark indices for equities and bonds, as well as an allocation to a separate real estate portfolio. The benchmark index plays a key role in the mandate, and helps ensure a clear distribution of responsibilities between Norges Bank and the Ministry of Finance. The mandate contains several requirements relating to separate risk management of the real estate portfolio, including that Norges Bank must adopt supplementary limits to restrict portfolio risk.

The mandate from the Ministry permits the real estate portfolio to be invested in listed equities and interest-bearing securities, as well as unlisted real estate. The return on the real estate portfolio is measured against the IPD index. The Ministry of Finance has previously pointed out that the IPD index is not a suitable benchmark index for listed real estate investments, or as a foundation for measuring and managing risk.

Although it is the most recognised and used unlisted real estate index, it has several weaknesses compared to indices composed of listed equities and bonds. In many markets, the IPD index represents only a minor proportion of the total real estate market. Moreover, it is based on self-reported appraisals, not on prices observed in a market. The composition and basis for calculation are known only to the index provider, and it is not possible to replicate the return on the index by investing in all properties included.

Since the index is not investable and based on appraisals, it is difficult to measure the return and limit risk as in the case of listed markets. The return on the IPD index will fluctuate less and feature a time lag compared to the return on listed real estate companies. This presents challenges in terms of measuring, managing and controlling risk and results. Norges Bank points to a drawback of the current regulatory arrangement, namely that real estate investments are not included in an overall limit on market risk in the GPFG. This makes it more difficult to manage, control and report total market and exchange rate risk for the Fund.

### 3.2.5 Recommendations regarding further development of the framework for real estate investments

#### *Choice of the real estate benchmark index*

The expert group has recommended that, in the management mandate, the Ministry employ listed equities and bonds as the benchmark index for all Fund investments, including unlisted real estate. The experts pointed out uncertainty as to whether a separate strategic allocation to real estate will improve the risk-return ratio compared to a benchmark index of listed equities and bonds. The expert group considers the foundation for such an allocation as highly uncertain and should therefore not be reflected in the Ministry's composition of the strategic benchmark index for the GPFG.

In its report, the expert group wrote that a fixed target of the real estate portion, as in the current mandate, takes insufficient account of the fact that return opportunities in unlisted markets vary over time. A fixed portion may result in investments in unlisted real estate on part of the manager with the sole aim of achieving the adopted target, without taking into account variation in return opportunities over time. This entails a risk that investments may be made when expected

return is low. The expert group pointed out that the Bank is closer to the market than the Ministry of Finance, and thus in a better position to assess such investments. In the view of the expert group, investments in unlisted real estate should therefore form part of Norges Bank's active management.

The expert group recommended that Norges Bank use the so-called opportunity cost model to set a required rate of return tailored to each individual investment in unlisted real estate. It was pointed out that such a required rate of return can be set by first selecting a listed real estate equity with corresponding risk and return properties, including the type of real estate, its location and an adjustment for debt ratio. The market risk associated with this real estate equity is then estimated as a combination of the risk in the listed equity and fixed-income benchmark indices. The required rate of return for each unlisted investment is the expected return achievable by assuming corresponding market risk through investments in the indices for listed equities and bonds. If the risk can be estimated with a high degree of precision and unlisted investments can be funded by selling equities and bonds in a ratio which follows from these estimates, total systematic risk is assumed to be unchanged regardless of whether or not the unlisted investment is made.

The purpose of the opportunity cost model is that the manager will invest in unlisted real estate only if the investment is expected to improve the risk-return ratio. The model also avoids use of benchmark indices for unlisted investments.

Norges Bank has assumed that increasing the proportion of real estate in the GPFG will improve the risk-return ratio, and recommended that the target for real estate investments be increased from five to 10 percent of the Fund's capital. Nevertheless, the Bank considers that such a target should not be reflected in the composition of the strategic benchmark index, and has proposed that all investments should be measured against the benchmark index of listed equities and bonds. The benchmark index will thus be investable, reflect the owner's capacity to absorb return fluctuations and be used as a starting point for measuring risk and return for the Fund as a whole.

#### *Risk management*

The expert group has proposed that the opportunity cost model be used to manage market risk related to unlisted investments. Under this model, unlisted real estate investments are funded



through the sale of listed equities and bonds from the benchmark index with an approximately equal estimated market risk, entailing that the total market risk of the GPFG will remain unchanged. However, the model will not encompass all types of risk. For example, unlisted investments often involve large individual investments with low liquidity compared to listed investments. The expert group also pointed out that real estate returns may to some extent be determined by other factor premiums which are not included in indices for listed equities and bonds. Risk which is not covered by the opportunity cost model, such as other systematic risk and asset-specific risk, can instead be managed by including supplementary risk limits in the mandate. Among other things, the expert group recommended that the mandate should include special requirements as to the diversification of the real estate investments and that a 10 percent cap should be set for real estate investments to ensure that the asset allocation of the GPFG does not deviate too much from the benchmark index.

Norges Bank's deviation from the benchmark index for equity and bond investments is currently regulated by means of a limit of 1.25 percentage points, measured by expected tracking error. Norges Bank recommends that the real estate investments be made subject to this limit because this would result in an overall limit on the GPFG's market and exchange rate risk. The recommendation would introduce an overall limit for the measurement and management of the risk that the return on the Fund will deviate from the return on the benchmark index. In a letter of 26 November 2015, Norges Bank stated that it was operationally capable of handling the transition to a more integrated framework in line with the above proposal. The Bank pointed out that the deviations between the return on the Fund's investments and the benchmark index in the short and medium term may be somewhat greater going forward if the real estate investments are made subject to the limit on expected tracking error. Norges Bank considers it natural to revert to the question of the tracking error limit as the proportion of unlisted investments in the Fund increases.

Norges Bank has pointed out that the current model makes the benchmark index a strategy which the manager is generally expected to follow. The Bank has stated that an opportunity cost model would assign the benchmark index a different role than at present. The benchmark index would no longer be a strategy the manager is

expected to follow closely, but rather an indirect reflection of the owner's risk tolerance. Norges Bank indicated that it would continue to work on the question of an absolute risk target. According to the Bank, such a target would be a better management tool if the owner primarily wishes to manage total market risk in the management context and is less concerned about influencing the selection of individual investments. Work will also continue on the question of whether the currency basket should be defined on a different basis than what is implied by the current benchmark index. Even though real estate investments are not presently included in the Fund's currency basket, it is used when measuring real estate returns.

The expert group stated that an opportunity cost model will be more difficult to implement than the current framework, but also pointed out that this type of model is more suitable for long-term investments than short-term risk targets like expected tracking error. However, a challenge with both models is that it is difficult to estimate market risk for unlisted investments.

### **3.2.6 The Ministry's assessment**

#### *Introduction*

In the management mandate, the Ministry of Finance has stipulated that up to five percent of the Fund may be invested in a separate real estate portfolio. The Fund's real estate investments are still being built up, and the real estate portfolio accounted for 3.1 percent of the Fund's capital at the end of 2015. The mandate permits the real estate portfolio to include listed real estate equities, subject to limits set by Norges Bank.

Under the mandate, the real estate portfolio forms part of the strategic benchmark index for the Fund. The return on the real estate portfolio is measured by reference to an unlisted real estate index, the IPD index. The Ministry has previously been advised by Ang, Brandt and Denison (2014) that changes should be made to the regulations governing the real estate investments. Both the expert group (Van Nieuwerburgh, Stanton and de Bever) and Norges Bank have made corresponding recommendations. The expert group and Norges Bank have pointed out that the IPD index is ill-suited as a return measure for real estate, and stated that it would be better to employ a benchmark index composed of listed equities and bonds. The Ministry recognises the weaknesses of the current return measure. The Ministry has also been advised by the expert group and Norges

Bank that a different approach should be taken to managing the risk associated with the real estate investments.

#### *Benchmark index of listed equities and bonds*

In accordance with the obtained analyses and assessments, the Ministry proposes to move away from the current strategic benchmark index with a dedicated real estate portfolio and related return measure. The Fund's strategic benchmark index will thus comprise the equity and bond indices only. The Ministry considers such a benchmark index better suited than the IPD index to the evaluation of Norges Bank's performance in the context of real estate management. The Bank's performance will thus be measured against a broadly composed index which can, in principle, be followed closely and at low cost. This entails a clearer distribution of fund management responsibility between the Ministry and the Bank.

Further, the equity and bond benchmark indices have a robust foundation, and ensure broad diversification. The equity index includes real estate in the form of listed real estate companies and funds, as well as real estate owned by companies in other sectors. The Ministry has noted that the expert group did not conclude that listed real estate equities provide a better risk-return ratio than equities in other sectors. This indicates that the financial markets are generally well-functioning and that equities carrying equal risk can be expected to generate similar returns irrespective of economic sector. After reviewing the financial literature, the expert group concluded that investments in listed and unlisted real estate generally have similar characteristics in the long term. It is thus uncertain whether investments in unlisted real estate will improve diversification or deliver a higher expected return due to lower liquidity. Furthermore, the limited data available on unlisted investments make it difficult to draw clear conclusions.

With the new benchmark index, the scope and composition of the real estate investments will be decided by Norge Bank subject to the limits stipulated in the mandate issued by the Ministry of Finance. Such regulation is consistent with the findings that there are no suitable benchmark indices for unlisted real estate and that this type of management demands specialist expertise and market proximity. The expected return will be uncertain and dependent on the manager's advantages and specific investment choices. Moreover, this distribution of responsibilities between the

Ministry of Finance and Norges Bank also underpins other strategies, including the harvesting of factor premiums and diversification beyond the benchmark index. The Ministry would underline that the risk and return associated with the Fund's real estate portfolio depend on the profile of Norges Bank's real estate investments to date. It is not possible to undertake investments that closely mirror the IPD index, and the Bank has chosen a composition for the real estate investment portfolio which deviates from the index.

#### *Risk regulation model*

The Ministry of Finance agrees with both the expert group and Norges Bank that the real estate investments should be better regulated than at present. The Ministry therefore proposes to include real estate investments in the tracking error limit which already applies to other deviations from the benchmark index. The Ministry also proposes to keep the current expected tracking error limit unchanged, at 1.25 percentage points. In its letter of 26 November 2015, Norges Bank confirmed that it has the operational capacity required to manage a more integrated framework, in line with this proposal.

The Ministry of Finance has therefore not adopted the expert group's proposal to employ a so-called opportunity cost model. Under this model, the market risk associated with investments in unlisted real estate and infrastructure must match the market risk level of the benchmark index, while other types of risk are managed by supplementary risk limits. The Ministry has noted that this model is used by several other large funds, and that it appears to be conceptually simple, but has nevertheless concluded that its implementation would be operationally challenging.

In the Ministry's view, and as recommended by Norges Bank, it is reasonable to use a risk measure with which the Bank has extensive operational management experience. The Bank's proposal outlines a general approach to the management assignment, as well as an overall limit on the market and currency risk of the Fund. According to the Bank, these changes entail a framework design that will permit and facilitate further development of the investment strategy.

The Ministry will collaborate with Norges Bank on continued implementation of the Fund's new regulatory framework for real estate in the mandate for the GPFG.

### *Cap on unlisted real estate investments*

Expected tracking error will limit investments in unlisted real estate in the same way as other strategies entailing deviation from the benchmark index. In addition, the mandate restricts the risk associated with different investment strategies through supplementary risk limits. The Ministry proposes to cap the GPFG's investments in unlisted real estate. The experts and Norges Bank have proposed a total cap on unlisted real estate investments of 10 percent and 15 percent, respectively. These limits are somewhat higher than the proportion of unlisted real estate in the market portfolio, which the expert group has estimated at five to six percent based on equity value.

Research indicates that large funds can achieve economies of scale in unlisted markets. The mandate for the management of the GPFG should give Norges Bank leeway to exploit the Fund's size. Nevertheless, there is reason to be cautious about granting wider scope for investment in unlisted assets. Real estate valuations are based on appraisals, making it difficult to measure performance on an ongoing basis and evaluate whether a comparative advantage relative to other investors has in fact been achieved. Further, it is uncertain whether an additional return can be expected on such investments, and the management of unlisted investments is generally more complex. Although the Fund has some years' experience of this type of management, a gradual approach is appropriate. Unlisted investments are also more expensive to downscale in the event of negative experiences.

The Ministry of Finance proposes to cap the proportion of unlisted real estate investments at seven percent of the GPFG. Returns on unlisted real estate may at times differ from the return on listed equities and bonds. Accordingly, Norges Bank must arrange its management in such a way that the proportion of unlisted real estate is lower than the cap in order to avoid breaching the limit and having to liquidate investments in the event of sharp, sudden drops in the value of listed investments. In the Ministry's opinion, a cap of seven percent will allow for a long-term unlisted real estate proportion of approximately five percent of the GPFG. This limit is sufficiently high to allow for the realisation of any economies of scale offered by the market.

### *Economic consequences and next steps*

The fixed-income portion of the benchmark index for the GPFG has gradually been reduced from 40

percent by a proportion corresponding to the real estate investments, which amounted to 3.1 percent at the end of 2015. The expert group has pointed out that the risk associated with real estate investments is more closely linked to stock market fluctuations than volatility in the bond markets. Norges Bank has also stated that the real estate investments impact the Fund's overall market risk.

The Ministry of Finance proposes to keep the total market risk of the GPFG largely unchanged, and will evaluate the detailed composition of the benchmark indices for equities and bonds on this basis. The Ministry would also point out that the Government intends to review the equity portion of the benchmark index in the report on the Fund for 2016, following analyses and recommendations received from an official commission and Norges Bank; see section 3.5.

## **3.3 Infrastructure investments**

### **3.3.1 Introduction**

The Ministry of Finance has considered whether to permit the GPFG to invest in unlisted infrastructure. As part of this process, the Ministry consulted an expert group (Van Nieuwerburgh, Stanton and de Bever) and Norges Bank; see also section 3.2.

The Ministry received the analyses and recommendations of the expert group and Norges Bank in December 2015. These were discussed at a specialist seminar arranged by the Ministry on 17 December 2015. The Ministry also held a dialogue meeting on 21 January 2016 at which infrastructure was on the agenda.

### **3.3.2 Recommendations concerning unlisted infrastructure investments**

Both the expert group and Norges Bank estimate the combined value of listed and unlisted infrastructure at approximately three percent of the global capital market. The analysis and index provider MSCI calculates the value of the infrastructure market at 3.2 percent, with the unlisted market accounting for around 0.5 percentage points.

Limited data are available on the risk and return characteristics of unlisted infrastructure investments. Both Norges Bank and the expert group have stated that the weakness of the underlying data makes it difficult to draw clear conclusions and renders assessments uncertain.

The expert group analysed historical returns on indices composed of listed infrastructure equities. The historical data cover a brief period, and the experts therefore had no basis for concluding that a dedicated infrastructure allocation would improve the risk-return ratio of the Fund. The experts concluded that infrastructure appears a more attractive investment object than real estate due to lower systematic risk and higher dividend growth, but also stated that current investment prices appear to be elevated.

Norges Bank examined data relating to the unlisted sector and concluded that these indicated an attractive risk-return ratio for unlisted infrastructure investments. However, the Bank also emphasised that the data covered a limited number of transactions. The Bank was sceptical about using listed infrastructure data as a basis for evaluating unlisted infrastructure because listed infrastructure prices will reflect developments in the stock market, not necessarily developments in investments relevant to the GPFG. Norges Bank concluded that any decision to invest in unlisted infrastructure must generally be based on qualitative, forward-looking risk and return assessments. In the Bank's view, it is reasonable to assume that unlisted infrastructure investments can improve the risk-return ratio in the long term.

Both the expert group and Norges Bank take the view that the GPFG is well suited to the development and exploitation of economies of scale in unlisted markets. In a letter of 2 December 2015, Norges Bank wrote that the Fund's size and long time horizon may indicate suitability to invest in certain types of infrastructure. The Bank also wrote that, if this type of investment were to be permitted, the proportion of the Fund invested in unlisted infrastructure would be small over the next few years, and that the Bank would approach investment opportunities and develop expertise gradually, in the same manner as for real estate. Initially, the Bank envisages assessing infrastructure investments which offer highly secure future earnings, and that the first investments will be made in the most developed countries. In Norges Bank's view, it is logical not to make the initial investments on a stand-alone basis.

The experts and Norges Bank have recommended permitting the GPFG to invest in unlisted infrastructure, but also that no target or separate allocation should be set for this type of investment other than as implied by the GPFG's listed benchmark index. In the absence of a dedicated unlisted infrastructure allocation, the scale of investments will be determined by Norges Bank subject to the

limits stipulated in the management mandate. The Bank recommends the inclusion of unlisted infrastructure investments in the current limit on deviations from the benchmark index as measured by expected tracking error, and that the cap on unlisted infrastructure be specified as a range from zero to five percent at this time. The expert group has recommended that the risk associated with unlisted investments be regulated by means of an opportunity cost model; see the discussion in section 3.2. To limit the GPFG's aggregate risk, the expert group recommended a cap of 10 percent on infrastructure investments, and that other types of risk be managed by special limits.

### **3.3.3 Distinctive characteristics of unlisted infrastructure investments**

In its letter of 2 December 2015, Norges Bank wrote that individual opportunities to invest in unlisted infrastructure involve large amounts, and that projects are illiquid and of long duration. Investment opportunities arise at irregular intervals, and investments can be difficult to sell. The Bank also wrote that unlisted infrastructure investments are non-standardised and more costly, and require different monitoring from listed investments. On the other hand, infrastructure investments can be managed by a considerably smaller number of employees than real estate. Norges Bank envisages that any equity investments in infrastructure by the GPFG will primarily be made via subsidiaries to limit the Bank's liability.

According to Norges Bank, the cost of managing unlisted real estate and infrastructure portfolios will be higher than the cost of managing listed equities and bonds. In particular, the Bank has pointed out that tax may comprise a substantial cost in some real estate and infrastructure investments, although it has also stated that there is no indication that infrastructure investments raise new tax issues beyond those arising in connection with real estate.

The Canadian company CEM Benchmarking Inc. prepares an annual comparison between the GPFG's asset management costs and those of other large funds. According to its 2014 report, the average infrastructure management costs of other large funds amounted to around 0.3 percent in the case of in-house management and around 2.4 percent when investments were made through fund structures. The expert group estimates that the internal asset management costs for directly owned investments will total between 0.5 percent and 1.0 percent.

Norges Bank has pointed out that many infrastructure projects are of social importance, and therefore subject to the supervision of dedicated authorities or governed by long-term agreements. Such investments carry a risk of changes in framework conditions, i.e. regulatory risk. In countries with a short history of such regulation, decisions may be inconsistent and difficult to predict, increasing risk for investors. In its letter of 2 December 2015, the Bank pointed out that in principle the GPFG is not better suited to bear this type of risk than other investors.

Political risk is related to regulatory risk, and encompasses, for example, the risk of expropriation, cancellation or amendment of agreements, altered tax laws and political instability. This type of risk is particularly relevant when investing in sectors associated with high and irreversible costs, large economies of scale and a high degree of centrally regulated pricing, such as telecommunications and electricity production. According to Norges Bank, political risk is higher in emerging markets than developed markets. The Bank has also stated that the risk of corruption may be higher in emerging markets.

The expert group pointed out that unlisted investments are associated with many non-financial risks, including political, reputational and climate risk, and that infrastructure carries a high risk of attracting official attention.

The expert group was divided in its view on whether Norges Bank should invest in infrastructure. Two of the experts (Van Nieuwerburgh and Stanton) concluded that the majority of infrastructure investments should comprise listed instruments. In this regard, it was pointed out that most privately owned infrastructure investments are currently held by listed companies, and that unlisted investments are associated with high operational complexity and non-financial risks. Norges Bank is already permitted to invest in listed infrastructure.

The third member of the expert group (de Bever) took the view that the GPFG should invest primarily in unlisted infrastructure, stating for example that most other large funds are invested in unlisted infrastructure assets. Further, de Bever stated that the real estate and infrastructure asset classes are generally less efficient and offer opportunities for funds that are able to invest stable capital over a long period to generate added value. He also concluded that direct ownership ensures better management and control of individual assets.

### **3.3.4 Renewable energy infrastructure and infrastructure in emerging markets**

#### *Investment in renewable energy*

Renewable energy infrastructure primarily comprises facilities for solar, wind, hydropower, biomass and geothermal energy production. The market has grown significantly over the past decade, and continues to develop.

The expert group has recommended that the GPFG should be permitted also to invest in unlisted renewable energy infrastructure. The experts point out that such investments are expected to account for more than half of all investments in energy production in the next 30 years. Changes in the energy market are generating investment opportunities, but the experts also stated that such investments are risky. There is a close connection between the return on investments in unlisted renewable energy infrastructure and traditional energy such as oil and gas. For example, a drop in oil and gas prices will, in isolation, reduce the value of renewable energy investments and thus incentives to make new investments. The experts stated that investments in unlisted renewable energy infrastructure are not only exposed to oil-price risk but are generally also highly dependent on the authorities for favourable regulatory conditions. In the experts' view, uncertainty about future subsidy policies constitutes a major risk which is difficult to quantify.

The expert group reviewed historical returns and risk relating to renewable energy investments. The average annual return on listed equities in renewable energy companies since 2007 is minus seven percent – a considerable negative excess return compared to broad market indices. The analyses also show considerable fluctuations in returns, with the greatest volatility occurring in 2008 when the market value of such companies dropped by some 65 percent; see Figure 3.3, which illustrates the development of renewable energy, equity and bond returns. Even though renewable energy investments have historically generated weak returns, the expert group's analyses show that such companies currently have high valuations.

Norges Bank takes the view that it would be possible to invest in unlisted renewable energy infrastructure subject to the same profitability requirement as applies to other investments. The Bank is of the opinion that the risk profile of institutional investors makes large-scale renewable energy projects most relevant, since such invest-

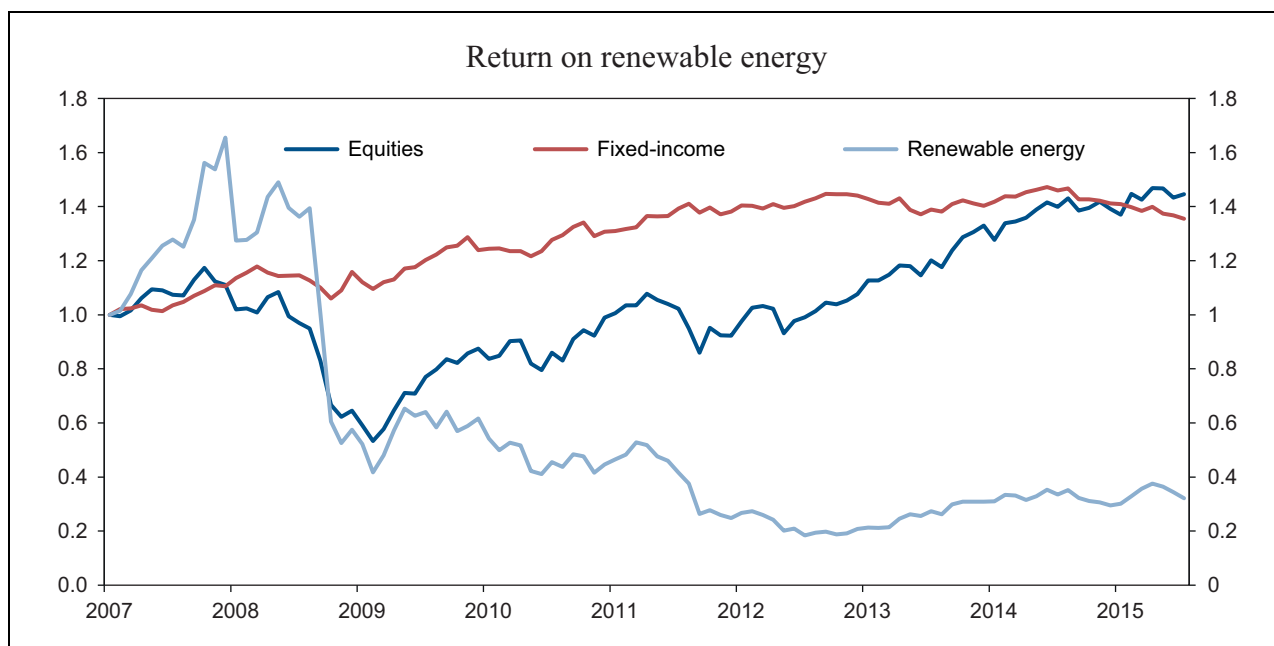


Figure 3.3 Accumulated returns on the S&P Global Clean Energy Index, Barclays Global Aggregate Bond Index and MSCI ACWI Equity Index from February 2007 to July 2015. USD

Sources: Van Nieuwerburgh, Stanton and de Bever (2015).

ments are capital-intensive, offer stable equity dividends and have a long investment horizon. However, this risk profile assumes predictable regulatory frameworks. This constitutes a material risk which must be thoroughly assessed prior to investment.

