NORGES BANK
INVESTMENT MANAGEMENT

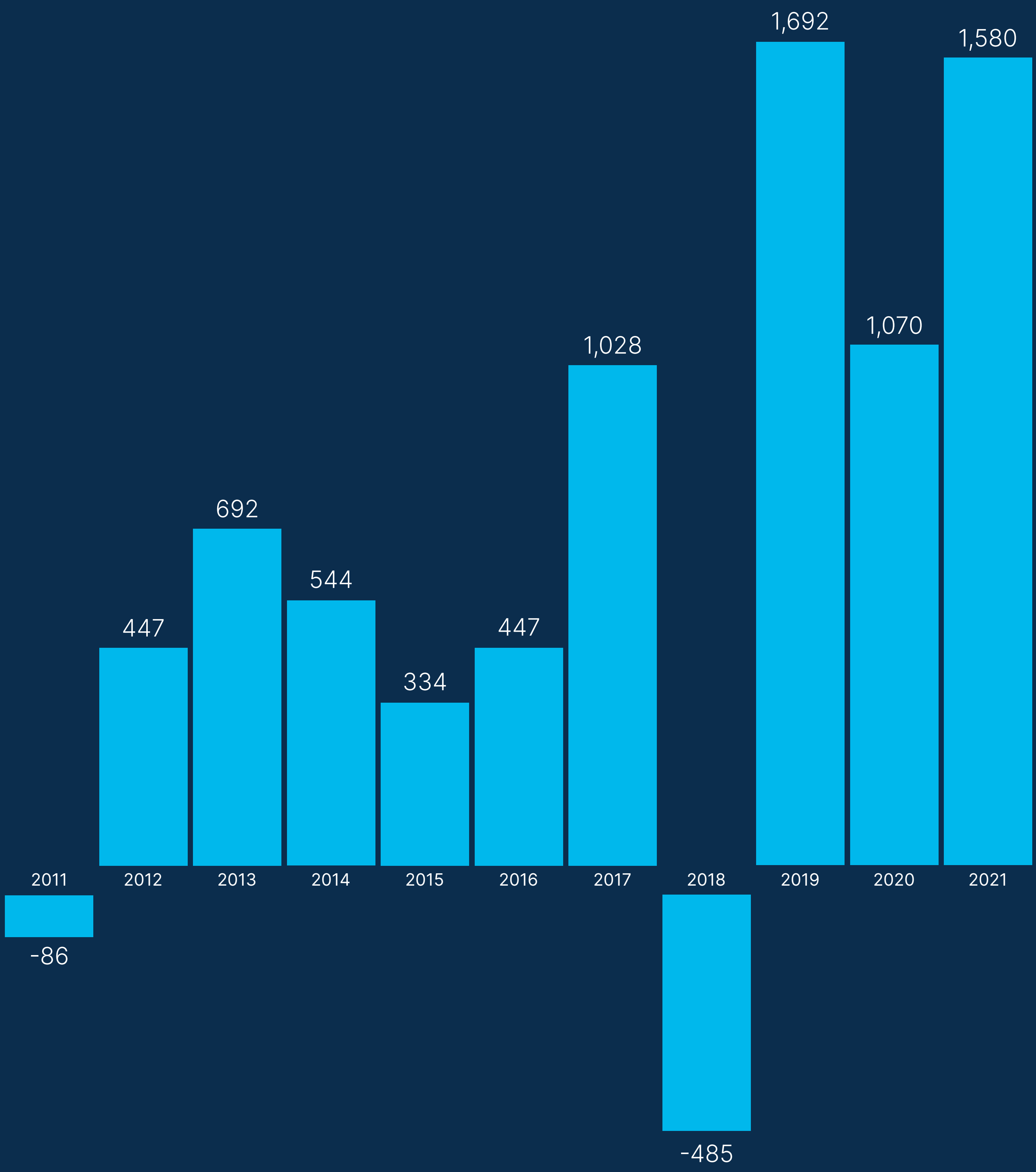
# Government Pension Fund Global

# Annual report 2021

No. 24

# Our mission is to safeguard and build financial wealth for future generations

# 2021 in figures



# 14.5%

## Annual return

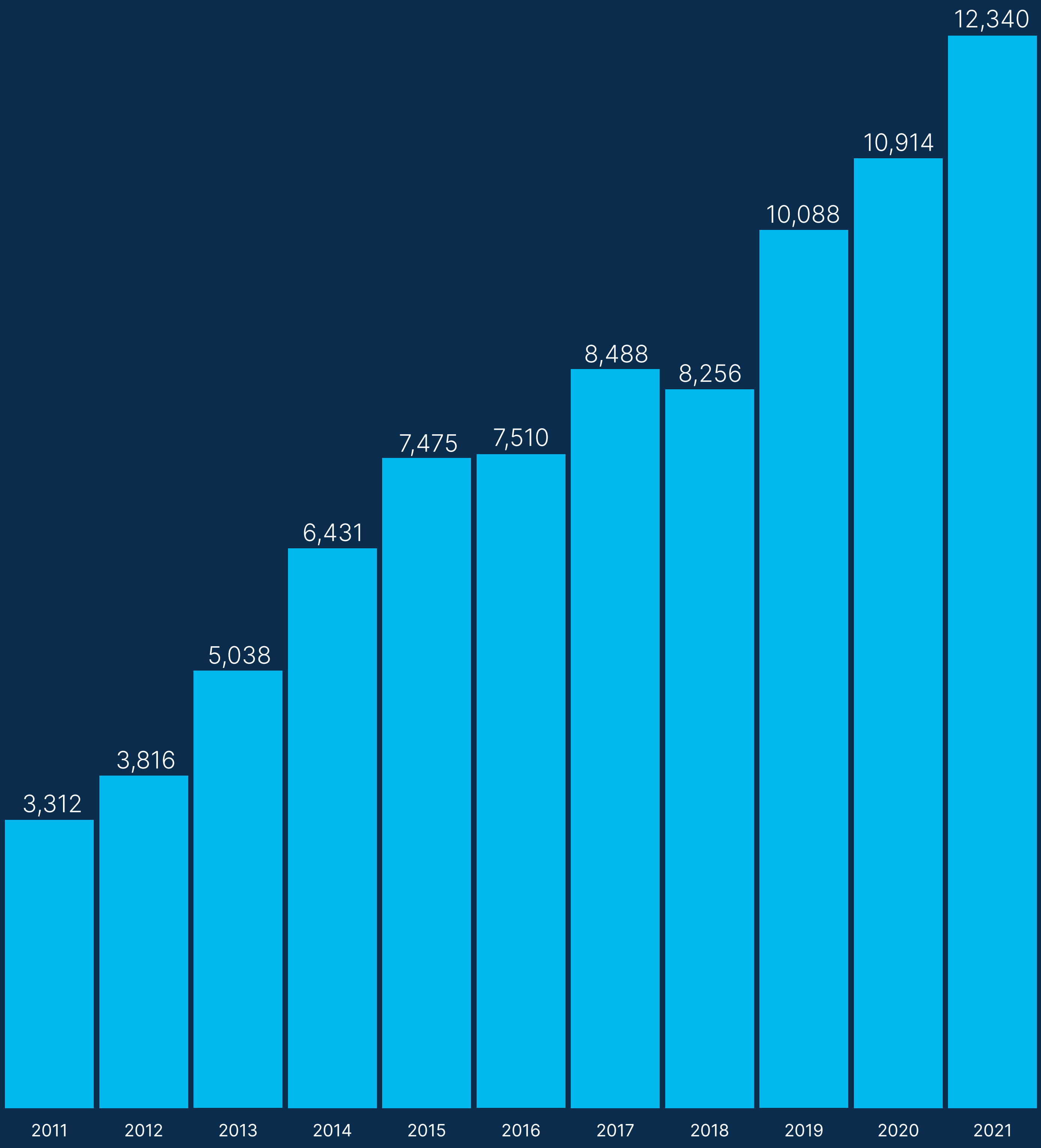
# 1,580

## billion kroner

The Government Pension Fund Global returned 14.5 percent or 1,580 billion kroner in 2021.

| | |
|---|---|
| Equities | 20.8% return on the fund's equity investments |
| Fixed income | -1.9% return on the fund's fixed-income investments |
| Unlisted real estate | 13.6% return on the fund's investments in unlisted real estate |
| Unlisted renewable energy infrastructure | 4.2% return on the fund's investments in unlisted renewable energy infrastructure |

# Market value



# 12,340
## billion kroner

The fund's market value was 12,340 billion kroner at the end of 2021, up from 10,914 billion kroner a year earlier.

| | |
|---|---|
| Equities | 8,878 billion kroner – 72.0% of the fund |
| Fixed income | 3,135 billion kroner – 25.4% of the fund |
| Unlisted real estate | 312 billion kroner – 2.5% of the fund |
| Unlisted renewable energy infrastructure | 14 billion kroner – 0.1% of the fund |

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# Government Pension Fund Global 2021

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Translated from Norwegian for information only.

Employees put in considerable effort into managing the fund during partial closures of the bank's offices.