#### *Investments in emerging markets*

The expert group has recommended that the GPFG should also be permitted to invest in unlisted infrastructure in emerging markets. The experts state that this sub-market features both substantial investment opportunities and a high level of risk. According to the expert group, there will be substantial demand for infrastructure investment in developing countries in future, not least as a result of economic growth and urbanisation. Private institutional investors can play an important role in co-financing infrastructure projects with local authorities and various development institutions. Further, unlisted infrastructure investments are generally associated with risks which do not arise in connection with listed investments. This applies particularly to investments in emerging markets, and encompasses both political and regulatory risk as well as management and governance risk, including the risk of corruption. Operational risk is also high in emerging markets. Operational problems or accidents in

infrastructure projects in which an investor has a large, direct ownership share may present considerable reputational risk.

The expert group also pointed out that there is no lack of private capital available for investment in emerging markets. According to the experts, the considerable volume of available private capital on the one hand and the high demand for such projects on the other indicates a gap between the demanded risk-return ratio for such investments and available projects. The experts state that institutions like the IMF and World Bank can play an important role in reducing infrastructure investment risk in emerging markets to make investments attractive to investors.

Norges Bank has stated that the need for infrastructure investments in emerging markets is considerable and probably growing. In the Bank's view, such investments would present challenges because many types of risk are higher in emerging markets than in developed economies, including risks relating to macro- and microeconomics, countries, currencies, politics, regulation, expropriation, reputation, corporate governance/corruption and operations. Co-investment with institutions that have extensive experience of these markets may help reduce risk somewhat. According to Norges Bank, if the Ministry were to permit investment in unlisted infrastructure, the Bank would develop its expertise gradually and initially

concentrate on investments offering highly secure future revenues in the most developed countries.

### 3.3.5 The Ministry's assessment

The Ministry of Finance has noted the recommendation of the expert group and Norges Bank that the GPFG should be permitted to invest in unlisted infrastructure. Both the expert group and Norges Bank take the view that this would grant access to an expanded investment universe and better opportunities to exploit the Fund's distinctive characteristics and advantages.

Further, unlisted investments are more complex and resource-intensive to manage than listed investments, and there is a need to develop different, more specialised expertise. Performance measurement is also more difficult with such investments, as is the measurement and management of risk.

Lack of data on unlisted infrastructure makes it difficult to evaluate whether such investments give the average investor better risk diversification or higher expected returns. Research into real estate investments shows that broad investments in unlisted and listed real estate have generated similar risk and return over time. This indicates that it is uncertain whether investments in unlisted markets will help reduce risk through diversification or produce a higher expected return due to low liquidity. Investments in unlisted infrastructure are therefore expected to improve the risk-return ratio *only* if the manager has comparative advantages relative to other investors.

Although permitting investment in unlisted infrastructure may, in isolation, improve the range of investment opportunities available to the manager, the Ministry has identified several important factors which speak against such an expansion of the Fund's investment universe.

Many infrastructure investments are exposed to high regulatory or political risk. Long-term contracts are commonplace in the infrastructure sector, and profitability is subject to the direct influence of political authorities in other countries through the setting of tariffs and other regulations. There have been several examples in recent years of authorities amending the conditions for such investments through the renegotiation of signed agreements or changes to grant schemes.

In the case of *unlisted* investments, the ownership stake in each individual investment will generally be large. As a result, the Fund's investments will also be more visible and likely subject to criti-

cism. In the Ministry's view, any conflicts relating to investments which are important public goods, or with the authorities of other countries, will be difficult to manage and entail high reputational risk for the GPFG. The Ministry considers that a transparent, politically endorsed sovereign fund like the GPFG is less suited to bear this type of risk than other investors. High transaction costs and low liquidity make divestment more challenging if problems were to arise.

The Ministry would also point out that the unlisted infrastructure market available to the GPFG is small. Unlisted infrastructure only accounts for approximately 0.5 percent of the global investable capital market, and most investable infrastructure is listed. Infrastructure differs from real estate in this respect, since most of the real estate market is unlisted. Permitting investment in unlisted infrastructure will to a lesser degree expand the Fund's investment opportunities than the decision to invest in unlisted real estate.

Both the expert group and Norges Bank have discussed the Fund's distinctive characteristics and potential management advantages. Such advantages are difficult to quantify. The Ministry is of the opinion that more experience should be gained with the current portfolio of unlisted real estate investments before any expansion to include additional types of unlisted investment. Unlisted markets represent a type of management of which the GPFG has just a few years' experience and, moreover, the unlisted real estate investments are still being built up.

Following an overall assessment, the Ministry of Finance has concluded that the GPFG should not be permitted to invest in unlisted infrastructure at this stage.

This also precludes unlisted infrastructure investments in the renewable energy and emerging markets sectors. These sectors have historically been associated with high financial, political and regulatory risk. In general, the Ministry of Finance considers that no separate guidelines should be issued on the proportion of the Fund's capital to be invested in individual sectors or countries beyond what follows from the benchmark index. This applies especially to unlisted markets. Investments in unlisted markets are characterised by highly varying returns and risk levels, high transaction costs, a lack of publicly available information and capacity limitations.

The GPFG has a financial target, and is not an instrument for promoting state investment in developing countries or renewable energy. There are

already several public policy instruments designed to promote investment in renewable energy and climate technology. Bodies such as Innovation Norway, the Research Council of Norway and Gassnova have launched grant schemes and research and development programmes. Enova issues grants in support of energy-saving measures and renewable energy projects. Public investment in renewable energy occurs through channels including Investinor, Norfund and various international development banks co-funded by Norway. Furthermore, the Storting has asked the Government to prepare the establishment of a limited company mandated to invest in partnership with the private sector in companies that develop and utilise green technologies. The Government will revert to this question in its revised budget for 2016.

### **3.4 New reporting and risk management requirements**

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#### **3.4.1 Background**

Norges Bank manages the GPFG on the basis of a mandate set by the Ministry of Finance. The mandate expresses the investment strategy for the Fund, and contains provisions on matters including the Fund's benchmark index and risk limits.<sup>3</sup> The Bank is permitted to deviate from the benchmark index within certain risk limits. The scope for deviations is defined by expected tracking error, which provides an indication of how much the return on the GPFG may be expected to deviate from the benchmark index under normal circumstances. The report on the Fund for 2014 proposed an increase in the scope for deviations from 1 to 1.25 percentage points. The aim is to provide Norges Bank with better opportunities to exploit the distinctive characteristics of the Fund and management advantages to improve the risk-return ratio.

In the management mandate, the Ministry of Finance requires Norges Bank to set a number of risk limits to supplement the limit on expected tracking error. The report on the Fund for 2014 proposed the inclusion in the mandate of a requirement for a new, supplementary risk limit for large losses which are expected to materialise infrequently – referred to as tail risk. It was also proposed that new requirements be introduced

regarding more detailed reporting on the risk assumed by the Bank in active management.

The changes proposed by the Ministry were based on the recommendations of an expert group comprising Andrew Ang, Michael Brandt and David Denison, who in 2013–2014 evaluated Norges Bank's management of the GPFG.<sup>4</sup> The Storting endorsed the amendments.

As part of the Ministry's inclusion of new requirements in the management mandate, Norges Bank was asked, in a letter of 26 June 2015, to make recommendations as to the form of such a supplementary risk limit, the expansion of public reporting on deviations between the return on the GPFG and the benchmark index set by the Ministry, and amendment of the reporting requirements in the mandate. The letter was discussed in the National Budget 2016. The Bank submitted its recommendations and assessments to the Ministry in a letter of 29 September 2015.

On 1 February 2016, the Ministry of Finance incorporated new risk limits and reporting requirements into the mandate to Norges Bank. The changes to the mandate are based on proposals sent to Norges Bank in a letter of 10 December 2015 and the Bank's reply of 28 January 2016. The new requirements for a supplementary risk limit and more detailed reporting are discussed further below. The scope for deviations from the benchmark index was increased as announced in the report on the Fund for 2014, in concert with the inclusion of new mandate requirements.

#### **3.4.2 New supplementary risk limit**

There is no single risk measure that captures all risk dimensions arising in the management of the GPFG. Accordingly, a number of risk management measures are used in different areas and at different management levels of the Fund. The Ministry of Finance regulates Norges Bank's scope to deviate from the benchmark index through the limit on expected tracking error.

In the management mandate, the Ministry requires Norges Bank to set several supplementary risk limits for the investment activities. These include limits on credit and liquidity risk, leverage and securities borrowing. Insight into the operational consequences of these supplementary limits requires market proximity, and their formulation has therefore been delegated to the Bank.

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<sup>3</sup> See section 2.1 for a detailed account of the investment strategy and chapter 8 for a discussion of the GPFG's benchmark index.

<sup>4</sup> The report by Ang, Brandt and Denison (2014) is available on the Ministry of Finance website. It is also discussed in the report on the Fund for 2013.



Nonetheless, the specific design of the limits must be submitted to the Ministry prior to implementation, as required in the mandate for the GPFG.

Long-term investors like the GPFG will generally be well suited to harvesting risk premiums over time by pursuing counter-cyclical strategies and strategies that systematically tilt investments towards assets with particular characteristics, referred to as factor strategies. Not all such risk premiums can be harvested passively by altering the composition of the benchmark index set by the Ministry of Finance. The harvesting of several such premiums has therefore been delegated to Norges Bank subject to the limits specified in the mandate.

The Ministry of Finance has previously discussed analyses showing that, historically, the harvesting of factor premiums has improved the risk-return ratio for investors like the GPFG. However, such strategies may entail long periods of higher or lower returns than on the benchmark index, and may have a clearly negative impact during periods of market turmoil. Ang, Brant and Denison also pointed out that factor strategies may result in sometimes sizable deviations between the return on the GPFG and the benchmark index when markets are turbulent. It is therefore important that the risk associated with such investment strategies is prudently managed and reported.

Expected tracking error fails to measure such risk adequately. Ang, Brandt and Denison therefore recommended that the risk of large deviations between the GPFG return and the return on the benchmark index – which are expected to arise only rarely – be measured and restricted by means of a supplementary limit. They also pointed out that limits of this kind present several technical and operational challenges, and that it will be difficult to calculate such risk. In response, in its letter of 26 June 2015, the Ministry of Finance asked Norges Bank to consider how such a limit could be defined.

In accordance with Norges Bank's proposal in its letter of 29 September 2015, the mandate for the GPFG was expanded with effect from 1 February 2016 through the inclusion of the requirement that the Bank must set a supplementary limit in respect of large anticipated negative deviations between the return on the equity and fixed-income portfolios and the related benchmark index (expected shortfall risk). While the allowance for expected tracking error measures and caps how much the return on the Fund is normally expected to deviate from the benchmark

index, the limit on expected shortfall risk is designed to measure and cap the negative deviation which can be expected in extreme cases.

The risk measurement function of the expected tracking error limit is based on a statistical distribution. The limit on expected shortfall risk, on the other hand, is designed to specify future outcomes on the basis of historical simulations for the current portfolio. The measurement of expected shortfall risk is thus based on estimates of the most negative deviations between the return on the GPFG and the return on the benchmark index the current portfolio would have experienced in the past. The calculations also incorporate a longer time period than the allowance for expected tracking error. Norges Bank has stated that these assumptions are meant to ensure that the limit on expected shortfall risk supplements the limit on expected tracking error.

Norges Bank presented the limit on expected shortfall risk to the Ministry of Finance in a letter of 8 February 2016. The Bank envisages that the limit on expected shortfall risk will be set so as to cap the negative deviation expected between the return on the GPFG and the return on the benchmark index in extreme cases at 3.75 percentage points.

Norges Bank has previously pointed out that proper use of this type of risk limit requires qualitative assessments to avoid undesirable portfolio adjustments and the restriction of opportunities to employ factor strategies and counter-cyclical management strategies that exploit the Fund's distinctive characteristics. In a letter of 1 February 2016, the Ministry of Finance asked Norges Bank to explain how the design of the limit ensures that shortfall risk is effectively measured and limited in the GPFG. In its letter of 8 February 2016, Norges Bank stated that the rules stipulate that the Bank's Executive Board must be notified immediately when, in special situations, extreme market movements trigger a material change in the Fund's measured shortfall risk, for example through the inclusion of new extreme observations in the calculation basis. The limit may be suspended until the Executive Board has considered the matter. In a letter to the Bank of 26 February 2016, the Ministry assumed that the chair of the Executive Board, or one of the deputy chairs, will consider and if appropriate approve a suspension of the limit until the Executive Board can deal with the matter.

In its letter of 8 February 2016, Norges Bank stated that the Executive Board will in such situations consider amending the investment strate-

gies, increasing the limit on shortfall risk beyond 3.75 percentage points and, if relevant, the continued suspension of the limit. In the Bank's view, this design will provide leeway not only to avoid undesirable portfolio adjustments, but also to pursue strategies that exploit the Fund's characteristics and advantages in extreme market situations, while still measuring and limiting shortfall risk effectively.

### 3.4.3 New reporting requirements

The Government is focused on ensuring the greatest possible transparency in the management of the GPFG. The Fund is currently regarded as one of the world's most transparent funds. Transparency is an important principle in its own right, and a prerequisite for broad confidence in and support for the management of the Fund. Prudent and relevant reporting is also important for the governance and supervision of the Fund.

Transparency about the management of the GPFG also strengthens the basis for maintaining profitable, long-term strategies during periods of weak results. Norges Bank is required to seek the highest possible return on the GPFG after asset management costs, subject to the limits applicable to its management activities. The allowance for deviations gives the Bank the opportunity to exploit the Fund's distinctive characteristics and management advantages. Deviations from the benchmark index may raise or lower the GPFG's absolute risk relative to the benchmark index. Long-term strategies used by the Bank in its management may produce weak returns during periods of market unrest. The experts Ang, Brandt and Denison proposed more detailed and relevant reporting to explain and support profitable long-term investment choices. They recommended requiring the Bank to describe the principles which underpin, and the sources of, the excess return achieved through active management and to report on the expected risk budgets and historical results for each of these. A further recommendation was that reports on risk and return relative to the benchmark index should distinguish between the contributions made by factor strategies, increased investment diversification and security selection.

In its letter of 26 June 2015, the Ministry of Finance asked Norges Bank to evaluate and make recommendations on the expansion of the reporting requirements in the mandate and public reporting based on the recommendations of Ang,

Brandt and Denison. In this connection, Norges Bank's Executive Board asked an expert group consisting of Professors Magnus Dahlquist, Christopher Polk, Richard Priestley and Bernt Arne Ødegaard to advise the Bank on the development of its performance and risk reporting.

In its reply of 29 September 2015, Norges Bank referred to planned changes in its public reporting. Reports on performance and risk are to be collated and expanded in a dedicated report. Returns and risks associated with different investment strategies will be decomposed as recommended by Ang, Brandt and Denison. The recommendations of Dahlquist, Polk, Priestley and Ødegaard (2015) will also be taken into account when designing the annual report. In the Bank's view, the provision in the mandate that all relevant management risks must be reported on covers all detailed reporting needs the Ministry may have, and there is thus no need to include more detailed reporting requirements in the mandate for the management of the GPFG.

The mandate was amended as of 1 February 2016 through the inclusion of more detailed reporting requirements relating to risk assumed by the Bank in active management, as outlined in the report on the Fund for 2014. The purpose of adopting new public reporting requirements is to provide better support for profitable, long-term strategies as recommended by Ang, Brandt and Denison.

The Ministry of Finance has laid down a clear objective for Norges Bank's public reporting on the management of the GPFG in section 6–1 of the mandate. The purpose is to promote the greatest possible transparency about the management of the Fund. Reports must provide true and comprehensive information on the Bank's choices and priorities, the results achieved and utilisation of the limits set in the mandate.

The content requirements for public reports are set out in section 6–2 of the mandate. A distinction is made between three different levels of reporting: strategic, quarterly and annual.

The *strategic reporting* requirement is new, and emphasises the responsibility of Norges Bank's Executive Board to adopt and report on the choice of investment strategies used in the management of the GPFG. The purpose of strategic reporting is to secure public support for the investment strategies which are employed. Relevant reporting and transparency about investment strategy choices can strengthen opportunities to maintain profitable long-term strategies during periods of weak results. Accordingly, section 1–7

of the mandate, which concerns the requirement for a strategic management plan, has also been amended. The provision now states that the *Executive Board* must have a strategic plan for the management of the GPF. In its letter of 10 December 2015 to Norges Bank, the Ministry of Finance emphasised that this responsibility may not be delegated.

The strategic report must separately describe the investment strategies adopted for the equity, fixed-income and real estate portfolios by the Executive Board. This includes the overarching principles governing the selection of strategies, the risk and return properties of the strategies and how the strategies aim to exploit the Fund's distinctive characteristics and the Bank's asset management advantages. A separate account must be included of different investment strategies employed in the management of the equity and fixed-income portfolios which may affect the Fund's market risk and shortfall risk. The strategic report must also describe the framework for risk management and control, and how the asset management is organised. The strategic report must be issued regularly, and at least every three years.

In Norges Bank's view, the reporting requirements should not be linked with a particular definition of the management assignment or the management strategies. Rather, they should provide room for gradual development over time. The new reporting requirements have been designed accordingly. They are worded generally, and do not link the provisions with particular investment strategies or a given definition of the management assignment. The Ministry of Finance therefore provided a number of clarifications of the provisions' scope and delimitation in its letters to Norges Bank of 10 December 2015 and 1 February 2016.

The provisions on quarterly and annual reporting have been expanded through the inclusion of a requirement that Norges Bank must include a separate account of the *sources of positive and negative excess returns* in the equity and fixed-income portfolios. Both Ang, Brandt and Denison (2014) and Dahlquist, Polk, Priestley and Ødegaard (2015) issued advice and recommendations on this type of performance breakdown. The Ministry of Finance referred to this advice in its letter to Norges Bank of 10 December 2015.

If reporting is too detailed and frequent, costs may arise, for example because other investors can exploit the information to profit from the Fund's transactions. At the same time, transparency about the risk assumed in management is important. The new provisions on annual report-

ing require Norges Bank to provide a separate account of the results of *all investment strategies entailing significant costs or high relative risk*.<sup>5</sup> The requirement is designed to promote transparency and public support for individual strategies with a material impact on the Fund's relative results, irrespective of which level of the Bank's governance structure has defined the strategy; see the discussion in the Ministry's letter to Norges Bank of 1 February 2016. For each of these investment strategies, there must be given an account of the contribution to the differential return, utilisation of the expected tracking error limit, expected shortfall risk and asset management costs. In its letter to Norges Bank of 10 December 2015, the Ministry of Finance emphasised that pursuant to this requirement the Bank must present the results of different *security selection* strategies. A further requirement is that the *Executive Board must evaluate the management performance*.

Reports should generally provide insight into whether the manager has generated a higher return than could alternatively have been achieved by increasing risk by adjusting the benchmark index. However, no single model or single set of assumptions provides an unambiguous answer to the question of how, in hindsight, risk has influenced results. Nor is there an unambiguous answer to the question of what adjustments can be made to the benchmark index. Accordingly, financial research employs a variety of approaches and models, all of which are based on different assumptions and produce different results. This indicates that a cautious approach should be taken when interpreting estimates produced by such models, and that several approaches should be used to illuminate results. This is also consistent with the recommendations of Dahlquist, Polk, Priestley and Ødegaard. The new provisions on annual reporting require Norges Bank to include a separate account of the risk-return ratio of the GPF. Several methods and measures must be used when reporting on the *risk-adjusted return*.

A further requirement is that Norges Bank must report annually on *management revenues and costs*, for example revenues generated by securities lending, tax costs, external asset management costs and estimated transaction costs.

Under the new requirements, quarterly reports must be published no later than one

<sup>5</sup> This follows from section 6–2(3) (a), as opposed to the provision regarding specification of excess return sources in quarterly and annual reports, which is found in section 6–2(2) (b).

month after the end of the quarter, while annual reports must, as at present, be published no later than three months after yearend. In its letter of 10 December 2015, the Ministry of Finance stated that Norges Bank may choose to publish quarterly reports in electronic form only.

There is strong public interest in data on the investments of the GPFG. Data access allows reporting to be verified and supports the objective of ensuring the greatest possible transparency about management. In its letter of 29 September 2015, Norges Bank stated that it would seek to ensure that methods for decomposing risk and return can be verified by control institutions outside the management organisation. In section 6–3 of the mandate, the Ministry of Finance has included a requirement that *data and methods* must be described and published insofar as possible.

The mandate for the GPFG and the letters referred to above are available on the Ministry of Finance website.

### 3.5 Assessment of the equity portion

The proportion of the GPFG invested in equities is the single decision with the greatest impact on the Fund's overall long-term risk and return. The GPFG was permitted to invest in equities in 1998. At that time, the equity portion was set at 40 per cent. This was increased to 60 per cent in 2007. The remaining capital in the Fund is invested in fixed-income securities and real estate.

The GPFG has grown substantially since the initial capital transfer in 1996, and now totals more than two-and-a-half times the GDP of the Norwegian mainland economy. In isolation, a higher equity portion will boost the Fund's expected long-term return, but also entails higher risk and greater fluctuations in Fund value.

In the National Budget 2016, the Ministry of Finance announced a review of the GPFG's equity portion. In January, the Government appointed a commission for this purpose. The commission will analyse expected risk and return with different equity portions, and is authorised to recommend changes to the equity portion. The assessment will examine matters such as the GPFG's objective, time horizon, size and expected withdrawals. The commission will also consider whether any change to the equity portion should affect other fundamental choices in the investment strategy, such as the composition of the benchmark indices for equities and fixed-income securities.

The commission is composed of the following persons:

- Chief Economist and Adjunct Professor Knut Anton Mork (chair), Oslo
- Chief Economist Harald Magnus Andreassen, Oslo
- Professor Hilde C. Bjørnland, Bærum
- Investor Harald Espedal, Stavanger
- Director Kristin Halvorsen, Oslo
- Associate Professor Espen Henriksen, Oslo
- County Governor Sigbjørn Johnsen, Ringsaker
- Group Executive Vice President Kari Olrud Moen, Oslo
- Professor Karin Thorburn, Bergen

The commission is due to submit its report by 15 October 2016. The Ministry of Finance intends to circulate the report through a public consultation. Analyses and assessments will also be obtained from Norges Bank.<sup>6</sup> The Ministry aims to discuss the question of the GPFG's equity portion in the report on the Fund to be submitted to the Storting in the spring of 2017.

### 3.6 Norges Bank's governance structure

Norges Bank has developed a competent organisation and delivered good long-term results in the management of the GPFG. However, the complexity of management has increased in recent years as the size of the Fund has grown significantly and investments have been spread across different asset classes and securities. Asset management accounts for an increasing proportion of the Bank's overall operations. Work on developing the management strategy for the Fund continues.

These developments impose new demands on the governance of the GPFG. This is the reason for the Government's proposal to increase the number of deputy governors at Norges Bank from one to two as of 2016. The new deputy governor has been given special responsibility for asset management.

In April 2015, the Government appointed a commission to review the Norges Bank Act (the Central Bank Act) and the governance of Norges Bank. The commission's mandate also includes a review of the governance structure for the management of the GPFG. The commission is chaired by Svein Gjedrem and is due to present its report in the spring of 2017.

<sup>6</sup> See letter to Norges Bank of 12 February 2016.

## 4 The Government Pension Fund Norway: strategy and performance

### 4.1 The current investment strategy

Folketrygdfondet manages the Government Pension Fund Norway (GPFN) in accordance with a mandate issued by the Ministry of Finance. The return on the GPFN is not transferred to the Treasury, but is added to the Fund capital on an ongoing basis.

The long-term investment strategy for the GPFN is expressed through the composition of the benchmark index and appurtenant risk limits specified in the mandate. The benchmark index comprises 60 percent equities and 40 percent fixed-income securities, with allocations of 85 percent to Norway and 15 percent to the rest of the Nordic region excluding Iceland; see Figure 4.1.

The distinctive characteristics of the Fund, such as size and a long time horizon, distinguish the GPFN from many other investors in the Norwegian capital market. The long time horizon enables the use of long-term investment strategies, such as rebalancing of the equity portion.

Size also entails certain benefits, including the ability to exploit economies of scale in asset management. At the same time, the size of the Fund relative to the Norwegian capital market makes it challenging to implement major changes to the investment composition within a short space of time.

Folketrygdfondet may, within moderate limits, deviate from the benchmark index. The purpose of such deviations is to generate an excess return over time, as well as to ensure cost-effective adjustment to the benchmark index.

The mandate for the GPFN only allows for investment in unlisted companies in which the board of directors has expressed an intention to seek a listing on a regulated market place. However, it does not allow for the GPFN to be invested in unlisted assets like real estate and infrastructure on a general basis. The Ministry's assessment of whether investment of parts of the GPFN in unlisted real estate and infrastructure should be permitted is discussed in chapter 5.

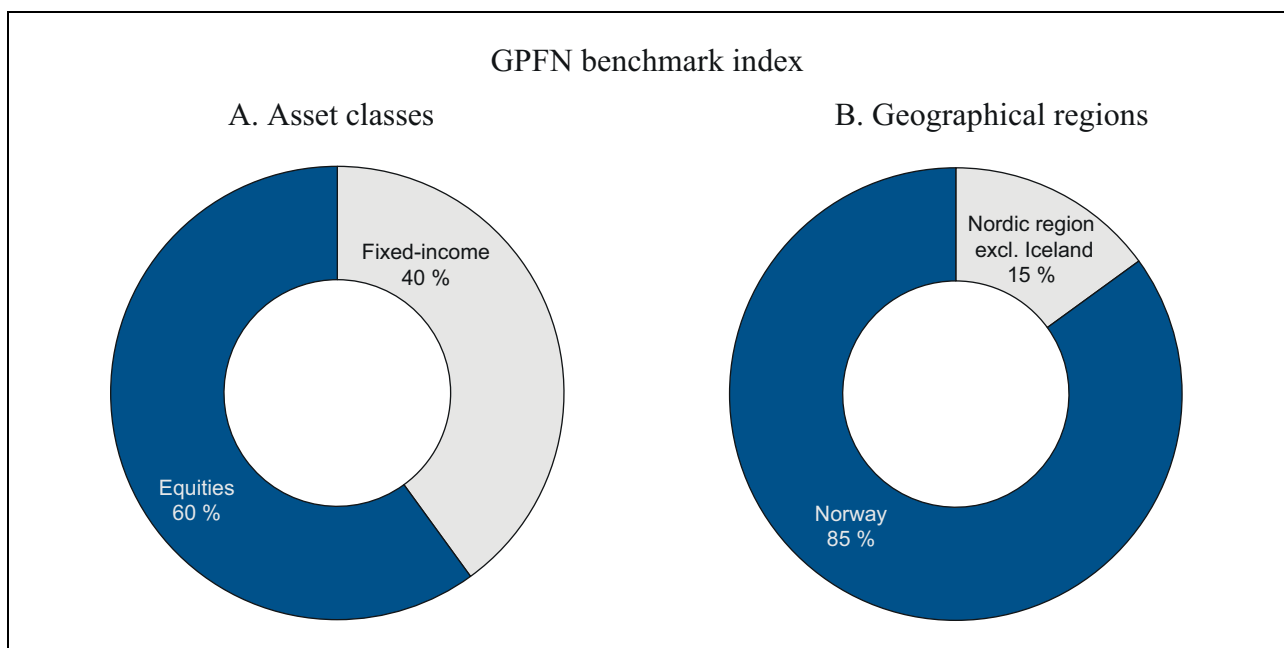


Figure 4.1 Strategic benchmark index for the GPFN. Percent

Source: Ministry of Finance.

Rebalancing rules form part of the investment strategy for the GPFN. Rebalancing involves the Fund adding to its holdings in the asset class with the weakest value performance in order to maintain the fixed allocation between equities and fixed-income securities as stipulated in the mandate. To avoid influencing the market and to ensure the sound execution of asset management, the detailed rebalancing rules are exempt from public disclosure, in line with the advice of Folketrygdfondet.

## 4.2 Performance

### 4.2.1 Market developments

The Norwegian and Nordic stock markets had a positive development in 2015. The main index of the Oslo Stock Exchange (OSEBX) gained 5.9 percent. Non-energy companies made a strong contribution. Low and falling oil prices resulted in negative returns on companies in the energy sector, particularly oil service companies. The Danish, Finnish and Swedish stock markets rose by 38.4 percent (OMXCB index), 15.2 percent (OMXHB index) and 6.1 percent (OMXSB index), respectively, as measured in local currency.

Yields on Norwegian government bonds with a long time to maturity were approximately

unchanged in 2015. At yearend, the yield on 10-year Norwegian government bonds was about 1.5 percent. Yields on corresponding bonds in Denmark, Finland and Sweden rose somewhat, but were lower than the yield on Norwegian government bonds at the end of the year. Private enterprises normally have to pay a higher interest rate than the state when borrowing money. This mark-up, called the credit spread, increased substantially in 2015, particularly in the case of bonds issued by industrial enterprises and banks.

### 4.2.2 Market value

At yearend 2015, the market value of the GPFN was NOK 198.4 billion; see Figure 4.2A. The market value increased by NOK 12.8 billion after asset management costs during the course of 2015. The value of the equity portfolio was NOK 118 billion. Norwegian equities accounted for NOK 95 billion of this total, whilst the value of stocks of companies in other Nordic countries, excluding Iceland, amounted to NOK 23 billion. The value of the fixed-income portfolio was NOK 80 billion, comprising NOK 64 billion from Norwegian bond issuers and NOK 16 billion from issuers in other Nordic countries. See Figure 4.2B for the GPFN's investment distribution at the end of 2015.

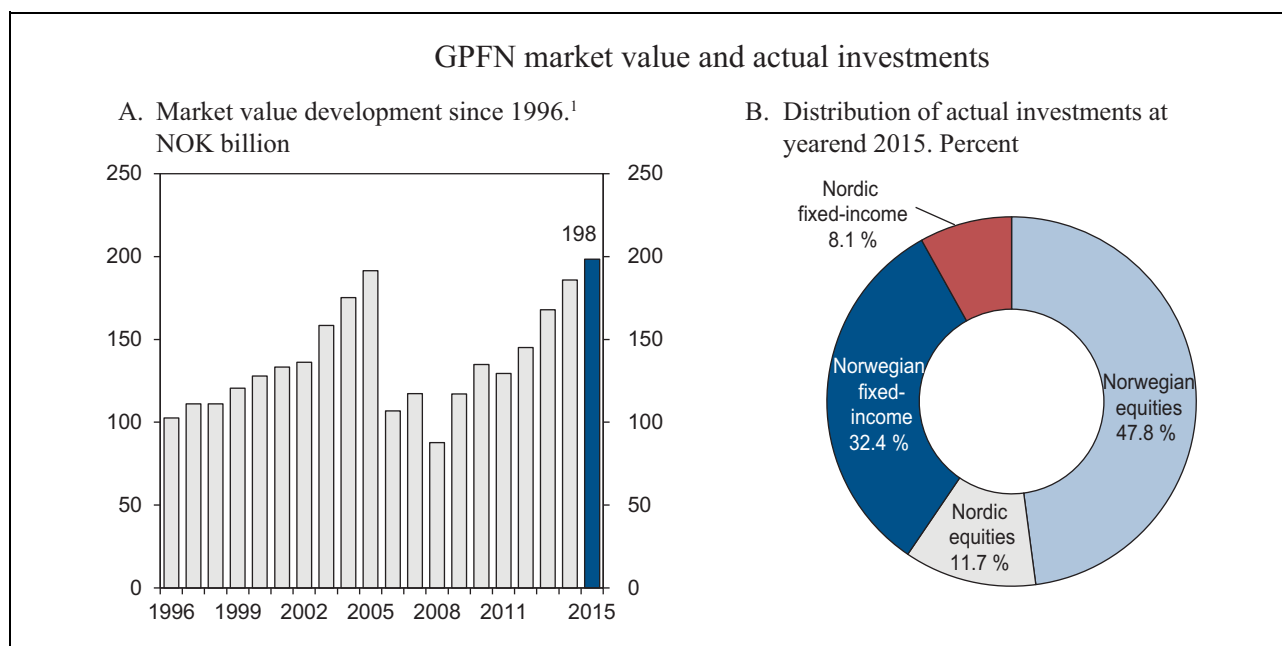


Figure 4.2 Market value of the GPFN since 1996 and distribution of actual investments at yearend 2015

<sup>1</sup> A major part of the GPFN's capital was invested with the Treasury in the form of mandatory deposits until 2005. Folketrygdfondet's participation in the mandatory deposit arrangement was discontinued in December 2006, and fund assets amounting to NOK 101.8 billion were repaid to the state.

Table 4.1 Return on the GPFN in 2015, in the last 3, 5 and 10 years, as well as over the period 1998–2015, measured in Norwegian kroner and before the deduction of asset management costs. Annual geometric average. Percent and percentage points

	2015	Last 3 years	Last 5 years	Last 10 years	1998–2015
<i>GPFN</i>					
Actual portfolio	6.95	11.05	8.09	7.57	7.32
Benchmark index	6.47	10.43	7.40	6.46	6.79
Excess return (percentage points)	0.48	0.61	0.69	1.11	0.53
<i>Equities<sup>1</sup></i>					
Actual portfolio	9.89	14.74	8.88	8.34	8.21
Benchmark index	9.19	13.98	8.23	6.95	6.82
Excess return (percentage points)	0.69	0.76	0.65	1.39	1.39
<i>Fixed-income securities<sup>2</sup></i>					
Actual portfolio	2.93	5.25	6.32	6.08	6.10
Benchmark index	2.72	4.71	5.46	5.30	5.87
Excess return (percentage points)	0.21	0.54	0.86	0.78	0.23
<i>Real return</i>					
Inflation	2.12	2.09	1.65	1.96	2.00
Costs	0.09	0.09	0.09	0.08	0.05
Net real rate of return	4.65	8.69	6.25	5.42	5.16

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

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

Sources: Folketrygdfondet and Ministry of Finance.

### 4.2.3 Return

The return on the GPFN in 2015 was 7.0 percent, measured in Norwegian kroner and before the deduction of asset management costs; see Table 4.1. The return on both the equity and fixed-income portfolios contributed positively to the aggregate return. Since January 1998, the GPFN has delivered an average annual return of 7.3 percent. This corresponds to an average annual real rate of return after costs of 5.2 percent.

The Norwegian krone depreciated against the euro, the Swedish krona and the Danish krone in 2015. As a result, the returns on the GPFN's investments in affected countries were higher

measured in Norwegian krone than in local currency.

#### *Equities*

The equity portfolio achieved a return of 9.9 percent in 2015; see Table 4.1. The Norwegian companies in the equity portfolio generated a return of 6.6 percent, whilst the Nordic companies returned 25.3 percent, measured in Norwegian kroner. Whilst Nordic equities outperformed Norwegian equities on average, the depreciation of the Norwegian krone also contributed to the high return on the Nordic holdings measured in Norwegian krone. The average annual return on

the equity portfolio since January 1998 is 8.2 percent.

#### *Fixed-income securities*

The fixed-income portfolio generated a return of 2.9 percent in 2015. The return on the Norwegian part of the portfolio was 1.7 percent, whilst Nordic bonds generated a return of 9.4 percent measured in Norwegian kroner. The depreciation of the Norwegian krone was the primary reason for the differing returns on Norwegian and Nordic bonds in 2015. The average annual return on the fixed-income portfolio since January 1998 is 6.1 percent.

Duration is a measure of the average time to maturity for a fixed-income portfolio based on weighted future interest and coupon payments. The longer the duration, the greater the capital loss in the fixed-income portfolio if interest rates were to rise. At yearend 2015, the GPFN's fixed-income portfolio had a duration of 4.6 years, approximately in line with the benchmark index. Although yields on five-year Norwegian and Finnish government bonds fell somewhat in 2015 – a development which in isolation entailed capital gains on these securities – rising yields on corresponding Swedish and Danish bonds triggered capital losses. Yields remain higher in Norway than in the other Nordic countries, boosting current returns on Norwegian government bonds. Increasing credit spreads entailed weaker returns on bonds issued by private companies.

#### **4.2.4 Management excess return**

The return on the actual investments in the GPFN is measured against the return on the benchmark index set by the Ministry of Finance. The difference between the two returns is referred to as the gross excess return, and is a measure of the results achieved by Folketrygdfondet in its management of the GPFN. This performance measure reflects the division of labour between the Ministry and Folketrygdfondet, and is a reasonable estimate of net value added through active management. See chapter 7 for further discussion of the gross excess return as a management performance measure.

In 2015, Folketrygdfondet achieved a return on the GPFN which was 0.48 percentage points higher than the return on the benchmark index; see Table 4.1. The excess return is attributable to the adoption of a somewhat different investment composition for the GPFN than implied by the

benchmark index. Income from the lending of securities to other investors also contributed to the excess return.

#### *Equities*

The return on the equity portfolio in 2015 was 0.69 percentage points higher than the return on the benchmark index for equities. The excess return on Norwegian equities contributed 0.52 percentage points, whilst the excess return on other Nordic equities contributed 0.08 percentage points. Securities lending revenues accounted for 0.08 percentage points of the excess return on the equity portfolio.

The excess return on the equity portfolio is primarily due to different strategies in the area of security selection, including a strategy which emphasises the companies' long-term risk and return properties. Folketrygdfondet typically invests less in companies with high financial or operational risk. In 2015, this strategy entailed that the equity portfolio generally included a lower proportion of energy-sector companies than implied by the benchmark index. In isolation, this contributed 1.1 percentage points to the excess return. Strategies which reduced the proportion invested in companies in the materials and consumer goods sectors produced a negative excess return in 2015.

#### *Fixed-income securities*

Folketrygdfondet's strategy for the fixed-income portfolio was adjusted in January 2015. The reported excess return is now split between a strategy for fixed-income holdings, a credit strategy and securities lending revenue. As a result of the change, the distribution of the excess return in the fixed-income portfolio between Norwegian and Nordic issuers no longer reflects the result of Folketrygdfondet's real risk-taking.

The return on the fixed-income portfolio was 0.21 percentage points higher than the return on the fixed-income benchmark index in 2015. The strategy for fixed-income holdings entailed the adoption of a different maturity structure for the government bonds in the fixed-income portfolio than that of the benchmark index, and contributed 0.06 percentage points to the excess return. The credit strategy increased the proportion of corporate bonds in the GPFN compared to the benchmark index, but also reduced the maturities of the credit bonds somewhat. This strategy contributed 0.03 percentage points. Securities lending reve-



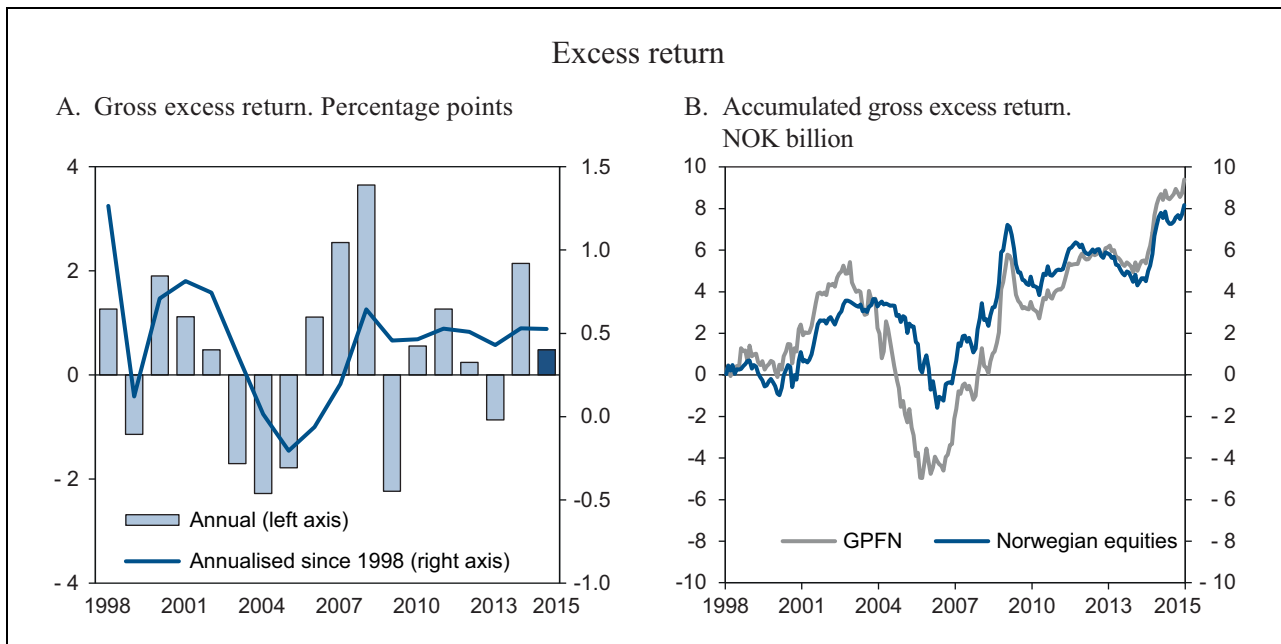


Figure 4.3 Gross excess return from Folketrygdfondet's active management in 2015 and since 1998  
Sources: Folketrygdfondet and Ministry of Finance.

nue totalled 0.04 percentage points. Other effects contributed 0.08 percentage points.

#### *Excess return over time*

The Ministry of Finance has previously stated an expectation of annual net value added through active management to total 0.25–0.5 percentage points. Since January 1998, Folketrygdfondet has achieved a return on the GPFN which is 0.53 percentage points higher than the return on the benchmark index adopted by the Ministry. Calculations by the Ministry estimate the GPFN's gross excess return in the period January 1998–2015 at approximately NOK 9.4 billion.<sup>1</sup> More than NOK 8 billion of this total is attributable to the excess return on Norwegian equities. Figure 4.3 illustrates the development of the gross excess return.

#### **4.2.5 Risk-adjusted return**

In the management mandate for the GPFN, the Ministry of Finance has stipulated a scope for deviation from the benchmark index of 3 percentage points, measured by expected tracking error. The allowance permits Folketrygdfondet to exploit the

Fund's distinctive characteristics and advantages to secure an excess return through active management. Deviations from the benchmark index may entail somewhat higher or lower absolute risk for the GPFN relative to the benchmark index. In financial literature, different models and measures are used to evaluate the excess return by reference to the risk taken by the manager. These include the information ratio and the Sharpe ratio.

The literature also employs models to explain historical results where a distinction is made between returns achieved by the manager through the acceptance of systematic risk and returns stemming from other deviations. Such methods are associated with considerable uncertainty; see the discussion in section 7.4. The Ministry of Finance regularly reviews the management of the GPFN, analysing and evaluating risk-taking. The risk-taking analyses in the most recent reviews of the management of the GPFN show that Folketrygdfondet's excess return cannot be explained by increased systematic risk-taking.

#### *Information ratio*

The scope for expected tracking error is the most important limit on market risk in the mandate issued by the Ministry. The information ratio measures the excess return achieved by Folketrygdfondet through its management activities by reference to relative risk. This measure of the

<sup>1</sup> The gross excess return in Norwegian kroner is calculated by multiplying the monthly gross return by the capital invested at the beginning of the month and then adding up all the monthly totals. The calculation therefore excludes the effect of compound interest.

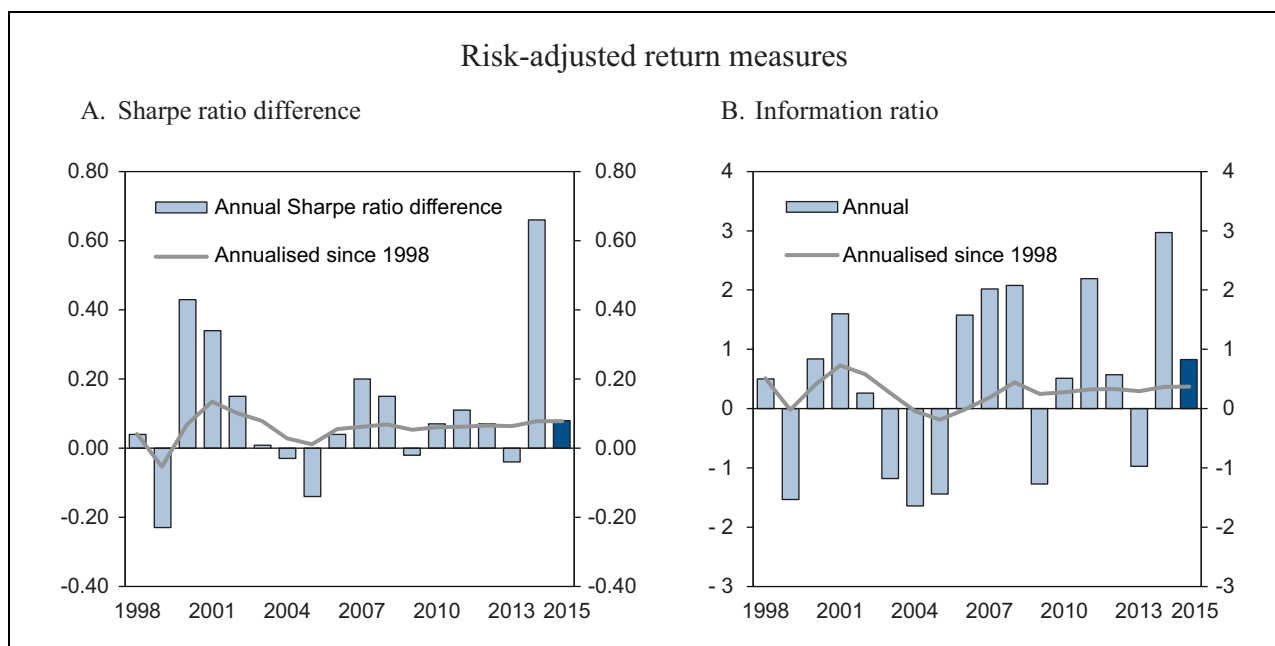


Figure 4.4 Risk-adjusted return for the GPFN in 2015 and since 1998

Sources: Folketrygdfondet and Ministry of Finance.

risk-adjusted return is therefore relevant in assessing Folketrygdfondet's active management.

In 2015, the information ratio for the GPFN was 0.83; see Table 4.2 and Figure 4.4B. Accordingly, every percentage point of relative risk was on average compensated by 0.83 percentage points of excess return. Measured in this way, active management has helped secure compensation for the relative risk taken in both the equity portfolio and the fixed-income portfolio. The calculations for individual years are based on a limited number of observations, and are therefore uncertain.

In the period 1998–2015, Folketrygdfondet achieved an information ratio of 0.36 for the GPFN. During this period, the Fund received approximately equal compensation for the relative risk taken in the equity portfolio and the fixed-income portfolio.

#### Sharpe ratio

In 2015, Folketrygdfondet achieved a Sharpe ratio for the GPFN which exceeded the corresponding ratio for the benchmark index by 0.08. This indicates that Folketrygdfondet's active management helped secure better compensation for the portfolio's aggregate risk than would have been achieved by investing in line with the benchmark index. However, the calculation is based on a limited number of observations, and is therefore uncertain.

The difference between the Sharpe ratio for the actual investments and the benchmark index in the period January 1998–2015 is also 0.08. Although the GPFN has had a lower risk level than the benchmark index, it has generated a somewhat higher return. The result is a better risk-return ratio compared to the benchmark index.

#### 4.2.6 Risk and limits

##### Absolute risk

Folketrygdfondet has estimated the *expected fluctuations* in the GPFN at 8.3 percent at yearend 2015, or about NOK 16.6 billion, as measured by standard deviation. Assuming a normally distributed return figure, the fluctuations will exceed one standard deviation in one out of three years.

Absolute volatility figures for the GPFN and the equity and fixed-income portfolios are based on actual monthly return data, and show that *historical fluctuations* in the GPFN are lower than the fluctuations in the benchmark index; see Figure 4.5A. Historically, therefore, Folketrygdfondet's active management has contributed to reduce fluctuations in the GPFN. The figure also shows that the fluctuations in the benchmark index largely determine the fluctuations in the Fund. In connection with its review of Folketrygdfondet's management of the GPFN – discussed in the report on the Fund for 2014 – the Ministry of Finance calculated

Table 4.2 Absolute and relative risk measures for the GPFN in 2015, in the last 3, 5 and 10 years, as well as over the period 1998–2015. Annual figures based on monthly observations

	2015	Last 3 years	Last 5 years	Last 10 years	1998–2015
<i>GPFN</i>					
Absolute volatility actual portfolio (percent)	6.71	5.59	7.07	10.51	8.29
Absolute volatility benchmark index (percent)	6.85	5.81	7.26	11.11	8.85
Tracking error (percentage points)	0.51	0.60	0.55	1.20	1.24
Sharpe ratio difference	0.08	0.16	0.11	0.12	0.08
Information ratio	0.83	0.90	1.14	0.81	0.36
<i>Equity portfolio</i>					
Absolute volatility actual portfolio (percent)	11.18	9.26	12.28	18.85	20.02
Absolute volatility benchmark index (percent)	11.51	9.70	12.63	20.04	21.30
Tracking error (percentage points)	0.82	0.99	0.91	2.29	3.55
Sharpe ratio difference	0.08	0.13	0.06	0.08	0.07
Information ratio	0.70	0.63	0.61	0.45	0.29
<i>Fixed-income portfolio</i>					
Absolute volatility actual portfolio (percent)	2.14	2.39	2.32	2.60	2.57
Absolute volatility benchmark index (percent)	2.25	2.52	2.54	2.64	2.86
Tracking error (percentage points)	0.50	0.37	0.55	0.65	0.77
Sharpe ratio difference	0.14	0.29	0.50	0.30	0.17
Information ratio	0.39	1.37	1.47	1.13	0.27

Sources: Folketrygdfondet and Ministry of Finance.

that over 98 percent of the fluctuations in the return on the GPFN in the period January 1998–2014 can be explained by fluctuations in the return on the benchmark index. The proportion of fluctuations attributable to fluctuations in the benchmark index has increased over time.

#### *Relative risk*

At yearend 2015, expected tracking error totalled 0.6 percentage points – 0.1 percentage points

lower than at the beginning of the year. Folke-trygdfondet is thus utilising a small proportion of the 3 percentage point deviation allowance granted by the Ministry.

*Realised tracking error* expresses historical fluctuations in the excess return. Last year, the fluctuations in the difference in returns between the GPFN and the Fund's benchmark index totalled approximately 0.5 percentage points; see Figure 4.5B. Both expected and realised tracking error were low at the end of 2015 compared to the

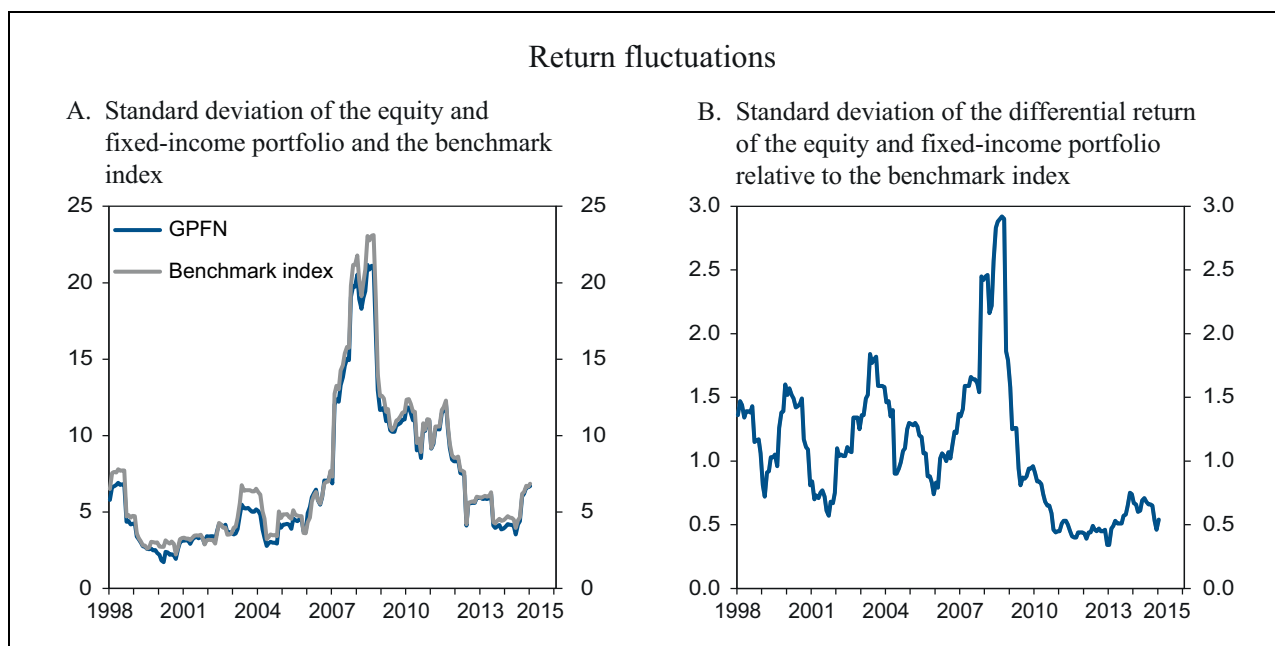


Figure 4.5 Rolling 12-month standard deviation of the return on the GPFN

Sources: Folketrygdfondet and Ministry of Finance.

average since January 1998. This finding accords with analyses showing that fluctuations in the return on the benchmark index explain a large and increasing proportion of the return on the GPFN.

Tracking error is generally affected by various factors, including market fluctuations. During periods of large market movements, tracking error is expected to increase.

#### Credit risk

The overall value-weighted credit quality of Folketrygdfondet's fixed-income investments can be calculated based on the market values and credit ratings<sup>2</sup> of the bonds in the portfolio. In 2015, the fixed-income portfolio had a value-weighted credit quality of AA, measured by credit rating. The value-weighted credit quality was unchanged from the beginning of the year. During 2015, Folketrygdfondet reduced the proportion of bonds with the lowest credit quality (high-yield bonds).

High-yield bonds are not included in the benchmark index for the GPFN. In the manage-

ment mandate, the Ministry of Finance has allowed for investments in high-yield bonds subject to a specified limit. At the end of 2015, high-yield bonds accounted for seven percent of the market value of corporate bonds in the fixed-income portfolio, equivalent to just over five percent of the fixed-income portfolio as a whole. This is well within the limit stipulated by the Ministry.

#### 4.2.7 Costs

Folketrygdfondet's actual annual asset management costs relating to the GPFN are covered subject to a limit set by the Ministry of Finance. In 2015, the cost limit was set at NOK 175 million. Folketrygdfondet's asset management costs for the GPFN amounted to NOK 168.1 million,<sup>3</sup> including equity dividends of NOK 1.4 million payable to the state. Measured as a proportion of average capital under management in 2015, the costs totalled 8.6 basis points (0.086 percent).

Figure 4.6 shows developments in asset management costs over time. The GPFN's management costs increased substantially in 2007 and 2008 measured in both krone value and basis points. This was due to the repayment of NOK 101.8 billion to the state when Folketrygdfondet's

<sup>2</sup> The rating scale for credit quality is AAA, AA, A, BBB, BB, B, CCC, CC, C, D, with AAA as the top rating. Bonds with a credit rating from AAA to BBB, inclusive, are deemed to have high creditworthiness and are termed "investment grade" bonds. Bonds with lower creditworthiness are deemed to have low creditworthiness and are termed "high yield" bonds.

<sup>3</sup> The amount includes a one-off effect of NOK 27.4 million resulting from Folketrygdfondet's restructuring of the pension scheme into a contribution-based scheme.

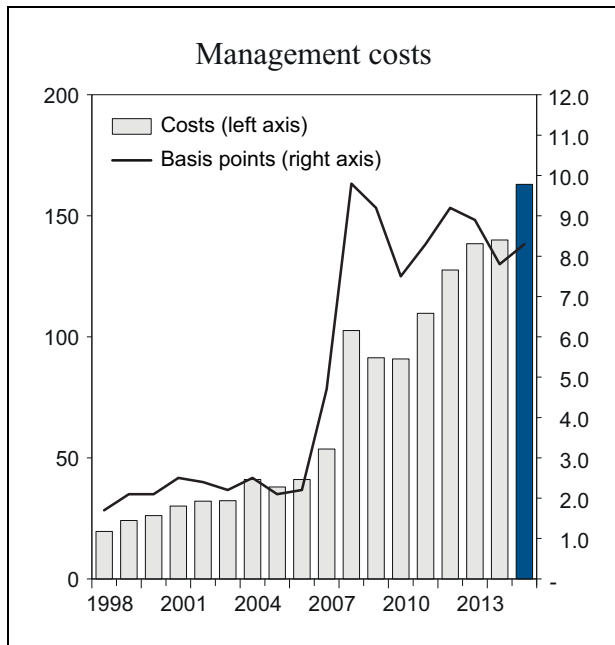


Figure 4.6 Development in GPFN asset management costs, 1998–2014. NOK million (left axis) and basis points (right axis). One basis point = 0.01 percent  
Sources: Folketrygdfondet and Ministry of Finance.

participation in the mandatory deposit arrangement was discontinued in December 2006. This approximately halved the GPFN's market value. In addition, stricter risk management and compliance and reporting requirements were introduced in 2007, of which necessitated substantial investments and recruitment of additional employees.

The Canadian company CEM Benchmarking Inc. compares the costs of the GPFN with the costs of other funds internationally. It follows from the report for 2014 that the costs of the GPFN are significantly lower than those of comparable funds. This is primarily because the GPFN is not invested in assets such as unlisted equities, real estate and infrastructure, which generally involve higher costs than listed equities and bonds. However, CEM has found that the costs of the GPFN are low even if adjusted for asset composition differences. The main explanation for this is that all management of the GPFN is handled internally by Folketrygdfondet, and that internal management costs are low compared to those of other funds.

#### 4.2.8 The Ministry's assessment

2015 was a year of substantial stock market fluctuations and falling oil prices. Interest rates remained approximately unchanged, while credit spreads on bonds issued by private companies

rose significantly. The depreciation of the Norwegian krone contributed to high returns on the GPFN's investments in other Nordic countries, measured in Norwegian kroner. The Ministry is satisfied with the fact that, in a challenging year, the GPFN achieved a return on a par with the average return since 1998. The return on the fixed-income investments was low, and interest levels remained low at yearend. Bonds are expected to continue generating low returns going forward.

The return achieved on the GPFN in 2015 exceeded the return on the benchmark index by 0.48 percentage points. This is in line with the average since 1998. The excess return was high relative to the utilisation of the scope for deviations from the benchmark index, both in absolute terms and compared to the average since 1998. The Ministry of Finance emphasises performance development over time, and has noted that the average annual gross return since 1998 has been about 0.5 percentage points higher than the benchmark index, which is in the upper range of the Ministry's expressed expectation as to the long-term excess return.

The asset management costs of the GPFN are low compared to other funds. The Ministry finds it satisfactory that the management of the GPFN appears to be cost effective, and will continue emphasising cost-effective asset management going forward.

### 4.3 Third party verification

#### 4.3.1 Assurance engagement

As part of the Ministry of Finance's follow-up and supervision of the management of the GPFN in 2015, the audit firm Ernst & Young has reviewed the design and implementation of certain aspects of the part of the framework established by Folketrygdfondet. The reports on such reviews, so-called assurance statements, are available on the Ministry's website.

One of the review topics is Folketrygdfondet's design and implementation of the governance and compliance framework for leverage, borrowing, securities lending and short selling. This includes the risk management and compliance processes for financial and operational risk established to support the implementation of leverage, borrowing, securities lending and short selling. As part of the engagement, the auditor has, inter alia, reviewed governing documents and other relevant written materials, held meetings with senior

executives and employees at Folketrygdfondet, and reviewed relevant processes.

The auditor has not examined whether risk management and compliance measures have been effective and have functioned as intended, nor evaluated whether the risks identified by Folketrygdfondet are complete and representative of its management activities.

The assurance statement concludes that, in all material respects, the design and implementation of the framework conform to the measurement criteria adopted by the auditor. The assessment is based on the current risk profile of Folketrygdfondet. It is emphasised that matters currently considered immaterial may become more important, and thus require reassessment by reference to a new risk profile, in the event of material changes to the product range of financial instruments or an increase in the applicable limits.

A further review topic is Folketrygdfondet's design and implementation of the framework for calculating the benchmark index, including return calculations for 2015. The auditor has reviewed Folketrygdfondet's process and method for calculating the return on the benchmark index, recalculating the return and comparing selected index values included in the calculations with those received from external index providers.

The assurance statement concludes that the design and implementation of Folketrygdfondet's framework for calculating the benchmark index for 2015 complies with the Ministry's mandate for the management of the GPFN in all material respects. The return calculation for 2015 also complies with the GPFN mandate in all material respects.

## 5 The Government Pension Fund Norway: refinement of strategy and management

### 5.1 Unlisted real estate and infrastructure

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#### 5.1.1 Background

The Ministry of Finance has reviewed investment in unlisted real estate and infrastructure by the Government Pension Fund. The report on the Fund for 2014 discussed Folketrygdfondet's recommendations and assessments.

In a letter to the Ministry of Finance of 13 November 2014, Folketrygdfondet recommended that the Government Pension Fund Norway (GPFN) should be permitted to invest in unlisted real estate and infrastructure subject to a cap of 10 percent of the Fund's capital. It was recommended that unlisted real estate and infrastructure should not be included in the benchmark index for the GPFN, but rather be measured against the current benchmark index composed of listed equities and bonds. Folketrygdfondet envisaged initially investing in Norway before subsequently expanding into the Nordic region. It argued that such an expansion of the investment universe could help spread the Fund's risk and increase the return after costs.

In the report on the Fund for 2014, the Ministry of Finance indicated that it would revert to the question of including unlisted real estate and infrastructure investments in the GPFN after further evaluation. A corresponding assessment was also to be undertaken for the GPFG.

#### 5.1.2 The Ministry's assessment

When assessing investments in unlisted real estate and infrastructure, it is deemed appropriate to start with the objective of risk diversification and potential advantages. In the Ministry's view, there are material differences between the GPFN and GPFG in this respect. It is also important to consider the analyses and recommendations the Ministry has received on the inclusion of unlisted investments in the GPFG; see section 3.2.

As opposed to the GPFG, the investment strategy for the GPFN is not based on the broadest possible diversification of risk. The current benchmark index for the GPFN is composed primarily of listed equities and bonds in Norway. The composition of the benchmark index for equities is thus determined by which companies are listed on the Oslo Stock Exchange at any given time, and corresponding market values. The earnings of many of the companies listed on the Oslo Stock Exchange are materially affected by changes in commodity prices and international economic conditions.

In isolation, permitting investment in unlisted real estate and infrastructure may improve risk diversification in the GPFN compared to the current benchmark index, but this can also be achieved by other, simpler means. As stated, GPFN's investment strategy is not designed to achieve broad risk diversification, since the Norwegian state already meets this objective through its investments in the GPFG.

The state already has substantial real estate and infrastructure holdings in Norway. In the view of the Ministry of Finance, this must be taken into account when evaluating whether the state's aggregate risk would be reduced by permitting the GPFN to invest more in unlisted real estate and infrastructure. The Ministry regards the Norwegian infrastructure investment market as small and underdeveloped. Any investments in unlisted infrastructure by the GPFN would most likely result from the sale of such assets by central or local government. Such a transfer of ownership would leave the state's overall risk level unchanged, and usually generate significant transaction costs. Moreover, financial investors in this market are subject to extensive public regulation, since infrastructure is normally an important public good.

Unlisted investments are generally more difficult to implement than listed investments. When making unlisted investments, a manager cannot invest in accordance with a market index at low cost as in a listed market. It is also more difficult

to measure performance and manage risk in connection with such investments, and unlisted investments are more expensive to downscale in the event of negative experiences.

The expert report on real estate and infrastructure in the GPFG (Van Nieuwerburgh, Stanton and de Bever, 2015) contains a review of relevant financial literature. It shows that broad investments in unlisted and listed real estate have generated similar returns and risk over time. It is therefore uncertain whether broad investment in unlisted markets will help reduce risk through diversification or produce a higher expected return due to low liquidity. Further, the range of results achieved by the managers in unlisted markets is wider than the range of results achieved in listed markets, indicating that unlisted investments should only be made if the manager has or can develop advantages.

In the Ministry's view, it is uncertain whether Folketrygdfondet has natural advantages or will be able to develop advantages in the unlisted real estate and infrastructure markets. The expert report on real estate and infrastructure in the GPFG refers to two studies which found that large investors who develop internal expertise can achieve both reduced costs and higher returns than smaller investors. Any unlisted real estate and infrastructure investments by the GPFN will be small in comparison with many other managers of such asset. In addition, the GPFN's capital is too small to make Folketrygdfondet a major player in the Nordic market compared to other international investors.

Following an overall assessment, the Ministry of Finance is not prepared to permit the GPFN to invest in unlisted real estate and infrastructure.



## 6 Responsible management

### 6.1 The current framework

The objective for the investments in the Government Pension Fund is to achieve the highest possible return, given a moderate level of risk. The Fund shall also be a responsible investor. The Ministry of Finance sets the general framework for Norges Bank and Folketrygdfondet's responsible management of the GPFG and GPFN, respectively.

The Ministry of Finance assumes that a good long-term return depends on well-functioning markets and a sustainable development. This applies particularly to a large, diversified and long-term investor like the Fund, which will generally achieve a return in line with value creation in the economy. Individual companies may profit by ignoring serious harm to others (negative externalities). For a universal, long-term owner, however, such gains may be counteracted by lower returns on other parts of the portfolio, or in the future.

The mandates for the management of the GPFG and GPFN refer to internationally recognised responsible management principles and standards, such as the UN Global Compact, the OECD Principles of Corporate Governance and the OECD Guidelines for Multinational Enterprises. These international standards specify good corporate governance norms and set out expectations to companies' handling of issues such as environmental and social conditions; see Box 6.1.

The Ministry of Finance, Norges Bank and Folketrygdfondet have also joined the Principles for Responsible Investment (PRI) Initiative, which concentrates on asset owners, asset managers and professional collaboration partners. It is supported by two UN partners: the Global Compact and the UN Environment Programme Finance Initiative (UNEP FI). The PRI Initiative encompasses six responsible investment principles, including respect for the environment, society and corporate governance in management and the exercise of ownership rights.

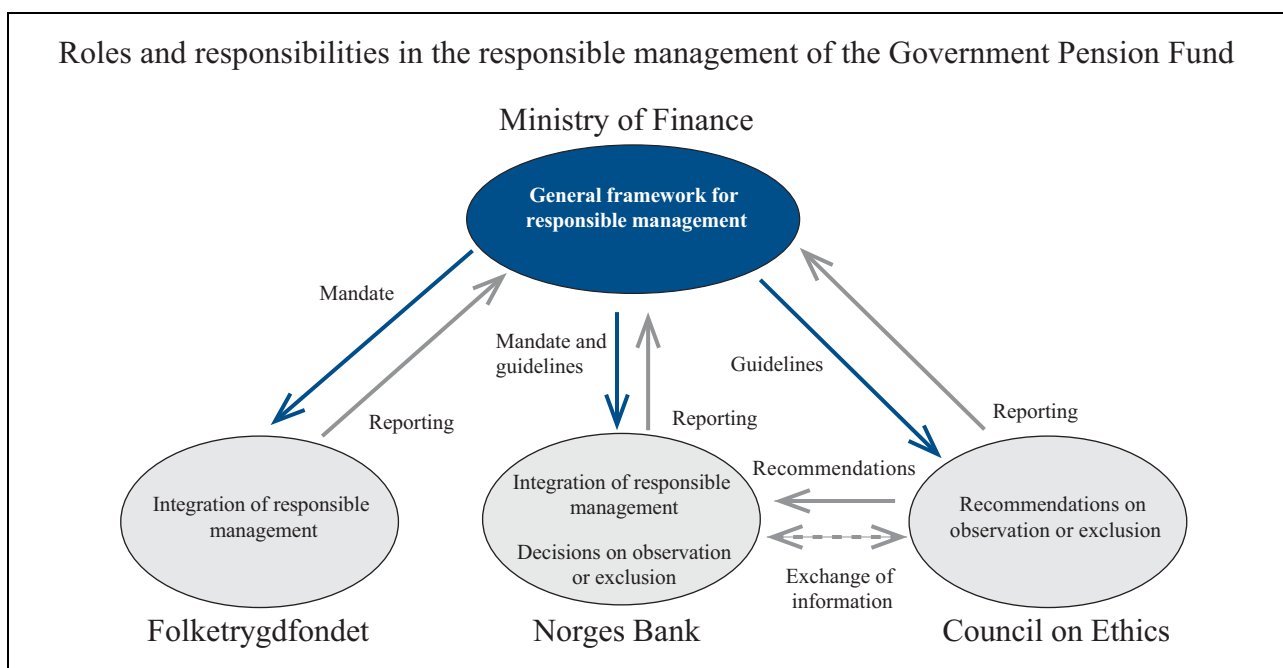


Figure 6.1 Distribution of roles and responsibilities in the responsible management of the Government Pension Fund

Source: Ministry of Finance.

### Box 6.1 International standards and principles

The mandates for the GPFG and GPFN refer to three internationally recognised standards and principles designed to ensure that good corporate governance and environmental and social conditions are taken into account in the asset management.

#### *OECD Guidelines for Multinational Enterprises*

The OECD Guidelines for Multinational Enterprises are voluntary, non-statutory recommendations intended to promote responsible conduct in all business sectors. They were launched in 1976, and most recently updated in 2011. Individual enterprises should assess independently how the guidelines can best be implemented. Countries which have adopted the guidelines are obliged to establish a national contact point for responsible business conduct. The contact points are mandated to spread knowledge about the guidelines and offer dialogue and mediation in individual cases. The Norwegian contact point is an independent specialist body subject to the administrative oversight of the Ministry of Foreign Affairs.

The guidelines are based on the existing obligation of states under international law to protect individuals against violations by third parties, in this case businesses. The principles emphasise that states should formulate clear expectations that companies located in their jurisdiction must respect human rights both nationally and internationally. However, any failure by a business to respect human rights does not constitute a human rights violation in a legal sense.

The guidelines provide that companies must avoid causing or contributing to negative effects through their own operations or business relationships, and that they must address cases in which such effects do occur. Guidance is also provided on how companies should follow up on their supply chains. Finally, the guidelines ask companies to conduct due diligence assessments to ensure that obligations are met.

#### *UN Global Compact*

The UN Global Compact is currently the world's largest corporate social responsibility initiative, with more than 12,000 participants in over 170

countries. The initiative is voluntary and focuses primarily on the commercial sector. Companies are urged to comply with 10 universal principles relating to human rights, labour rights, the environment and anti-corruption. Participants must report annually on their efforts to implement the principles in their operations. The results are published in the annual Global Corporate Sustainability Report.

The principles are based on 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, inter alia, that businesses should respect human rights, 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. Furthermore, businesses should support a precautionary approach to environmental challenges and promote the environment, development and environmentally friendly technologies. They should also combat all forms of corruption, including extortion and bribery.

#### *G20/OECD Principles of Corporate Governance*

The G20/OECD Principles of Corporate Governance address matters such as the distribution of roles and responsibilities between the owners, board of directors and the senior executives of a company. The principles are designed to promote a common understanding of best practice in areas such as transparency and disclosure, equitable treatment of shareholders, and the responsibilities and liabilities of board of directors. The principles also give input to national decision-makers on executive remuneration, the conduct of institutional investors and the establishment of well-functioning stock markets.

The principles are based on the view that good governance over time promotes company value growth, access to financing and well-functioning capital markets. Effective corporate governance and capital allocation in turn promote welfare and general economic growth. The G20 adopted the principles in the autumn of 2015.

### Box 6.2 Guidelines for Observation and Exclusion from the Government Pension Fund Global

The Ministry of Finance has adopted ethically motivated guidelines on the observation and exclusion of companies from the GPFG. Some exclusion criteria are product-based, while others focus on conduct. The Fund is also prohibited from investing in bonds issued by certain sovereign states. Companies may be placed under observation if there is doubt about whether the exclusion conditions are met or uncertainty as to future developments, or when deemed appropriate for other reasons.

The *product criteria* provide that the Fund's assets may not be invested in companies which themselves or through entities they control:

- produce weapons that violate fundamental humanitarian principles through their normal use;
- produce tobacco; or
- sell weapons or military materiel to sovereign states in whose government bonds the Fund is barred from investing.

The weapons criterion encompasses chemical weapons, biological weapons, anti-personnel mines, undetectable fragmentation weapons, incendiary weapons, blinding laser weapons, cluster munitions and nuclear arms.<sup>1</sup> Moreover, the Fund shall not be invested in companies that develop or produce key components for these types of weapons.

The tobacco criterion is limited to the actual tobacco product, and does not include associ-

ated 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, whether directly or through entities they control, shall be excluded.

Observation or exclusion may also be decided for mining companies and power producers which themselves or through entities they control derive 30 per cent or more of their income from thermal coal or base 30 per cent or more of their operations on thermal coal; see section 6.3.

The *conduct criteria* provide that observation or exclusion may be decided for companies where there is an unacceptable risk that the company contributes to or is responsible for:

- serious or systematic human rights violations, such as murder, torture, deprivation of liberty, forced labour and the worst forms of child labour;
- serious violations of the rights of individuals in situations of war or conflict;
- severe environmental damage;
- acts or omissions that on an aggregate company level lead to unacceptable greenhouse gas emissions;
- gross corruption; or
- other particularly serious violations of fundamental ethical norms.

<sup>1</sup> See the Revised National Budget 2004.

Important tools in the responsible management of the Fund include the promotion of standards, principles and relevant research. Further tools are the expression of expectations as an owner, the exercise of ownership rights through engagement with companies and voting at general meetings. Considerations relating to corporate governance, the environment and social conditions are integrated into management activities.

The Ministry of Finance has adopted the ethically motivated guidelines for observation and exclusion from the GPFG; see Box 6.2. Some criteria provide for the exclusion of companies based on their products, such as tobacco, weapons and coal. Other exclusion criteria are conduct-based

and address matters such as serious human rights violations and severe environmental damage. The Council on Ethics makes recommendations as to whether a company should be excluded or placed under observation. The final decision is made by Norges Bank.

The use of policy instruments relating to coal and petroleum companies has been amended in accordance with the Storting's deliberation of the report on the Fund for 2014 and the National Budget 2016. Among other things, the Ministry of Finance has included a conduct-based climate criterion and a product-based criterion directed at coal companies in the guidelines for observation and exclusion from the GPFG. The new criteria took effect on 1 January and 1 February 2016,

respectively. The implemented changes are discussed in section 6.3.

Norges Bank and Folketrygdfondet make investment decisions and exercise ownership rights independently of the Ministry, within the limits of the management mandates and guidelines. Figure 6.1 illustrates the distribution of roles and responsibilities relating to responsible management of the Government Pension Fund.

The frameworks for and use of policy instruments in the responsible management of the GPFG and GPFN are largely based on a common platform.

## 6.2 Responsible management efforts

This section describes the work done by the Council on Ethics, Folketrygdfondet and Norges Bank in the area of responsible management. Implementation of the ethically motivated guidelines on observation and exclusion is discussed in section 6.2.3.

### 6.2.1 The Government Pension Fund Global

The mandate for the GPFG requires Norges Bank to seek to establish a chain of responsible management measures and to adopt a set of responsible investment principles to be integrated into management of the GPFG. The mandate states that the principles shall be based on the principles that the investments have a long time horizon and must be broadly diversified. The principles shall reflect the objectives of good corporate governance and environmental and social considerations in line with internationally recognised standards. The mandate also identifies contributions to research and the development of good standards, as well as environment-related investments, as part of the responsible management efforts. Norges Bank is required to publish the principles and measures applied in this work.

The Executive Board of Norges Bank established a corporate governance committee in 2015. The committee is mandated to prepare matters for and make recommendations to the Executive Board, including on the observation and exclusion of companies. Norges Bank's own principles and expectations relating to responsible management were revised in January 2016. This included incorporation of a direct reference to the UN Guiding Principles on Business and Human Rights (UNGPs).

On 4 February 2016, Norges Bank presented a separate report on responsible investment in 2015. The Bank groups its responsible investment activities into three categories: standard setting, ownership and risk management.

#### *Standard setting*

The GPFG is invested in several thousand companies globally. The average ownership share was 1.3 percent at the end of 2015. Work on common standards can be an effective means of influencing company practice. Standards may range from regulations, listing requirements and best practice codes to norms, formal standards and observed market practice. In the area of standard setting, Norges Bank gives priority to broad international principles and standards. The G20/OECD Principles of Corporate Governance, OECD Guidelines for Multinational Enterprises and UN Global Compact are examples of such, and are referred to specifically in the mandate from the Ministry of Finance. Norges Bank supports the development of selected international standards, including through participation in international forums and consultations. The Bank also promotes good market practice through dialogue with regulatory authorities, other standard setters and market participants.

The Bank works with industry standards, specific markets and topics such as company reporting and corporate governance, as well as stand-alone standards. One example of a global reporting initiative supported by Norges Bank is CDP (formerly known as the Carbon Disclosure Project). CDP is an independent organisation that gathers and publishes information on companies' emissions of greenhouse gases, water and deforestation to promote improved reporting by companies.

Last year, Norges Bank submitted comments in 11 consultations relating to international or company- or market-specific standards and regulations.

Norges Bank also promotes research in support of its responsible management efforts. Research is considered particularly useful in areas with unanswered questions, such as the relationship between sustainability and profitability of business operations. In 2015, the Bank supported various research projects and contributed to a number of seminars and conferences. The Norwegian Finance Initiative (NFI) is a research programme with the purpose of facilitating research into subjects of potentially high importance in the long-term management of the Fund. Among other

things, the NFI has made active ownership one of its research programme topics. Norges Bank has included the topic of financial economics and climate change in this programme.

### *Ownership*

Ownership can be exercised by voting at general meetings, participating in governing bodies, engaging in dialogue with companies and communicating with boards of directors. Norges Bank premises its exercise of ownership rights on the principle that the board of directors and company management bear primary responsibility for business strategy and operations of the company.

Norges Bank regards voting at general meetings as the most important tool for influencing companies. The Bank has adopted a set of voting principles which provide, for example, that the Bank shall generally vote at all shareholder meetings and that its voting decisions must be published. Voting must reflect the Fund's long-term interests and take into account long-term value creation, sustainable business operation, board liability, shareholder rights, equal treatment of shareholders and transparent company communication. The Bank's voting guidelines and principles are based on the G20/OECD Principles of Corporate Governance.

Norges Bank publishes its voting decisions on its website the day after each general meeting. Starting in 2015, the Bank announced in some instances its voting intentions prior to annual or extraordinary general meetings to promote clear expectations, transparency and shareholder influence. The Bank also published position papers on selected corporate governance topics. These papers are intended to support good market practice and the Bank's own voting. In 2015, the Bank published position papers on voting for individual board candidates and the right of shareholders to propose board candidates in US companies.

Norges Bank voted on 112,601 resolutions in 11,562 general meetings in 2015. Some 98 percent of the resolutions were proposed by the companies themselves, whilst three percent were proposed by shareholders. Since the board of directors plays a key role in the value added and long-term strategy of a company, the Bank pays particular attention to the choice of chair and composition of the board. Norges Bank also gives priority to participation in individual nomination processes through involvement in nomination committees and direct dialogue with board chairs.

Company dialogue is another responsible management instrument. In 2015, the Bank arranged a total of 3,520 meetings between Fund representatives and company executives and specialists. The most important contacts for the Bank in its capacity as shareholder are the board chair and directors. Companies are normally prioritised based on investment value, ownership share, selected topics and challenges specific to the individual company. In 2015, Norges Bank prioritised five topics in its interaction with companies: nomination processes in connection with board elections, equal treatment of shareholders, corporate governance form in Japan, corruption and sustainability. The Bank also engaged in dialogue in response to events in companies and assessments based on the ethically motivated guidelines on observation and exclusion.

### *Risk management*

In 2015, Norges Bank enhanced its risk monitoring of companies in the Fund, including through more intensive gathering and development of non-financial data.

The Bank conducted 2,517 documented risk assessments during the year. Emphasis is given to matters with a potentially significant impact on an individual company or the Fund's investments overall. The Bank has stated that priorities must be set to ensure that ownership and risk efforts have optimal effect.

Norges Bank focuses primarily on the ownership and risk management measures with the greatest potential impact on the portfolio as a whole. The Bank has also chosen to prioritise three so-called focus areas:

- children's rights
- climate change
- water management

Norges Bank has, for each of these three areas, formulated expectations as to how companies should manage risk and report on their activities. The Bank published updated expectation documents on all three areas in 2015, as well as a new expectation document on human rights (in February); see section 6.5.

During the year, Norges Bank carried out assessments of the reporting of a total of 2,113 companies by reference to the focus areas. Around half of these evaluations concerned climate change, with the remainder being distributed fairly evenly between water management and children's rights. The value of the evaluated com-

panies accounted for 45 percent of the equity portfolio's market value.

Norges Bank analyses the greenhouse gas emissions of the companies in the equity portfolio. A company with high emissions may represent a risky investment, not least because it is vulnerable to regulatory changes and new technological developments. The Bank evaluates emissions by reference to company size. Not all companies report their emissions in a standardised manner, and Norges Bank's analyses therefore rely extensively on emissions models from external providers.

In recent years, the Bank has made certain divestments in response to risk assessment findings. Such adjustments of the portfolio are financially motivated, and differ from exclusions based on the ethically motivated guidelines for observation and exclusion. Risk-based divestment reduces the Bank's scope for deviations from the benchmark index. Divestment decisions are made following a systematic review of corporate governance, environmental and social conditions. Greenhouse gas emissions, water scarcity, waste, climate change and biodiversity are all factors incorporated into the assessment. Under the heading of social conditions, consideration is given to child labour, human capital, health and safety. Corporate governance focuses primarily on corruption risk.

In its responsible investment report for 2015, Norges Bank states that it divested from 73 companies during the year. These divestments were based on greenhouse gas emissions (eight companies engaged in cement production, 16 companies active in coal power generation, 11 companies working with coal extraction for power-generation purposes and seven companies in other segments), social and governance-related matters (nine companies in the construction sector, five companies on corruption grounds, one company for other reasons), deforestation (two palm-oil producers, four paper producers, one coal mine in India), and water and conflict (nine companies engaged in general mining and precious metals production). In total, the bank has divested from 187 companies since initiating risk-based divestment in 2012.

#### *Environment-related investment mandates*

Since the adoption of separate environment-related investment mandates in 2009, Norges Bank has established internal and external management mandates focusing on companies which

contribute to reducing environmental problems, particularly through the development of new environmental technologies. At the end of 2015, NOK 53.8 billion was invested in securities under the environment-related mandates. In recent years, these mandates have produced a lower return than the Fund as a whole; see section 2.2.

#### **6.2.2 The Government Pension Fund Norway**

The Board of Directors of Folketrygdfondet has adopted responsible management principles based on the UN Global Compact, OECD Principles of Corporate Governance and OECD Guidelines for Multinational Enterprises. Folketrygdfondet also refers to the UN PRI and the Norwegian Code of Practice for Corporate Governance (NUES). These principles define a general framework for how Folketrygdfondet is to deal with environmental, social and corporate governance issues in seeking to maximise returns over time.

Folketrygdfondet is of the view that company follow-up contributes to both lower risk and favourable portfolio performance over time. As a financial investor, Folketrygdfondet engages in key ownership issues like financial objectives and capital structure, board composition, corporate governance, reporting and transparency. Folketrygdfondet also considers monitoring of corporate executive remuneration policies an important instrument for safeguarding shareholder value.

Folketrygdfondet has prepared guidance notes for companies' handling of executive remuneration schemes, financial objectives and capital structure, human rights, labour rights, the environment, climate issues and anti-corruption. The guidance notes are designed to facilitate effective dialogue with companies by clarifying Folketrygdfondet's expectations of companies in terms of understanding, dealing with and reporting on material risks and opportunities in these areas. The notes are incorporated into Folketrygdfondet's responsible investment principles and based on the UN Global Compact and NUES.

Folketrygdfondet has integrated the responsible management effort into both its investment activities and its ownership follow-up. In 2015, Folketrygdfondet included the ownership report in its annual report. The document "Folketrygdfondet's exercise of ownership rights", which details how the Fund practises its ownership in Norwegian and Nordic businesses, was updated.

### *Focus areas for active ownership*

Folketrygdfondet has for several years prepared risk analyses relating to environmental, social and corporate governance issues (so-called ESG issues) for all Norwegian companies in the equity portfolio. The Fund also has access to external ESG analyses for some Norwegian companies and all Nordic companies. Based on these analyses, Folketrygdfondet decided to focus particularly on companies' financial objectives and capital structure, greenhouse gas emissions and corporate anti-corruption efforts in 2015. The analyses also constitute the basis for dialogue with the portfolio companies, during which Folketrygdfondet discusses current challenges and outlines its principles and expectations.

In the Norwegian stock market, Folketrygdfondet holds regular meetings and maintains regular contact with company executives, and with the board chair on matters that fall within the responsibilities of the board of directors. In its annual report for 2015, Folketrygdfondet states that it has engaged in dialogue with all 49 Norwegian portfolio companies on key ownership issues and specific incidents.

For the Nordic companies, Folketrygdfondet uses an external service provider to monitor compliance with international norms and environmental, social and corporate governance standards. The service provider reports suspected breaches. In response, Folketrygdfondet conducts its own analyses and considers how the notified problem should be dealt with. Folketrygdfondet received three such reports in 2015, relating to human rights, corruption and workers' rights. Based on related analyses, Folketrygdfondet took steps with respect to one company.

The issuers in the fixed-income portfolio are regularly monitored, and efforts are made to integrate ESG analyses into ongoing credit assessments. In Folketrygdfondet's view, how an issuer handles environmental and social issues provides an indication of credit risk.

Folketrygdfondet seeks to incorporate information on climate risk into its management activities, including through a CO<sub>2</sub> analysis of the investment portfolio.

### *General meetings and election committees*

Folketrygdfondet votes at the general meetings of all companies in which it holds ownership stakes. In 2015, Folketrygdfondet cast votes at a total of 49 ordinary general meetings and 10 extraordi-

nary general meetings of companies listed on the Oslo Stock Exchange. Over that period, Folketrygdfondet voted against proposals put forward by the boards of five Norwegian companies. These proposals concerned, inter alia, executive remuneration, good corporate governance and option schemes.

As regards the Nordic companies in its portfolio, Folketrygdfondet voted at a total of 90 general meetings in 2015, all by proxy with voting instructions. In the Nordic region, Folketrygdfondet voted against, or abstained from voting on, a total of 26 proposals put forward by company boards. These proposals concerned, inter alia, executive remuneration and incentive schemes.

Folketrygdfondet emphasises the important role of election committees in composing competent boards. In 2015, Folketrygdfondet was represented on seven election committees of Norwegian companies. It also participated in four corporate assemblies and three shareholders' committees.

### *Development of best practice*

Folketrygdfondet is involved in various external initiatives to develop best practice and robust standards for business activity, including the Norwegian Institute of Directors, the Norwegian Society of Financial Analysts and the Eierforum group of institutional investors. Folketrygdfondet is also one of the driving forces behind and an active member of the Norwegian Forum for Sustainable and Responsible Investment (NORSIF).

### **6.2.3 Observation and exclusion of companies from the GPFG**

The Ministry of Finance has adopted ethically motivated guidelines on observation and exclusion of companies from the GPFG; see Box 6.2. The Council on Ethics makes recommendations as to whether a company should be excluded or placed under observation. The decision is made by Norges Bank.

A list of the companies excluded or under observation is available on the Norges Bank website, while the relevant recommendations are available on the website of the Council on Ethics. According to the list, 64 companies were excluded and one company was under observation as at the end of 2015. Four new companies were excluded during the course of the year. Observation of one company was concluded, and one new company was placed under observation.



### *Product-based exclusion*

The Council on Ethics uses an external consultancy firm that continuously monitors the portfolio companies for production potentially in violation of the guidelines. In addition, the Council on Ethics collaborates with other financial institutions to identify companies that produce cluster munitions.

The Council on Ethics normally contacts companies if there is reason to believe that they are engaged in production in violation of the guidelines for the Fund. If a company confirms the information held by the Council, an exclusion recommendation is sent to Norges Bank. Companies that fail to respond to an enquiry from the Council are recommended for exclusion if the Council's documentation shows that they are highly likely involved in the production of goods encompassed by the exclusion criteria. This procedure is designed to achieve a reasonable degree of assurance that companies making products in violation of the guidelines are excluded from the Fund. However, there is no guarantee that the Council's monitoring system will cover all companies at all times.

The government bond exclusion provision was introduced in 2010, and currently applies to interest-bearing securities issued by North Korea and Syria. The Council on Ethics has thus far not identified any portfolio companies that sell weapons or military materiel to these countries. One company was excluded when Myanmar was previously included on the list, but this exclusion was subsequently revoked. Iran was removed from the list in February 2016.

As at yearend 2015, 39 companies were excluded from the Fund under the product-based criteria. Some 18 of these companies have been excluded on the basis of production of weapons that violate fundamental humanitarian principles in their normal use, while 21 companies are excluded for producing tobacco.

### *Conduct-based exclusion*

The Council on Ethics assigns priority to companies and topics for conduct-based follow-up. While problem areas are typically reviewed in accordance with a long-term plan, individual cases are usually investigated in response to news coverage. An external consultancy firm monitors a range of news sources in multiple languages every day for material on portfolio companies. The Council receives quarterly reports from the consultancy

firm and investigates the companies which appear to present the greatest risk of future breaches of standards. The Council also receives and assesses enquiries from individuals and organisations relating to specific companies or issues.

Amongst the cases identified through news searches, external enquiries and sector studies, the Council on Ethics selects the most serious instances for further investigation. The Council gives weight to, *inter alia*, how serious the norm violation is, whether the company is accused of several counts of unethical conduct, whether it is likely that norm violations will continue, and the scope for documenting the conduct of which the company is accused. The aim is to identify companies where there is an unacceptable risk that violations of the ethical guidelines are taking place and that such violations will continue.

Norges Bank is also authorised to draw the Council on Ethics' attention to potential problems, and sent 16 letters relating to such matters in 2015. Further, the Council obtains information from researchers and research institutions, international, regional and national organisations and various other sources. The Council often engages consultants to investigate suspected guideline violations. The portfolio companies themselves are also an important source of information. There is often close dialogue, both oral and written, with the companies during the investigation process.

For several years, the Council on Ethics has systematically reviewed the investments of the GPF in companies involved in certain types of activity capable of causing serious environmental problems. In 2015, the Council devoted considerable attention to companies establishing plantations in tropical rainforests and companies involved in unregulated, unreported or illegal fishing. Under the human rights criterion, the Council surveyed portfolio companies engaged in textiles production in certain Asian countries, as well as companies involved in construction projects in Qatar. The Council's risk approach in corruption cases is to review countries and sectors which international rankings indicate to be particularly vulnerable to corruption. Thus far, the Council has concentrated on the building and construction industry, the oil and gas sector, the defence industry and the telecommunications industry.

The Council on Ethics contacts companies at an early stage in its examination of cases. Companies are requested to answer questions or send information to the Council. In 2015, the Council contacted 42 companies, and met with 11 of these. The Council prioritises obtaining information



directly from companies, but may also issue a recommendation to Norges Bank if a company fails to respond to the Councils' enquiries.

At yearend 2015, a total of 25 companies were excluded from the GPFG under these criteria, including 17 companies excluded because they are deemed to cause severe environmental damage. Three companies are excluded on the basis of contributions to serious or systematic human rights violations, while two companies are excluded based on other particularly serious violations of fundamental ethical norms. Three companies have been excluded on the basis of serious violations of individuals' rights in situations of war or conflict.

#### *Observation*

The observation of one company pursuant to the gross corruption criterion has been concluded. During the observation period, the Council on Ethics monitored matters such as the company's development of anti-corruption systems. A new company which has established palm-oil plantations in tropical rainforests has been placed under observation pursuant to the severe environmental damage criterion.

#### *Discontinuation*

The Council on Ethics evaluates annually whether the grounds for excluding or observing a company continue to apply. If new information indicates that the basis for exclusion or observation is no longer pertinent, the Council on Ethics recommends the revocation of the earlier decision.

### **6.3 Climate considerations and coal companies in the GPFG**

#### **6.3.1 Introduction**

The GPFG's investments in and use of measures towards coal companies were discussed in the report on the Fund for 2014 and the National Budget 2016. Pursuant to the Storting's deliberation of these documents, the Ministry of Finance has amended the guidelines for observation and exclusion from the GPFG; see Recommendation No. 290 (2014–2015) and Recommendation No. 2 (2015–2016).

The Ministry of Finance adopted a conduct-based climate criterion for observation and exclusion of companies with effect from 1 January 2016. The criterion targets companies associated

with an unacceptable risk that they contribute to or are responsible for "acts or omissions that on an aggregate company level lead to unacceptable greenhouse gas emissions". The overarching understanding of the criterion was discussed in the report on the Fund for 2014, in which it was also pointed out that the detailed interpretation of the provision would develop over time. The criterion is incorporated in a new sub-paragraph (d) in section 3 of the guidelines.

The Ministry has also included a new product-based coal criterion in the guidelines with effect from 1 February 2016. Further, a number of other changes have been made to the guidelines and mandate for the management of the GPFG as a result of the new criterion; see sections 6.3.2–6.3.4.

Various other processes of relevance to these topics have been initiated. Norges Bank is currently reviewing the risk associated with portfolio companies involved in activities such as coal extraction, coal power generation and coal-based energy conversion, where these activities represent a significant part of the companies' business; see section 6.3.5. The Ministry plans to discuss financial risk resulting from climate change in the report on the Fund to be published in the spring of 2017. The Ministry also intends to return to the question of whether the GPFG's investment strategy should be considered from a national wealth perspective allowing for oil-price risk in the Norwegian economy to be illustrated in a broader perspective; see the report on the Fund for 2014. This topic is to be covered in the forthcoming report on long-term perspectives for the Norwegian economy.

#### **6.3.2 Details of changes to the responsible management framework**

The Council on Ethics and Norges Bank have been consulted on the proposed changes to the responsible management framework. Neither institution made any material comments. The Council on Ethics' letter of 19 January 2016 and the letter of 28 January 2016 from Norges Bank are available on the Ministry of Finance's website.

The wording of the main provision on product-based observation and exclusion of coal companies in section 2(2) of the guidelines is as follows:

"Observation or exclusion may be decided for mining companies and power producers which

themselves or through entities they control derive 30 per cent or more of their income from thermal coal or base 30 per cent or more of their operations on thermal coal.”

According to the Storting’s consideration the criterion shall:

- Apply to mining companies and power producers which produce or use coal for energy purposes, so-called thermal coal. The term “thermal coal” has been added compared to the wording presented in the National Budget 2016. Metallurgical coal, for example for use in steel production, is not covered.
- Apply to actual production. The purchase and sale of coal, its transportation and distribution, and energy trading are not covered.
- Be interpreted to mean that it is sufficient for a company to exceed one of the threshold values (income/operational) in order for the proportion of coal to be deemed material. Difficulties inherent in threshold assessments are described in the National Budget 2016, and it is stated that detailed interpretation and practice must develop over time.

Further, the relevant assessment basis will be whether a parent company directly or through units under its control (subsidiaries) exceeds either the income threshold or the proportion-of-operation threshold. The income assessment should be based on consolidated accounting figures. In Recommendation No. 2 (2015–2016) the Standing Committee on Finance and Economic Affairs states that the provision on controlling units “shall be interpreted to mean that the company cannot automatically remain in the portfolio simply by establishing one or more subsidiaries for its coal operation. The majority notes that the relevant assessment basis will be whether the company directly or through subsidiaries controlled by the company in question exceeds either the income threshold or the proportion-of-operation threshold.”

The wording of the criterion permits application of the criterion to be adjusted as experience is gained. The criterion has been given an overarching, general and discretionary form providing the necessary leeway to make forward-looking assessments and facilitate a chain of measures as emphasised by the Storting, for example in Recommendation No. 290 (2014–2015).

The objective of forward-looking assessments is sought to be safeguarded through the wording of section 2(3):

“In assessments pursuant to subsection (2) above, in addition to the company’s current share of income or activity from thermal coal, importance shall also be attached to forward-looking assessments, including any plans the company may have that will change the share of its business based on thermal coal and the share of its business based on renewable energy sources.”

In its letter of 28 January 2016, Norges Bank stated that some discretion should be allowed, for example to assess the appropriate weight to be attached to the proportion of renewable energy in a power producer’s operation in the overall assessment. The Ministry supports this approach.

The wording of the second paragraph has been adjusted slightly compared to the wording presented in the National Budget 2016. The addition of a third paragraph on forward-looking assessments meant that the second paragraph had to be amended to relate only to the current situation.

In accordance with Recommendation No. 2 (2015–2016), section 2 of the guidelines contains a new fourth paragraph stating that recommendations and decisions on exclusion shall not include a company’s green bonds, provided that these are recognised through inclusion in specific indices for green bonds or are verified by a recognised third party.

Before making a decision on exclusion, Norges Bank shall consider whether other measures, including the exercise of ownership rights, may be more suited to reduce the risk of continued norm violations, or whether such alternative measures may be more appropriate for other reasons. The Bank shall consider the full range of measures at its disposal and apply these in a coherent manner. The provision in section 6(3) also applies to the new coal criterion. Correcting an oversight, this provision no longer applies to decisions on the reinclusion of companies or cancellation of observations.

The same transparency procedure applies as under the other criteria, namely that the name of companies which are placed under observation or excluded – and the decision basis – must be published.

### 6.3.3 Division of labour between the Council on Ethics and Norges Bank

Pursuant to Recommendation No. 2 (2015–2016), Norges Bank has been given formal responsibility

for identifying and excluding companies under the coal criterion, also where the Council on Ethics has not made a recommendation. The same applies to reinclusion. In addition, the Council has independent authority to recommend observation and exclusion of companies under the coal criterion.

The same transparency procedure applies as to recommendations from the Council on Ethics. This entails publication of the decision basis drawn up by the Bank.

Provisions in this regard have been included in section 1(4) on the scope of the guidelines, section 6(1) on Norges Bank's jurisdiction and tasks, and section 8(1) on publication.

#### **6.3.4 Financial divestment of coal companies**

In recent years, Norges Bank has made risk-based divestments from some coal companies under the scope for deviations from the benchmark index. Based on the Storting's endorsement in Recommendation No. 2 (2015–2016), section 12(2) of the guidelines now states that securities which would have been covered by the new product criterion if they had still been included in the portfolio may be excluded and eliminated from the benchmark index. Hence, such securities will no longer form part of the benchmark index against which the Bank's investments are measured. The same procedures must be followed as for other decisions, including publication of the company's name and the decision basis.

#### **6.3.5 Report on the risk associated with coal investments**

In June 2015, the Ministry of Finance asked Norges Bank to review the risk associated with investments in companies for which activities such as coal extraction, coal power generation or coal-based energy conversion constitute a material proportion of operations.

In August 2015, Norges Bank engaged the Smith School of Enterprise and the Environment at the University of Oxford to analyse and write a report on the risk associated with coal investments. It was emphasised that different risk factors facing companies involved in coal mining, coal power generation and other coal-based energy conversion ("coal-to-liquid") should be evaluated. The Smith School of Enterprise and the Environment published a report covering the 100 largest coal-power companies, the 30 largest coal-mining companies and the 30 largest "coal-to-liquid" companies in January 2016. The analysis

includes a forward-looking assessment of environment-related risks for coal companies, such as air pollution, regulatory changes, pricing of CO<sub>2</sub> emissions, access to water of sufficient quality and technological changes.

The report forms part of the Bank's analysis of climate risk. The primary objective of the Bank in requesting the report is to convert research results into a useful foundation for the work of investors in the areas of risk management, exercise of ownership rights and divestment. Studies of environment-related risk commonly examine CO<sub>2</sub> emissions and intensity based on company-level reporting (the "top-down approach"). This report analyses the individual assets in the thermal-coal value chain based on a range of environment-related risk factors (the "bottom-up approach"). According to the report, this provides better insight into companies' future prospects.

### **6.4 OECD Guidelines for Multinational Enterprises**

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The OECD Guidelines for Multinational Enterprises are voluntary recommendations intended to promote responsible conduct in all business sectors. They were launched in 1976, and have most recently been updated in 2011. The guidelines are not legally binding, and individual enterprises are required to assess independently how they can best be implemented. In some areas, the guidelines overlap with other standards, such as the UN Guiding Principles on Business and Human Rights (UNGPR).

Adhering governments are obliged to set up a national contact point for responsible business conduct. The contact points are mandated to spread knowledge about the guidelines and offer dialogue and mediation in individual cases. The Norwegian contact point is an independent specialist body subject to the administrative oversight of the Ministry of Foreign Affairs.

The management mandate for the GPFG requires Norges Bank to adopt a broad set of responsible investment principles. The principles must be based on the objectives of good corporate governance and environmental and social considerations in line with internationally recognised principles and standards, including the OECD Guidelines for Multinational Enterprises. Norges Bank exercises the Fund's ownership rights, and has in this context stated that companies in which the Fund is invested are expected to follow the recommendations in the guidelines.

A research report prepared in 2013 showed that many financial institutions regarded the OECD Guidelines for Multinational Enterprises as unclear, and that the guidelines are little used in the financial sector. In 2014, the OECD discussed the interpretation of certain principles and terms in the guidelines, among other things in response to an enquiry from Norway. This work was supervised by the OECD's investment committee and a working group on responsible business conduct. It was agreed that the guidelines are applicable to the financial sector and also, in principle, to minority shareholders. However, the guidelines do not discuss explicitly what responsibility financial investments entail. This contrasts with the provisions on, for example, the responsibility of purchasers for suppliers.

The OECD has for several years worked to develop concrete guidance documents on practical application of the guidelines in different sectors. In the autumn of 2015, work began on drafting guidance on the use of the guidelines in the financial sector. This work is being supervised by the working group on responsible business conduct and a reference group comprising representatives from central governments, industry, international organisations, trade unions and academic institutions. The Ministry of Finance and Norges Bank are involved in the reference group. The guidance documents are due to be issued during the course of 2016.

## **6.5 Expectation document on human rights**

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In connection with its consideration of the report on the Fund for 2014, the Storting adopted the following petition resolution on 5 June 2015: "The Storting requests the Government to ask Norges Bank to consider whether an expectation document on human rights can be prepared, and which human rights areas can be included in such a document."

Pursuant to this resolution, the Ministry of Finance asked Norges Bank, in a letter of 23 June 2015, to consider the feasibility of preparing such a document. In its reply of 1 February 2016, the Bank described how human rights are incorporated into the GPF's responsible management efforts and discussed the question of a new expectation document. In February 2016, Norges Bank presented an expectation document on human rights.

Norges Bank uses expectation documents in selected areas as a tool in its work on responsible

investments. The expectation documents are general in nature, and express expectations directed at company boards on topics such as strategy, risk management, reporting and transparency. The expectations also serve as a starting point for the asset manager's engagement with companies.

The expectation document on human rights presented in February specifies Norges Bank's expectations, in its capacity as a financial investor, that companies shall respect human rights in accordance with the international UNGP guidelines. The Bank states that companies have an independent responsibility to evaluate how, and to what extent, the UNGP guidelines are relevant to their activities. Companies must demonstrate due care and seek to reduce the risk of human rights violations. Norges Bank considers respect for human rights as an aspect of good business practice and risk management. Company boards are also expected to give appropriate consideration to other affected parties and deal with their interests in an orderly manner.

Norges Bank points to the initial framework for company reporting on the UNGP which was developed in 2015. Reliable reporting is important for the human rights-related efforts of the authorities, shareholders, companies and other stakeholders.

The Bank also states that roles and responsibilities should be distributed between shareholders and company boards in conformity with recognised international corporate governance principles. This guides expectations as to what can be achieved through the exercise of ownership rights. Investors have special ownership rights, including the right to vote at general meetings and a right to information. Investors can also initiate dialogue with companies, although minority shareholders should not seek to micromanage. The Bank's expectations documents are therefore general in nature, and directed at company boards.

In Norges Bank's view, effective exercise of ownership rights must be based on principles and standards which enjoy broad shareholder support. Expectations towards companies in the area of human rights should be based on the UNGP and OECD guidelines and principles, and thus aim to reflect and promote such accepted standards.

The expectation document does not refer separately to individual human rights. Rather, it adopts the same breadth of rights as the UNGP and OECD guidelines. Key instruments in this context include the Universal Declaration of Human Rights, the International Covenant on

Economic, Social and Cultural Rights (ICESCR) and the International Covenant on Civil and Political Rights (ICCPR), as well as the ILO core conventions on fundamental rights and principles at work. Norges Bank understands this approach to be widely supported.

The expectation document on human rights supplements existing documents on climate change, water management and children's rights. These were updated in 2015. The updated document on children's rights reflects the normative basis the UNGP provides for human rights in general, and children's rights in particular.

## 6.6 Exclusion of companies from the GPFN, etc.

Both the GPFG and the GPFN are invested in listed equities and bonds in Denmark, Finland and Sweden. The Council on Ethics is responsible for evaluating whether the GPFG's investments conflict with the ethically motivated guidelines on observation and exclusion from the GPFG. The Council makes recommendations to Norges Bank on observation and exclusion from the GPFG, but has no corresponding role with respect to the GPFN. However, it is assumed that a Nordic company in which both the GPFG and GPFN are invested will be excluded from the investment universes of both funds if a decision is made to exclude the company from the GPFG.<sup>1</sup> The mandate for the management of the GPFN reflects this.

Decision-making authority on observation and exclusion of companies from the GPFG was transferred to Norges Bank with effect from 1 January 2015. Since the ethically motivated observation and exclusion criteria are determined by the political authorities also under the new arrangement, and decisions are based on a recommendation relating to the GPFG, the Ministry of Finance assumes that companies which are excluded from the GPFG shall continue to be excluded from the GPFN's investment universe. The same is assumed to apply to reinclusions.

On this basis, the Ministry has laid down a general restriction in the mandate for the management of the GPFN stating that the Fund shall not be invested in securities which are excluded pursuant to the guidelines for observation and exclu-

sion from the GPFG (see section 3–1(3) and section 3–6(8), amended on 14 March 2016). This means that such securities will not be included in the investment universe of the GPFN, and that no specific decision to exclude from the GPFN's investment universe is required in each individual case. In the Ministry's view, it is no longer appropriate for the Ministry to make individual decisions concerning exclusion from the GPFN; see the discussion in the report on the Fund for 2013.

Nor shall securities which are excluded pursuant to the guidelines be included in the benchmark index for the GPFN. The Ministry of Finance sets the date for exclusion and reinclusion of such securities in the benchmark index; see section 3–1(3) of the mandate. This mirrors the arrangement for the GPFG; see section 6.7.

The established procedure is that the Ministry notifies Folketrygdfondet once Norges Bank's exclusion or reinclusion decision is announced publicly. Folketrygdfondet is required to report on exclusions and reinclusions in its quarterly and annual reports.

### *Exercise of ownership rights independently of the Ministry of Finance*

Documents such as the preparatory works to the Government Pension Fund Act<sup>2</sup> envisage that the Ministry of Finance will not instruct Folketrygdfondet on issues relating to the exercise of ownership rights in individual companies. As of 14 March 2016, section 1–2(3) of the mandate for the management of the GPFN states that Folketrygdfondet shall exercise ownership rights independently of the Ministry.

### *Clarification of the objective for responsible management efforts*

On 14 March 2016, a new formulation of objectives was included in section 1–3 of the mandate for the management of the GPFN. A general clause (section 2–1) on responsible management principles was included at the same time. These changes reflect corresponding changes to the mandate for the GPFG implemented on 1 January 2015. The amendments relating to the GPFG were discussed in the report on the Fund for 2013, in which the Ministry stated that the link between sustainable development and robust long-term returns must be understood as a specification of

<sup>1</sup> See for example the report on the Fund for 2006 and the preparatory works to the Act relating to Folketrygdfondet (Proposition No. 49 (2006–2007) to the Odelsting, section 2.2, penultimate paragraph, on fund management).

<sup>2</sup> Proposition No. 2 (2005–2006) to the Odelsting relating to the Government Pension Fund Act, section 3.4.2.

the overarching objective of achieving the highest possible return.

In addition, some linguistic and minor editorial changes have been made to reflect the terminology and structure of the GPFG's mandate. This applies, for example, to the term "responsible investment", which has been replaced by "responsible management".

### **6.7 Adjustment of the benchmark index when companies are excluded from the GPFG**

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The guidelines for observation and exclusion from the GPFG provide that companies may be excluded on the basis of conduct (e.g. serious human rights violations and severe environmental damage) or production (e.g. tobacco, weapons and coal). Equities and bonds issued by excluded companies shall not be included in the GPFG's benchmark index; see section 3–2(9) and section 3–3(5) of the GPFG mandate. Pursuant to section 3–1(3), Norges Bank must have guidelines in place for excluding and reincluding companies in the Fund's investment universe and benchmark index.

In a letter of 4 December 2015, Norges Bank recommended that the Ministry of Finance should set a date for exclusion from and reinclusion in the benchmark index. The Ministry supports this proposal, and has with effect from 1 February 2016 included a provision in this regard in the mandate; see section 3–1(3), new second sentence. Further, a new second sentence stating that the Bank shall inform the Ministry of exclusion and reinclusion decisions has been added to section 2–5, which assigns the authority to make decisions under the guidelines for observation and exclusion to Norges Bank.

### **6.8 Evaluation of the new distribution of responsibility for excluding companies from the GPFG**

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The Ministry of Finance has adopted ethically motivated guidelines on observation and exclusion of companies from the GPFG. The Council on Ethics makes recommendations as to whether a company should be excluded or placed under observation, while the decisions in such cases are made by Norges Bank. Until 2015, the Ministry decided whether a company should be excluded or placed under observation. The members of the Council on Ethics are still appointed by the Minis-

try, and the candidates are recommended by Norges Bank.

A proposal for a new division of labour was discussed in the report on the Fund for 2012, published in the spring of 2013. One purpose of the change was to facilitate productive cooperation between the Council on Ethics and Norges Bank to make integrated assessments of the different policy instruments easier and support appropriate use of these in each individual case. The Storting followed up on this objective in its consideration of the report, with the majority of the Standing Committee on Finance and Economic Affairs writing, among other things, that "... when the exclusion mechanism is transferred to Norges Bank, it will be important that the Strategy Council's recommendations on clearer lines of responsibility and better communication and integration of work between Norges Bank and the Council on Ethics are implemented and improved to ensure that the chain of policy instruments is as coherent as possible and that external communications are regarded as unambiguous" (Recommendation No. 200 (2013–2014)). The majority of the committee assumed that the new organisational structure would be evaluated in the annual reports to the Storting. The report on the Fund for 2014 stated that the Ministry would return to this issue in this report.

The new framework has been effective for a relatively short time. In this initial evaluation, the Ministry of Finance has therefore concentrated on individual and joint procedures and work methods adopted by Norges Bank and the Council on Ethics in implementing the framework. The Ministry asked Norges Bank and the Council to provide their evaluations. The Bank and the Council's letters of reply – both of 29 January 2016 – are available on the Ministry of Finance's website.

Norges Bank's Executive Board has adopted principles for the Bank's work on responsible management. As discussed in the Bank's report on responsible investment in 2015 the Executive Board has also established a corporate governance committee which prepares matters for and makes recommendations to the Executive Board concerning responsible management and observation and exclusion of companies from the Fund. The committee comprises one of the Bank's deputy governors and two external board members. Decisions are made by the Executive Board.

In addition to recommendations from the Council on Ethics, the Executive Board gathers input from the Bank's asset management unit, NBIM, regarding companies which are candidates for

exclusion or observation. In this context, consideration is also given to whether exercise of ownership rights may be a more appropriate instrument. These evaluations are based on factors such as the amount invested, whether a relationship has been established with the company, the Fund's ownership share in the company and the matters raised in the Council's recommendation.

The Ministry understands the aim of ensuring "that the chain of policy instruments is as coherent as possible" to mean that all measures must be considered from an integrated perspective, and that they must collectively be applied in the most purposive manner possible. This will only be possible if strong procedures are in place for the exchange of information between the Bank and the Council on Ethics.

Norges Bank and the Council on Ethics have introduced procedures for the exchange of information and coordination. Norges Bank keeps the Council updated on which companies the Fund is invested in, and on contact between the Bank and portfolio companies. The Council notifies Norges Bank of companies under investigation. The Bank and the Council hold quarterly meetings to discuss the work on individual companies and future work plans.

According to the guidelines, "communications with companies shall be coordinated and aim to be perceived as consistent". The Council on Ethics informs Norges Bank, represented by NBIM, when it wishes to contact a company. If deemed purposive, NBIM informs the company that it will be contacted. The Council gives priority to explaining its role in the responsible management framework to relevant companies.

Norges Bank and the Council on Ethics emphasise transparency. However, it is generally impossible to name companies under evaluation before a recommendation has been issued and a decision made. All exclusion decisions in 2015 were published after the divestment was concluded. The

Council published its recommendation at the same time as Norges Bank made its decision public. Both the Council and Norges Bank discuss recommendations and decisions in their annual reports and on their respective websites.

#### *The Ministry's assessment*

The changes in division of labour have resulted in the Council on Ethics and Norges Bank now being in direct contact regarding responsible management issues. However, they play different roles. The Council makes recommendations to Norges Bank regarding companies to be placed under observation or excluded from the Fund, while the Bank makes decisions under the guidelines. The Council is an independent body, and there are clear lines of responsibility.

The different measures available, such as observation, exclusion and exercise of ownership rights, should not be considered in isolation. Closer contact between the Council on Ethics and Norges Bank provides a basis for viewing the instruments from a more integrated perspective and utilising them optimally in each individual case. This demands reliable procedures for the exchange of information between the Council and Norges Bank. The Council and the Bank have adopted such procedures.

The guidelines have been effective for a relatively short time, and the Ministry considers that the Council on Ethics and Norges Bank have made good progress in the implementation of such guidelines. The Ministry expects these efforts to continue. When more time has passed, a review will provide an assessment of whether the new organisational structure has contributed to strong, uniform responsible management of the GPF. Evaluations will be conducted regularly, and will be discussed in the relevant reports on the Fund.

*Part II*  
*Thematic articles*





## 7 Gross excess return as a management performance measure

### 7.1 Introduction

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The Ministry of Finance has adopted mandates for the management of the Government Pension Fund Global (GPFG) and Government Pension Fund Norway (GPFN) by Norges Bank and Folketrygdfondet, respectively. The mandates express the funds' investment strategies, including provisions on the composition of the respective benchmark indices and risk limits. The mandates provide that the managers shall seek to achieve the highest possible returns on the GPFG and GPFN – measured in international currency and Norwegian kroner, respectively – after asset management costs.

The mandates permit Norges Bank and Folketrygdfondet to deviate from the applicable benchmark indices subject to given risk limits. The limit on market risk as measured by expected tracking error is key. It allows the managers to exploit the funds' distinctive characteristics and advantages to achieve excess returns compared to the benchmark indices, and offers an opportunity for cost-effective adjustment to the benchmark indices. Deviations from the benchmark indices may raise or lower the funds' absolute risk relative to the benchmark indices.

The Ministry of Finance employs *gross excess return*, defined as the difference in the returns on the Fund and the benchmark index, as the management performance measure. The figure is based on the audited accounts and is independent of model assumptions and estimated parameters. The performance measure is a gross quantity that ignores costs. However, index management also incurs costs. The Ministry has previously referred to calculations prepared by Norge Bank and Folketrygdfondet which support the view that gross excess return may be a reasonable approximation of net value added.

### 7.2 The division of labour between the asset owner and the manager

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The benchmark indices adopted by the Ministry of Finance for the GPFG and GPFN are based on leading, easily accessible and broad market indices for equities and bonds prepared by recognised index providers. The expected returns on the benchmark indices reflect the excess returns compared to risk-free investments achievable by harvesting risk premiums with a robust theoretical and empirical foundation, such as equity and credit premiums. Investments in line with broad market indices also ensure good risk diversification by reducing the significance of incidents in individual companies, sectors and markets.

Market indices are standardised products in which index providers decide on various choices and priorities relating to the representation of markets and securities. The requirement that included securities and markets must be liquid allows investors to buy securities in an index without incurring high transaction costs. In principle, indices can be followed closely at low cost. The benchmark indices for the GPFG and GPFN may therefore provide a suitable starting point for measuring the value added by the managers.

The choices and priorities of index providers are adapted to a theoretical average investor in the market. Accordingly, market indices do not necessarily express the optimal risk-return ratio for investors with distinctive characteristics that deviate significantly from the average, such as large size and a long investment horizon.

The scope for deviations from the benchmark indices stipulated in the mandates adopted by the Ministry of Finance is designed to afford the managers some leeway to make progressive adjustments to the composition of the investments in the two funds. Changes to investment composition to ensure cost-effective adaptation to the benchmark indices, greater risk diversification than in the benchmark indices, exploitation of factor strategies and appropriate security selection may, over time, improve the risk and return properties of the GPFG and GPFN. Such changes in

investment composition require specialist expertise, market proximity and the ability to make time-critical decisions, and are therefore delegated to the two managers.

In accordance with this division of labour, the Ministry of Finance uses gross excess return to measure the results of Norges Bank and Folketrygdfondet's management of the GPFG and GPFN, respectively. Gross excess return encompasses all deviations from the benchmark indices. This means that the results of all changes in the composition of the investments in the GPFG and the GPFN compared to the benchmark indices are attributed to the two managers. This is consistent with the management objective as expressed in the mandates from the Ministry.

### 7.3 The link between gross excess return and net value added

To assess the value added to the GPFG and GPFN by Norges Bank and Folketrygdfondet, respectively, the returns on the two funds must be compared to the returns, after costs, which could alternatively have been achieved. In principle, the returns on the benchmark indices cannot be achieved at zero cost.

The purchase and sale of securities in order to match investment to the benchmark indices – so-called index management – incur both management and transaction costs. Moreover, in the GPFG and GPFN, some transaction costs will be due to rebalancing of the equity portion to the strategic weighting stipulated by the Ministry of Finance. In the GPFG's case, costs have historically also been incurred in conjunction with capital inflows to the Fund. Changes in asset allocation have also historically imposed transaction costs on the GPFG and GPFN. Transaction and asset management costs are excluded from the return calculation for the benchmark indices. In principle, therefore, index management will entail a negative excess return compared to the benchmark indices.

Net value added through active management is a measure of the capital value added after costs, and is defined as the difference between the returns on the funds less actual asset management costs and the returns which could have been achieved through index management. The returns on the two funds, the returns on the benchmark indices and actual asset management costs have been audited and verified. Historical index management costs, on the other hand, are

based on uncertain estimates of costs linked to factors such as capital inflows, rebalancing, changes in portfolio composition and index adjustments. It is also necessary to estimate historical asset management costs related to index management.

Uncertainty about the size of these costs renders the precise amount of net value added uncertain.

As part of their management, Norges Bank and Folketrygdfondet lend securities to other investors and receive compensation for doing so. Securities lending is associated with risk, including counterparty risk. There is thus a need for reliable risk management systems and a robust legal framework. The Ministry of Finance has previously pointed out that, to some extent, it is reasonable to regard securities lending revenues as additional returns secured through active management; see the report on the Fund for 2009. Such revenues are included in the gross excess return, but are excluded from the return on the benchmark indices.

In connection with reviews of the management of the GPFG and GPFN discussed in the reports on the Fund for 2013 and 2014, respectively, both Folketrygdfondet and Norges Bank presented estimates of historical index management costs.<sup>1</sup> These estimates indicate that comparisons of gross amounts (gross excess return) and net amounts (net value added) produce similar results. This is because the estimated historical negative excess return achieved through index management is approximately equal to the actual historical asset management costs. The calculations do not take excess returns due to securities lending revenues into account. Accordingly, the gross excess return has thus far been regarded as a reasonable estimate of net value added.

### 7.4 Risk adjustment

Managers can achieve excess returns compared to benchmark indices in various ways, including by assuming additional risk. In financial literature, models are commonly used to explain historical results. A distinction is made between returns a manager secures by assuming systematic risk and

<sup>1</sup> The analyses are documented in a letter from Norges Bank to the Ministry of Finance of 12 March 2014 and a corresponding letter from Folketrygdfondet of 10 March 2015. The letters are available on the Ministry's website. Norges Bank has updated the analyses in its annual report for 2015.

returns due to other deviations. The latter estimates the risk-adjusted excess return, and is termed “alpha”. In principle, the purpose of such risk adjustments is to provide greater insight, in hindsight, into factors which may explain the excess return. The models assume that the owner can accept higher systematic risk directly, by adjusting the benchmark index. However, no single model or single set of assumptions provides an unambiguous answer to the question of how, in hindsight, risk has impacted performance. Nor is there an unambiguous answer to the question of what adjustments the owner can make to the benchmark index.

Under the Capital Asset Pricing Model, the risk associated with investing in the market portfolio is the only risk compensated for by the expected excess return beyond risk-free investment of the capital. Risk adjustment often employs the manager’s benchmark index as an approximation of the market portfolio. Under this model, the manager’s return is adjusted for the return achieved by accepting more or less systematic risk than the benchmark index. For example, the manager can accept more systematic risk by concentrating investments in assets which increase fluctuations in the return on the benchmark index. In the Capital Asset Pricing Model, the owner of the capital can directly increase or reduce systematic risk by debt financing investments in the benchmark index or making risk-free investments, respectively. Positive alpha can be interpreted as meaning that the manager has achieved a return above the return implied by compensation for risk-taking.

A manager may also employ so-called factor strategies through which investments are systematically tilted towards assets with particular characteristics, such as low market value, low relative price and low liquidity. Harvesting risk premiums has historically improved the risk-return ratio for investors like the GPFG. However, such strategies may entail long periods of higher or lower returns than the benchmark index and have a sizable negative impact during periods of market turbulence.

Although there is no agreement in the financial literature regarding which factors are priced into the capital markets or what risks factor premiums may potentially compensate for, models which adjust for the harvesting of factor premiums are still frequently used. In such models, the manager’s return is adjusted for the return achieved by accepting more or less systematic risk than in the benchmark index and other (assumed) systematic risk expressed by a

selected number of factor premiums. However, these factor premiums can reasonably be regarded more as explanatory variables than as compensation for accepting systematic risk (Eckbo and Ødegaard, 2015).

Different risk-adjustment models are based on different assumptions, and may produce different results. As Eckbo and Ødegaard (2015) have pointed out, adjustments may produce a positive, zero or negative alpha depending on which factor strategies are adjusted for and how these are measured.

Alpha is used to measure the manager’s skill in security selection, the exploitation of time variations in risk premiums and the harvesting of risk premiums excluded from the risk adjustment (Hsu, Kalesnik and Wermers, 2011). Alpha is therefore a conditional estimate of risk-adjusted excess return which depends on the risk model and data employed. Uncertainty about the choice of model, data and theoretical basis for different factor premiums suggests that care should be taken when interpreting estimates produced by such models. Using alpha from models which adjust for the harvesting of factor premiums as a management performance measure can also be problematic. As Dahlquist, Polk, Priestley and Ødegaard (2015) have pointed out, it can be argued that the results achieved by harvesting certain factor premiums must be attributed to the manager, and that no adjustment should be made for them.

An important point is that not all risk premiums can be harvested by adjusting the benchmark index. In the report on the Fund for 2010, the Ministry of Finance concluded that giving greater emphasis to factor strategies in the management of the GPFN was ineffectual. Among other things, it was pointed out that it is difficult to identify an unambiguous set of factors in the Norwegian market, and that factor premiums are insufficiently stable over time. Such factors mean that there is little purpose in seeking to adjust the benchmark index for the GPFN to harvest factor premiums.

The report on the Fund for 2012 contained comprehensive analyses of factor strategies for large global equity portfolios like that of the GPFG.<sup>2</sup> It was stated that it is difficult to identify the most appropriate adjustments, and that such adjustments may change over time. For a large fund like the GPFG, some strategies will entail

<sup>2</sup> The analyses were prepared by the index provider and consultancy firm MSCI (2013).

large transaction volumes and costs, and have low investability. The Ministry therefore emphasised the necessity of adapting the strategies to the Fund. It was concluded that the GPFG's distinctive characteristics mean that it is, in principle, well positioned to harvest factor premiums, but that the strategies should not be incorporated into the benchmark index stipulated by the Ministry.

Models which seek to estimate risk-taking by managers are also a useful tool for investigating how risk may, in hindsight, have impacted results. The Ministry of Finance regularly reviews the management of the two funds. This includes thorough analysis and evaluation of risk-taking by the managers. The risk-taking analyses in the most recent review of the GPFN's management do not indicate that Folketrygdfondet is taking on more systematic risk by concentrating investments in assets which display a higher degree of covariation with the benchmark index.<sup>3</sup> In the GPFG's case, the analysis results are not clear-cut.<sup>4</sup> The analyses also show that harvesting factor premiums appears to account for a considerable proportion of the excess return, particularly in the GPFG. Section 3–5(2) of the mandate for the GPFG provides that “[t]he equity and bond portfolio should be composed in such a way that the expected relative return is exposed to several different systematic risk factors”.

## 7.5 Summary

The Ministry of Finance uses gross excess return to measure the results achieved by Norges Bank and Folketrygdfondet in their management of the GPFG and GPFN, respectively. The performance measure is based on the division of labour between the Ministry and the two managers, and on the audited accounts. Calculations indicate that the gross excess return is also a reasonable measure of net value added through active management. This is because the actual historical asset management costs are approximately equal to the estimated historical negative excess return achieved through index management. The calcu-

lations exclude the excess return due to revenue from securities lending.

The gross excess return is not dependent on model assumptions or estimated parameters. The Ministry of Finance emphasises that performance measures should be as unambiguous as possible, and simple to understand and communicate. Moreover, the gross excess return should be supplemented by analyses that adjust for any returns achieved by the manager through systematic risk-taking, and analyses illustrating the harvesting of any factor premiums.

On 1 February 2016, the Ministry of Finance adopted new requirements for more detailed reporting on performance, risks and costs in the management of the GPFG; see section 3.4. Among other things, reports must now be made on the risk-adjusted return and the composition of the gross excess return.

Although gross excess return is used as the primary measure of the results achieved by the two managers, several supplementary measures and analyses are also employed.

The managers give an account of risk-taking in their reports on Fund performance. The Ministry of Finance presents supplementary measures in its annual report to the Storting on the Government Pension Fund, and conducts regular reviews of the management of the two funds. These reviews include evaluation of risk-taking.

## 7.6 References

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<sup>3</sup> See the enclosure to the letter of 10 March 2015 from Folketrygdfondet to the Ministry of Finance. The letter is available on the Ministry's website.

<sup>4</sup> See the report of the expert group comprising Ang, Brandt and Denison (2014), the enclosure to the letter of 12 March 2014 from Norges Bank to the Ministry of Finance, which is available on the Ministry's website, and Norges Bank's annual report for 2015.

## 8 The GPFG's benchmark index for equities and bonds

### 8.1 Background

The Ministry of Finance expresses the investment strategy for the GPFG through a benchmark index, risk limits and other provisions in the mandate issued to Norges Bank. The benchmark index plays an important role in the management of the GPFG, as it specifies the desired capital allocation across asset classes, geographical regions and currencies. The index incorporates separate benchmark indices for equities and fixed-income securities, and the real estate portfolio.

The long-term strategy for the GPFG specifies a fixed allocation to equities (60 percent), up to five percent in real estate and the remainder in fixed-income securities. See Figure 8.1. Distribution across asset classes is the primary determinant of the Fund's total risk.

The overarching principles underpinning the design of the benchmark indices for the equity and fixed-income portfolios are discussed below. Detailed rules for the fixed-income index and equity index are set out in section 3–2 and section 3–3, respectively, of the mandate for the management of the GPFG.

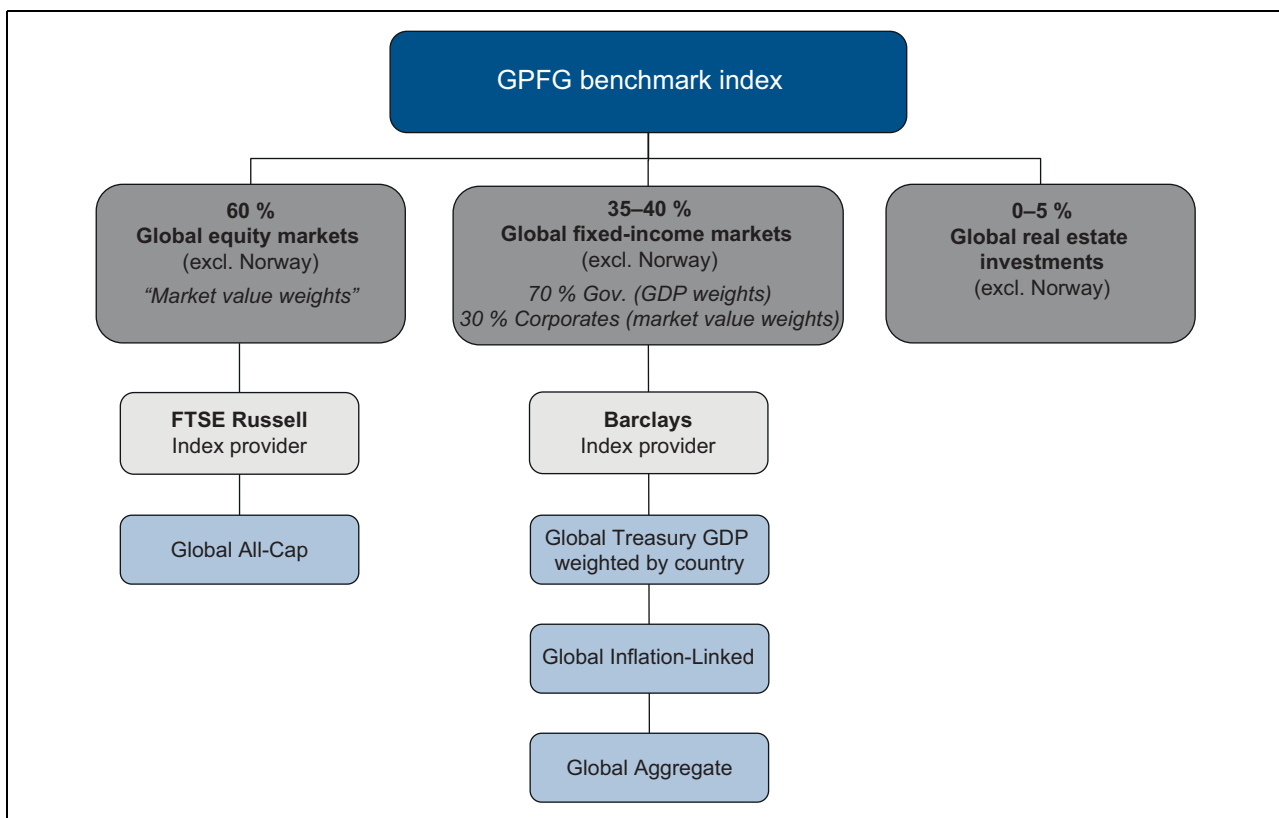


Figure 8.1 Benchmark index for the GPFG

Source: Ministry of Finance.

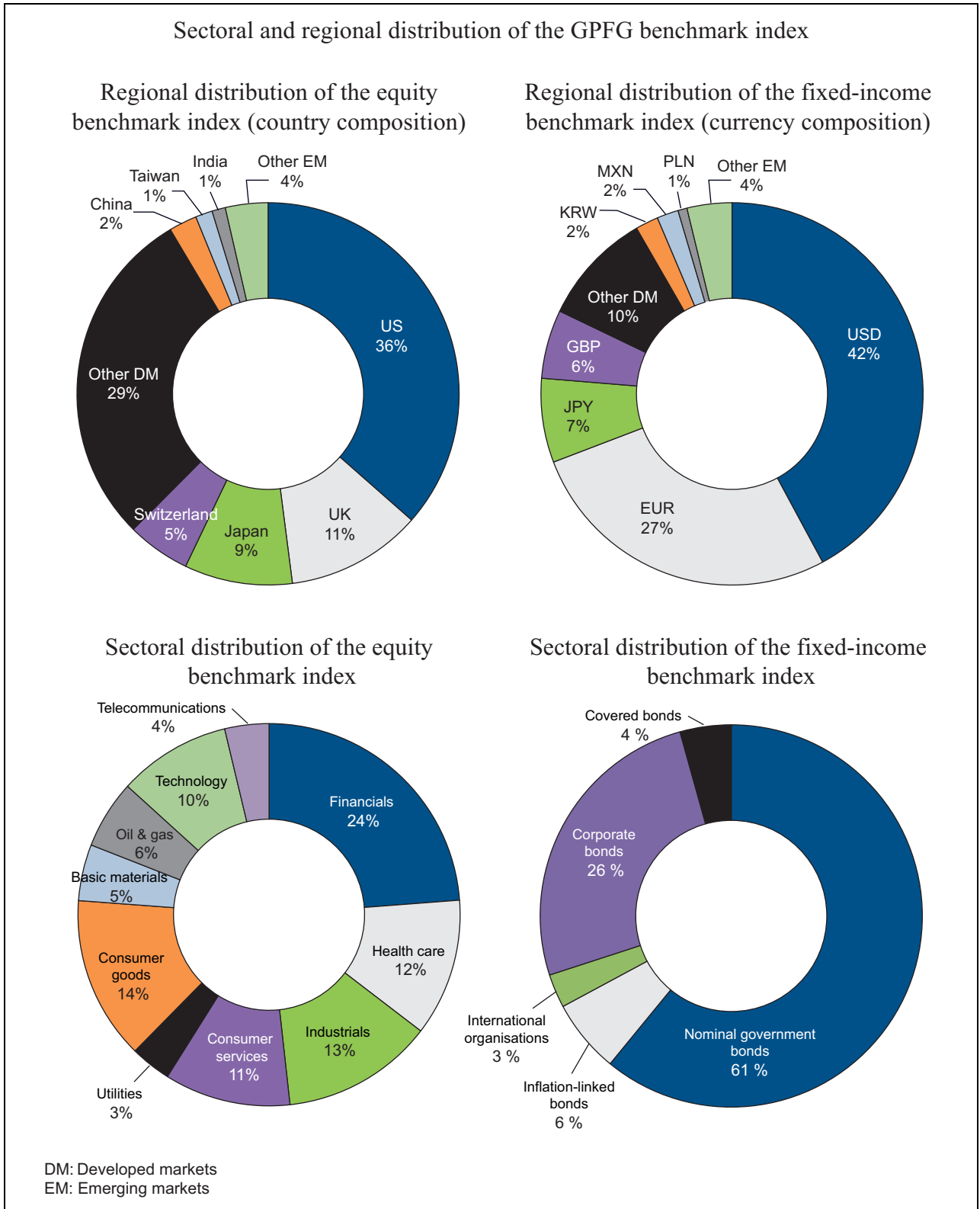


Figure 8.2 Distribution of the equity and fixed-income benchmark indices across geographical regions and sectors as of 31 December 2015

Sources: Norges Bank and Ministry of Finance.

## 8.2 Broad market indices

The investment strategy for the GPFG is based on the assumption that total risk in the Fund can be reduced by spreading the investments across a large number of securities, i.e. through diversification. The benchmark indices chosen for the GPFG's equity and fixed-income investments are based on broad global indices and generally reflect the investment opportunities available in global equity and bond markets. The benchmark indices provide a clear, detailed description of how the Fund should in principle be invested in different countries, sectors, currencies, individual companies and bonds; see Figure 8.2.

The broadness of a market index also depends on what inclusion criteria the index provider applies to securities. Among other things, providers decide which markets and securities should be included in a given index. Indices are generally constructed with the objective of broad risk diversification. A further aim is that indices should be investable. Highly liquid securities are therefore accorded priority in the composition of such indices, to ensure that broad groups of investors can invest in the selected securities at a low transaction cost.

To some extent, different index providers apply dissimilar criteria when determining which securities are to be included in an index. As a result, different equity indices for a given region will not necessarily contain the same equities, and the selected equities may not have the same relative weightings. Moreover, various indices may incorporate different countries and markets. There may be considerable composition differences between global indices prepared by different index providers, even though the indices all aim to reflect developments in global stock markets. The Ministry of Finance would emphasise that the Fund's benchmark index is based on index products developed by leading, recognised index providers.

Basing the Fund's benchmark index on standardised products largely leaves decisions regarding market and company representation to the chosen index provider. The management mandate nevertheless includes a provision stating that Norges Bank must pre-approve all markets before funds may be invested. This approval requirement applies regardless of whether a market is included in the benchmark index stipulated by the Ministry of Finance. Accordingly, the manager is obliged to conduct an independent assessment to establish which markets provide the Fund with satisfactory security.

## 8.3 The equity index

The benchmark index for the GPFG's equity investments is based on the FTSE Global All Cap index, and includes all countries classified by the index provider as developed or emerging markets, with the exception of Norway. At the end of 2015, the index incorporated 24 developed markets and 21 emerging markets.<sup>1</sup>

The index provider classifies stock markets as developed, emerging or frontier by reference to criteria such as data quality, currency restrictions, per capita GDP, the number of limited companies, securities pricing quality, the country's credit rating and restrictions on foreign ownership. The efficiency of settlement systems, market liquidity and maturity, total market capitalisation and scope for exercising ownership rights also affect classification.<sup>2</sup> The inclusion of countries in the equity index is determined by the index provider's assessments. The country composition of the index will vary over time as individual markets are included or excluded from the index.

An index in which each individual company is given a weighting corresponding to the market value of the shares in the company is referred to as a market-weighted index. A market-weighted index reflects the investment opportunities available to a typical investor, and can be regarded as the portfolio held by the average global investor. Developments in a market-weighted index reflect the value performance of the stock market as a whole, as represented by the index. Basing investment composition on market-weighted indices entails tracking the market's pricing of the included equities. The geographical distribution of such an index is determined by the included companies' market value and where they are listed.

The FTSE Global All Cap index is based on global market weights, but is adjusted for so-called free float. Free-float adjustment involves altering the index weightings for individual companies to reflect the ownership shares of large long-term owners and cross-ownership. This adjustment reduces index weights of companies with many long-term owners. The argument for such adjustment is that these ownership shares are not freely tradable. The adjusted weights provide a better measure of the investment opportu-

<sup>1</sup> FTSE classifies Belgium and Luxembourg as a single stock market. The number of individual countries is thus 46.

<sup>2</sup> FTSE Russell Country Classification Process (September 2015).



nities available to international financial investors, and promote lower transaction costs.

Adjusting index weightings to take free float into account also impacts the geographical distribution of such indices. In emerging markets, a material proportion of shares in listed companies are not freely tradable. These markets are therefore given a lower weighting in a market-weighted index adjusted for free float than in an index based on full market capitalisation.

A geographical distribution in line with market weightings provides a natural starting point for the composition of the Fund's equity index. Market value weighting also implies that countries in which the stock market is largely listed and market value is high are accorded a high weighting in the index. The proportion of the capital market which is listed varies between different countries, regions and market types. In the Ministry's view, pure market weighting (free-float adjusted) will entail an undesirably high concentration of investments in the US stock market; see the report on the Fund for 2011. The benchmark index for the equity investments is supplemented by country and market adjustment factors to ensure a more balanced geographical distribution.

#### 8.4 The fixed-income index

The purpose of the fixed-income investments is to reduce fluctuations in the total return on the Fund, provide liquidity and exposure to risk factors such as interest and credit risk. The composition of the GPFG's fixed-income benchmark index is based on assessments of the risk and return properties of different parts of the bond market, in line with the purpose of the fixed-income investments.

While the Fund's equity benchmark index broadly represents the global listed stock market, the fixed-income index covers a narrower range of investment opportunities in debt instruments. The design of the Ministry's fixed-income index balances the desire for a simple, transparent and verifiable index with the objectives of broad risk diversification and representation of investment opportunities in the global bond market. Some sub-segments included in broad market indices have been excluded based on, inter alia, evaluations of market structure, concentration risk and whether the sub-markets are suited for passive management; see the report on the Fund for 2011.

The fixed-income benchmark index is based on the currencies and individual securities

included in selected sub-indices provided by Barclays. To be included in Barclays' broad index of fixed-income securities in local currencies, securities must have a high credit rating (investment grade). The securities and the local currency markets must also be sufficiently liquid and investable. Further, there must be a liquid currency market in which international investors can hedge against future fluctuations in the value of the local currency.

70 percent of the fixed-income benchmark index comprises government bonds, inflation-linked bonds and bonds issued by international organisations (the government sub-index). The remaining 30 percent comprises corporate bonds (company sub-index). The allocation between the two sub-indices is fixed, and there is full monthly rebalancing to the specified proportions.

The role of the *government sub-index* is particularly to reduce fluctuations in the Fund's aggregate return. The composition of the government bond index is based on the currencies included in Barclays' broad index<sup>3</sup> of nominal government bonds issued in local currencies, with the exception of Norwegian kroner. If the index provider alters the selection of currencies in the underlying indices, the benchmark index for the GPFG's fixed-income investments will be changed correspondingly. The government sub-index presently comprises nominal government bonds issued in 23 currencies, including 11 emerging-market currencies. Other securities included in the government sub-index are inflation-linked bonds issued in currencies of developed economies and bonds issued by international organisations like the World Bank.<sup>4</sup>

Market weighting can be a less suitable starting point for investment in government bonds than for equities and corporate bonds. The overall supply of government bonds is significantly impacted by the borrowing needs of individual sovereign states. Market weighting implies high and increasing exposure to countries with high and rising debt levels, and does not necessarily ensure good risk diversification.

The weighting of the GPFG's sub-index for government bonds is based on the size of each

<sup>3</sup> Securities are selected in accordance with the Barclay Global Treasury GDP Weighted by Country Index.

<sup>4</sup> Securities are selected in accordance with the Barclays Global Inflation Linked Index and the "Supranational" sub-segment in the Barclays Global Aggregate Index. Bonds issued by international organisations are allocated to countries in accordance with the currency denomination of each security.

country's economy as measured by gross domestic product (GDP). GDP weighting entails lower index exposure to countries with high national debt relative to the size of the economy than with a market-weighted index, and vice versa. The distribution across different regions and individual countries depends on developments in GDP and on which markets are included or excluded from the index. In each country, sub-segments and individual bonds are weighted according to market weights. Market weighting ensures equal ownership shares in all bonds in the same country.

Some countries have high GDP compared to the size of the government-bond market. In the interests of investability, individual country weights in the government sub-index are therefore supplemented by adjustment factors. The size of the Fund makes the investability requirement particularly important.

The management mandate also includes a requirement that Norges Bank must take differences in national fiscal strength into account when composing the actual portfolio. This requirement is intended to emphasise that one of the objectives for the Fund's investments in government bonds

is to reduce fluctuations in the Fund's aggregate return over time.

The benchmark index for the *company sub-index* contains covered bonds and corporate bonds.<sup>5</sup> Expected return on corporate bonds is assumed to exceed that on government bonds, partly due to the compensation expected for accepting the credit risk associated with such bonds, i.e. the credit premium. The composition of the company sub-index in the fixed-income index is based on market weights. The index incorporates seven approved developed-market currencies in Europe and North America.<sup>6</sup>

The Ministry of Finance

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Recommendation of 5 April 2016 from the Ministry of Finance on the Management of the Government Pension Fund in 2015 be submitted to the Storting.

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<sup>5</sup> Securities selection is based on the sub-segments "Covered Bonds" and "Corporates" in the Barclays Global Aggregate.

<sup>6</sup> USD, CAD, EUR, GBP, SEK, DKK, CHF.

**Appendix 1****Glossary of terms***Active management*

Active management involves the asset manager composing, on the basis of analyses and assessments, a portfolio that deviates from the benchmark index established by the asset owner. In such a portfolio, some securities will be overweighted and some underweighted compared to the benchmark index. The portfolio may also contain securities which are not included in the index. The purpose of such deviations is to achieve an excess return or improve the risk-return ratio compared to the benchmark index. In the GPFN and GPFG, deviation from the benchmark index is primarily regulated by means of a limit on expected tracking error. See *Excess return*, *Actual benchmark index*, *Index management*, *Strategic benchmark index* and *Tracking error*.

*Actual benchmark index*

The actual benchmark index for the GPFG and the GPFN is based on the strategic benchmark index. The strategic benchmark index specifies the allocation across asset classes and comprises a given number of securities, determined by the criteria adopted by the index provider for inclusion in the index. However, since the various asset classes generate different returns over time, the asset allocation of the actual benchmark index will drift from the strategic weights. In order to prevent the deviation from the strategic weights from becoming excessive, the Ministry has adopted rebalancing rules for the equity portion for the actual benchmark index. See *Strategic benchmark index* and *Rebalancing*.

Within the established asset management framework, the composition of the actual portfolio may deviate from that implied by the actual benchmark index. Since the scope for deviations is limited, the risk and return of the Fund will largely be determined by the actual benchmark index. The actual benchmark index forms the basis for the measurement of excess return and risk assumed in active management. See *Active management*, *Excess return* and *Actual portfolio*.

*Actual portfolio*

The term actual portfolio designates the overall investments included in the Fund. The actual portfolio will normally deviate from the benchmark index (active management). See *Active management*, *Actual benchmark index* and *Strategic benchmark index*.

*Arithmetic return*

Arithmetic return is a measure of the average return over several time periods. It is calculated by adding up the return achieved in different time periods and dividing the sum by the number of periods. See *Return* and *Geometric return*.

*Asset allocation*

Asset allocation means the allocation of capital under management across different asset classes. A distinction is made between strategic asset allocation and tactical asset allocation. Strategic asset allocation expresses the asset owner's underlying risk tolerance and return expectations, and is for the Government Pension Fund Global expressed through the composition of the benchmark index. Within the limits of the investment mandate, the asset manager may engage in tactical asset allocation. This entails actively choosing to deviate from the strategic asset allocation on the basis of assessments as to whether one asset class is over- or underpriced relative to another. See *Asset classes*.

*Asset classes*

Asset classes are different types or classes of financial assets with different risk and return properties. The benchmark index for the GPFG encompasses three asset classes: equities, bonds and real estate. The benchmark index for the GPFN includes two asset classes: equities and bonds. See *Bond*.

### *Bond*

A bond is a tradable loan with a maturity of more than one year. Bonds are redeemed by the issuer (borrower) upon maturity, and the issuer pays interest (so-called coupon) to the bondholders during the period between issuance and maturity. Most bonds are based on a fixed nominal interest rate, i.e. the coupon is a specified predetermined amount. A fixed-rate bond will appreciate in value when the general interest rate level falls and correspondingly depreciate when the general interest level rises. Bonds may have different features, including a floating interest rate, a zero coupon or an ongoing redemption structure.

### *Capital Asset Pricing Model*

The Capital Asset Pricing Model is an equilibrium model for the pricing of securities (or a portfolio of securities) with an uncertain future return. The model features a linear relationship between the expected return in excess of a risk-free rate and the sensitivity of the security (or portfolio) to market risk.

### *Concentration risk*

If investments or loans are concentrated in an individual company, industry or market, the portfolio becomes vulnerable to incidents which affect these investments in particular. Concentration risk can be reduced through broad diversification of investments or loans. See *Diversification*.

### *Correlation*

Correlation refers to the degree and direction of the covariation between two variables. Perfectly positive correlation (= 1) means that the variables always move perfectly in tandem. Zero correlation means that there is no covariation whatsoever. Perfect negative correlation means that the variables always move in exact opposition to each other. The risk associated with a portfolio can be reduced by diversifying the investments across several assets, unless there is perfect positive correlation between the returns on the individual investments. See *Diversification*.

### *Counterparty risk*

Counterparty risk is the risk of loss as the result of another contracting party not fulfilling its legal obligations. See *Credit risk*.

### *Coupon*

The interest paid to bondholders during the period between issuance and maturity. Bonds may be issued with or without a coupon.

### *Covariation*

See *Correlation*.

### *Credit risk*

Credit risk is the risk of loss due to non-fulfilment of legal obligations by the issuer of a security or a counterparty to a securities trade, for example as a result of bankruptcy. See *Counterparty risk*.

### *Currency basket*

The GPFG is exclusively invested in foreign securities, and thus only in securities that are traded in currencies other than Norwegian kroner. Hence, the return on the GPFG measured in Norwegian kroner will vary with changes in the exchange rate between Norwegian kroner and the currencies in which the Fund is invested. However, the international purchasing power of the Fund is unaffected by developments in the Norwegian kroner exchange rate. The return on the Fund is therefore measured in foreign currency. This is done on the basis of the currency basket for the Fund, which weights together the currencies included in the benchmark portfolio.

### *Differential return*

See *Excess return*.

### *Diversification*

The risk associated with a portfolio can normally be reduced by including more assets in the portfolio. Doing so reduces the impact on the portfolio of fluctuations in, for example, an individual share, industry or market. This is referred to as diversification, or the spreading of risk. Diversification is the main reason for spreading the benchmark index of the Fund across several asset classes and a broad range of countries, sectors and companies. Diversification can improve the ratio between expected return and risk. See *Asset classes*.

### *Duration*

Duration measures how long it takes, on average, for the cash flows (coupons and principal) of a bond to be redeemed. The value of a bond is sensitive to interest rate changes, and such sensitivity increases with longer duration. See *Bond*.

### *Emerging markets*

The term emerging markets denotes countries with economies that are less developed than those of traditional industrialised nations. There is no unambiguous set of criteria that defines whether a market is emerging, and country-classification practice varies. The classifications of index providers such as FTSE are commonly used for investments in listed stock markets. FTSE classifies emerging markets on the basis of, inter alia, gross domestic product per capita. Since indices provide the foundation for financial investments, account is also taken of financial market characteristics such as size, liquidity and regulatory framework.

### *Excess return*

The contribution made by active management to the return on the invested capital is referred to as the excess return, and is measured as the difference in return between the actual portfolio and the benchmark index. It is also referred to as the differential return, or as a negative excess return when the actual portfolio produces a lower return than the benchmark index. Risk and asset management costs are also taken into account when evaluating the results of active management in this context.

### *Exchange rate risk*

Investments may feature a different distribution across countries and currencies than the goods and services they are intended to finance. Changes in international exchange rates will therefore influence the amount of goods and services that can be purchased. This is referred to as (real) exchange rate risk. International purchasing power parity plays a key role when it comes to measuring such exchange rate risk. See *International purchasing power parity*.

### *Expected return*

Expected return is a statistical measure of the mean value in a set of all possible return out-

comes, and is equal to the average return on an investment if repeated numerous times. If an investment alternative has a 50 percent probability of a 20 percent appreciation, a 25 percent probability of a 10 percent appreciation and a 25 percent probability of a 10 percent depreciation, the expected return is 10 percent:  $(0.5 \times 0.2) + (0.25 \times 0.1) + (0.25 \times -0.1) = 0.10$ . Expected return may be calculated using historical return series or based on forward-looking model simulations. See *Return*.

### *Externalities*

Externalities are production or consumption costs or benefits that are not incurred by, or accrue to, the decision maker. An example of a negative externality is environmental damage which affects society but not the company which causes it. Without regulation, the profitability of a company will not reflect the negative externalities of its production. When an externality is negative, the socioeconomic cost is higher than what is paid by the producer. The opposite applies to positive externalities. Such market failure results in inefficient resource use compared to scenarios in which the company covers the full socioeconomic cost. Regulation can promote correct pricing of externalities and thus effective use of resources for the benefit of society, for example through a tax on environmental damage.

### *Factors*

Factors influence the return on a broad range of investments. Investors will normally require an expected return in excess of the risk-free rate to accept exposure to systematic factors, preventing the reduction of the risk associated with such factors through diversification. This is labelled a factor premium. Known systematic factors in the stock market include market risk, size, value, momentum, liquidity and volatility. Important systematic factors in the bond market are term, credit and liquidity, with corresponding factor premiums. See *Diversification* and *Systematic risk*.

### *Financial owner*

The term financial owner is applied to investors who primarily have a financial objective when investing in securities. To spread risk, a financial owner will often prefer to be a small owner in many companies, rather than a large owner in few. See *Strategic owner*.

*Fundamental analysis*

Fundamental analysis primarily aims to analyse the factors that influence the future (expected) cash flow of an asset. A key feature of a fundamental analysis of individual stocks will be assessments relating to the income, costs and investments of the company. Fundamental analysis is used for, inter alia, the valuation of companies. Active management strategies will often involve the purchase of equities that are deemed to have a low valuation in the stock market relative to the estimated fundamental value of the company. The investor therefore expects the fundamental value of the company over time to be reflected in its share price. See *Active management*.

*Geometric return*

Geometric return (or time-weighted return) is a measure of average return over several time periods. The measure specifies the average growth rate of an investment in each period. The more pronounced the variation in the annual return, the greater the difference between the geometrically and arithmetically calculated returns. In quarterly and annual reports, return over time is most commonly reported as a geometric average. See *Arithmetic return*.

*Index*

An index comprises a set of securities defined on the basis of the selection criteria applied by the index provider, and specifies an average return for the securities included in the index. Indices are prepared by securities exchanges, consultancy firms, newspapers and investment banks. They may, for example, be based on countries, regions, markets or sectors. If it is possible to invest in a portfolio in line with the index composition, the index is said to be investable. This will typically be the case with highly liquid securities, like listed equities. An index of unlisted real estate developments, on the other hand, will not be investable. When an index is used as a return measure for a specific securities portfolio, it is referred to as a benchmark index. See *Index management*, *Actual benchmark index* and *Strategic benchmark index*.

*Index management*

Index management (passive management) entails organising asset management to ensure that the

actual portfolio reflects the composition of the benchmark index. If the composition of the actual portfolio is identical to the composition of the benchmark index, the return on the actual portfolio will be equal to the return on the benchmark index, ignoring transaction costs, taxes and asset management costs. If the benchmark index includes most of the securities traded in the market, index management will achieve a return that reflects the return on the market as a whole. The costs associated with index management are normally low. See *Index*, *Actual benchmark index* and *Strategic benchmark index*.

*Inflation*

Inflation is an increase in the general price level.

*Inflation risk*

Inflation risk is the risk of a loss of purchasing power as the result of unexpectedly high inflation. See *Inflation*.

*Institutional investor*

Institutional investors are organisations set up for the purpose of engaging in investment activities, typically on behalf of clients. Institutional investors normally manage large portfolios covering several asset classes and geographical markets. Examples of institutional investors are pension funds, insurance companies, securities funds and sovereign wealth funds. Banks and hedge funds may also be classified as institutional investors.

*International purchasing power parity*

This term describes a theory which states that over time exchange rates are determined by the amount of goods and services which can be purchased using each currency. Exchange rates will be drawn to a level at which the prices of goods and services converge when measured in a common currency. No account is taken of transportation costs, trade barriers or the fact that not all goods can be traded internationally. There is a broad consensus among researchers that international purchasing power parity applies in the long run. Purchasing power parity plays a key role in the measurement of exchange rate risk. See *Exchange rate risk*.

### *Investability*

By investability is meant the extent to which an investment idea or rule can be implemented in operational asset management. Investability may differ for small and large funds.

### *Liquidity premium*

A liquid security can be traded relatively quickly and at a relatively predictable price. A liquidity premium is an expected compensation for investing in illiquid securities. In practice, liquidity premiums are difficult to define and measure. See *Risk premiums*.

### *Market efficiency*

Market efficiency implies that the price of a financial asset, such as an equity or a bond, at all times reflects all available information about the fundamental value of the asset. If this hypothesis is correct, it will be impossible for a manager consistently to achieve an excess return through fundamental analysis. See *Active management* and *Fundamental analysis*.

### *Market risk*

Market risk is the risk that the value of a securities portfolio will change as the result of broad movements in the market prices of equities, currencies, commodities and interest rates. It is normally assumed that higher market risk is accompanied by a higher expected return over time. See *Expected return*.

### *Market value weights*

A portfolio or index is market-value weighted when the investments in each individual security or asset are included with a weight corresponding to the security's or asset's proportion of total market value. See *Index*.

### *Nominal return*

Achieved return measured in nominal prices, i.e. without inflation adjustment. See *Return, Inflation* and *Real rate of return*.

### *Operational risk*

Operational risk is the risk of economic loss or reputational loss as the result of deficiencies in

internal processes, human error, systems error or other loss caused by circumstances that are not a consequence of the market risk in the portfolio. Operational risk does not generate a risk premium. However, in managing operational risk, the gain to be made by keeping the probability of such losses low must be balanced against the costs incurred as a result of increased control, monitoring, etc.

### *Passive management*

See *Index management*.

### *Portfolio*

A collection of different securities and asset classes held by an investor. See *Diversification*.

### *Principal-agent problem*

Principal-agent problems describe situations in which there is not a complete alignment of interests between the person issuing an assignment (the principal) and the person performing it (the agent). In cases where the principal and the agent have access to different information, the agent may make choices that are not necessarily in the interest of the principal. In the capital markets, such situations may generally arise both between an asset owner and an asset manager and between an asset manager and the senior executives of the companies in which investments are made.

### *Probability distribution*

A probability distribution describes the relative frequency of various values that an uncertain (stochastic) variable may assume. The best known probability distribution is the normal distribution, which is symmetric around the mean value (expected value). Asymmetrical distributions are often referred to as skewed. Distributions in which extreme outcomes (large or small) carry a higher probability than under the normal distribution are referred to as distributions with "fat" or "heavy" tails.

### *Real rate of return*

Real rate of return is the achieved nominal return adjusted for inflation. It may also be referred to as return measured in constant prices or in terms of purchasing power. See *Inflation* and *Nominal return*.

### Rebalancing

The Ministry has adopted strategic benchmark indices for the GPFG and the GPFN which incorporate a fixed equity portion and, for the GPFN, also a fixed regional allocation. Since returns develop differently in respect of each asset class and region, the equity portion in the actual benchmark index will over time move away from the strategic allocation. The Fund's actual benchmark index is therefore permitted to deviate somewhat from the strategic composition. Further, rules have been issued on the rebalancing of the index. When deviations exceed predetermined limits, the necessary assets are purchased and sold to bring the actual benchmark index into conformity with the strategic benchmark index. Rebalancing returns the risk in the Fund to the level implied by the strategic benchmark index. It also gives the investment strategy something of a counter-cyclical flavour, since over time the Fund will buy the asset class which has fallen substantially in value in relative terms and sell the asset class which has experienced high relative value growth. See *Actual benchmark index* and *Strategic benchmark index*.

### Relative return

See *Excess return*.

### Return

Historical return is calculated as the change in market value from one specific date to another. Cash outflows during the period, such as equity income and coupons, are included when calculating the return. See *Arithmetic return*, *Geometric return*, *Excess return* and *Expected return*.

### Risk

Risk is a measure that provides some indication as to the probability of an event occurring and the consequences thereof, for example in the form of losses or gains. There are various aspects to risk. One important aspect is the distinction between risk that can be quantified and risk that is difficult 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 common way of quantifying risk. See *Market risk*, *Operational risk*, *Credit risk*, *Systematic risk* and *Standard deviation*.

### Risk premium

Investors will normally demand an expected return beyond the risk-free rate for accepting risk which cannot be eliminated by diversification, i.e. for exposure to systematic risk factors. This excess return is referred to as the risk premium. See *Diversification* and *Factors*.

### Standard deviation

Standard deviation is often used to measure portfolio risk. It indicates how much the value of a variable (in this case the portfolio return) is expected to fluctuate around its mean. The standard deviation of a constant value will be 0. The higher the standard deviation, the larger the expected fluctuations (volatility) or risk relative to the average return. Linking the standard deviation to a probability distribution sheds light on the probability of a portfolio decreasing in value by more than x percent or increasing in value by more than y percent during a given period.

If normally distributed, a return will deviate from the average return by less than one standard deviation in approximately two out of three instances. In 95 percent of the cases, the return will deviate by less than two standard deviations. Empirical studies of returns in the securities markets indicate that very low and very high returns occur more frequently than implied by a normal distribution. This phenomenon is called "fat tails" or "tail risk". See *Probability distribution* and *Risk*.

### Strategic benchmark index

The overarching investment strategy for the Government Pension Fund is expressed through strategic benchmark indices for the GPFN and the GPFG, respectively. The strategic benchmark indices specify a fixed allocation of capital across different asset classes and, in the GPFN's case, also a fixed regional allocation. The strategic benchmark indices provide a detailed description of the asset allocation, and are set by the Ministry of Finance in the respective fund mandates. See *Asset allocation*, *Asset classes* and *Actual benchmark index*.

### Strategic owner

The term strategic owner is used to describe investors who, unlike financial owners, actively seek to exploit their ownership status for non-financial purposes, for example to secure a



desired change in conduct. For a strategic owner, it is important to exercise influence over the company, preferably through a large ownership share and a seat on the company's board of directors. Such owners are also referred to as industrial owners. See *Financial owner*.

#### *Systematic risk*

Systematic risk refers to the proportion of risk associated with a security or portfolio that cannot be diversified away by holding more securities. Investors cannot diversify away from recessions, lack of access to credit or liquidity, market collapse, etc. Systematic risk thus reflects the inherent uncertainty of the economy. According to financial theory, higher systematic risk will be compensated for in the form of higher expected returns over time. See *Diversification and Risk factors*.

#### *Tracking error*

The asset owner will normally define limits as to how much risk the asset manager may take. A common method is to define a benchmark index, together with limits specifying how much the

actual portfolio may deviate from the benchmark index. In the mandates of Norges Bank and Folketrygdfondet, the Ministry of Finance has defined a limit in the form of a target for expected tracking error, i.e. the expected standard deviation of the difference in the returns on the actual portfolio and the benchmark index. This means that over time, if certain statistical assumptions apply and the entire limit is utilised, the actual return will deviate from the return on the actual benchmark index by less than the defined limit as expressed in percentage points in two out of three years. See *Active management, Excess return, Actual portfolio, Actual benchmark index and Standard deviation*.

#### *Unlisted investments*

Unlisted investments are investments in assets which are not traded in open and regulated markets.

#### *Volatility*

Return variations. Measured by standard deviation. See *Standard deviation*.

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**Appendix 2****Historical tables**

Table 2.1 Return on the GPFG in 2015, in the last 3, 5 and 10 years, as well as over the period 1998–2015, measured in Norwegian kroner. Annual geometric average. Percent

	2015	Last 3 years	Last 5 years	Last 10 years	1998–2015
<i>GPFG incl. real estate</i>					
Actual portfolio	15.54	21.55	13.57	7.80	6.96
Norwegian inflation <sup>1</sup>	2.12	2.09	1.65	1.96	2.00
Asset management costs	0.06	0.06	0.06	0.09	0.09
Return net of costs and inflation	13.09	19.01	11.66	5.64	4.78
<i>GPFG excl. real estate</i>					
Actual portfolio	15.30	21.46	13.52	7.78	6.95
Benchmark index	14.80	21.22	13.38	7.72	6.69
Excess return (percentage points)	0.51	0.24	0.15	0.06	0.27
<i>Equity portfolio</i>					
Actual portfolio	16.77	25.63	15.22	8.02	6.83
Benchmark index	15.84	25.18	15.00	7.80	6.36
Excess return (percentage points)	0.94	0.45	0.23	0.23	0.48
<i>Fixed-income portfolio</i>					
Actual portfolio	12.83	14.58	10.33	6.56	6.18
Benchmark index	13.10	14.83	10.42	6.51	6.05
Excess return (percentage points)	-0.27	-0.25	-0.09	0.04	0.14
<i>Real estate portfolio</i>					
Actual portfolio <sup>2</sup>	23.71	23.91	14.19		

<sup>1</sup> Inflation figures in the table are not based on inflation measured in the currency basket of the Fund, but on Norwegian CPI data.<sup>2</sup> The first real estate investment was made in the first quarter of 2011. The five-year return is the annualised return since 1 April 2011.

Sources: Norges Bank, Macrobond and Ministry of Finance.

Table 2.2 Nominal return on the GPFG and inflation<sup>1</sup> in selected currencies and measured in the currency basket of the Fund. Annual geometric average. Percent

Year	Currency basket of the Fund		NOK		USD		EUR		GBP	
	Return	Inflation	Return	Inflation	Return	Inflation	Return	Inflation	Return	Inflation
1997	9.07	1.75	10.83	2.62	-4.01	2.29	11.87	1.53	-0.16	1.89
1998	9.26	0.92	19.75	2.25	15.87	1.56	7.63	1.10	14.59	1.57
1999	12.44	1.28	13.84	2.30	7.92	2.21	26.43	1.08	11.40	1.26
2000	2.49	2.02	6.53	3.13	-2.91	3.36	3.66	2.14	4.75	0.83
2001	-2.47	1.17	-5.34	3.03	-6.93	2.85	-1.87	2.36	-4.48	1.24
2002	-4.74	1.91	-19.09	1.29	4.76	1.58	-11.11	2.18	-5.30	1.22
2003	12.59	1.57	19.96	2.45	24.92	2.28	3.92	2.13	12.34	1.34
2004	8.94	2.37	3.93	0.44	14.16	2.66	5.94	2.09	6.45	1.32
2005	11.09	2.33	14.28	1.59	2.22	3.39	17.80	2.17	14.32	2.09
2006	7.92	2.13	5.89	2.26	15.16	3.23	3.01	2.24	1.01	2.30
2007	4.26	3.12	-3.90	0.76	10.20	2.83	-0.61	2.07	8.35	2.38
2008	-23.31	1.42	-6.66	3.79	-27.62	3.86	-23.87	3.27	0.21	3.55
2009	25.62	1.82	7.88	2.11	30.77	-0.37	26.69	0.33	16.42	2.24
2010	9.62	1.98	9.49	2.47	8.82	1.68	16.38	1.63	12.24	3.23
2011	-2.54	2.84	-1.39	1.24	-3.96	3.12	-0.75	2.68	-3.25	4.47
2012	13.42	1.98	6.70	0.77	14.42	2.09	12.66	2.51	9.39	2.78
2013	15.95	1.41	25.11	2.13	14.77	1.48	9.81	1.32	12.63	2.60
2014	7.58	0.91	24.23	2.01	0.52	1.59	14.47	0.50	6.78	1.52
2015	2.74	0.86	15.54	2.12	-2.13	0.13	9.02	0.00	3.54	0.00
1998–2015	5.64	1.78	6.96	2.00	5.88	2.19	5.91	1.76	6.53	1.99
1997–2015	5.81	1.78	7.16	2.04	5.34	2.19	6.21	1.75	6.17	1.99

<sup>1</sup> Inflation figures in individual currencies presented in the table are not based on inflation measured in the currency basket of the Fund, but on CPI data for each country/currency area.

Sources: Norges Bank, Macrobond, Thomson Reuters Datastream and Ministry of Finance.

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