Oslo, 9 February 2022

Øystein Olsen
Chair of the Executive Board

Norges Bank's Executive Board visited Norges Bank Investment Management's London office in October 2021.

# The Executive Board's assessment of the results

The investments in the Government Pension Fund Global returned 14.5 percent in 2021, which is 0.74 percentage point more than the return on the fund's benchmark index. The Executive Board is satisfied that the return both in 2021 and over time has been higher than the return on the benchmark index. The Board is also pleased with the way employees have managed the fund despite challenging operating conditions during the coronavirus pandemic.

## Management of the fund in 2021

The Government Pension Fund Global had a market value of 12,340 billion kroner at the end of 2021. The fund's return before management costs was 14.5 percent measured in the fund's currency basket. Equities returned 20.8 percent and bonds -1.9 percent. The return on bonds was the weakest in the history of the fund. Investments in unlisted real estate returned 13.6 percent. Management costs amounted to 0.04 percent of assets under management.

Norges Bank achieved an overall return before management costs that was 0.74 percentage point higher than the return on the fund's benchmark index.

The year was marked by the coronavirus pandemic. Employees put considerable effort into managing the fund during partial closures of the bank's offices in Norway and abroad.

Norges Bank manages the fund with a view to achieving the highest possible long-term return within the constraints laid down in the mandate from the Ministry of Finance. The bank pursues a variety of investment strategies, and since 2013 these have been grouped into three main categories: asset management, security selection and fund allocation. All three categories made a positive contribution to the excess return in 2021.

The contributions to the relative return from equity, fixed-income and real asset management show that equity management contributed most to the fund's relative return. After the poor performance of the sector in 2020, real estate management made a solid contribution to the fund's excess return in 2021.

The bank manages the fund close to the benchmark, but all the investment strategies also have active components. Norges Bank has reported contributions to the relative return for the same three categories of strategies throughout the period 2013–2021. The management within each category has, however, been subject to change.

The Executive Board adopted a revised strategy plan for the bank's management of the fund in early 2021. The plan builds on the previously adopted strategy but has less emphasis on overall allocation. In keeping with this, the strategies within fund allocation were adjusted in 2021 to reduce exposure to strategies for systematic risk factors and investments in certain segments outside the benchmark index. However, investments in unlisted real estate, unlisted renewable energy infrastructure and emerging-market debt remain part of the strategy.

When it comes to asset management, the Executive Board has put emphasis on further developing the bank's strategies for achieving the desired market exposure efficiently. Within security selection, the plan is to expand the number of companies the bank follows closely and increase the use of external managers with deep insight into specific companies and markets. Knowledge about the fund's company investments helps achieve the objective of the highest possible return. It could also improve risk management and strengthen work on responsible investment.

In April, Norges Bank announced the fund's first investment in unlisted renewable energy infrastructure. The bank will gradually build up a portfolio of investments in this area, mainly in wind and solar power.

## Performance measured over time

In the period from 1998 to 2021, the annual return on the fund has been 6.6 percent. The annual net real return, after deductions for inflation and management costs, was 4.6 percent in the same period.

Over the past five years, the annual net real return has been 7.7 percent. This strong return in recent years serves as a reminder that the fund's market value may fluctuate considerably in the future.

The Executive Board emphasises the importance of assessing the performance of the fund over time. Viewed over the full period 1998–2021, the annual return before management costs has been 0.27 percentage point higher than the return on the benchmark index defined by the Ministry of Finance. In the period since 2013, during which the strategies have been grouped into asset management, security selection and fund allocation, the annual excess return before management costs has been 0.25 percentage point. The contributions from the three groups of strategies show that the strategies employed by the bank within fund allocation have made a negative contribution to the relative return, while asset management and security selection have both made a positive contribution.

The objective for Norges Bank's management of the fund is the highest possible return after costs. This is to be achieved with acceptable risk. Risk is measured, analysed and followed up using a broad set of measures and analyses. One key provision in the mandate from the Ministry of Finance requires Norges Bank to manage the fund with a view to ensuring that expected relative volatility (tracking error) does not exceed 1.25 percentage points. Expected relative volatility was 0.50 percentage point at the end of 2021, compared with 0.56 percentage point a year earlier.

Measured over the full period since 1998, realised relative volatility has been 0.64 percentage point.

The management of the Government Pension Fund Global is to be cost-effective. Cost-effective management supports the objective of the highest possible return after costs. In the period from 2013 to 2021, annual management costs averaged 0.05 percent of assets under management. In 2021, management costs amounted to 4.6 billion kroner, or 0.04 percent of assets under management. The Executive Board is satisfied that management costs are low compared to other managers.

## Further development of the investment management

An important part of the Executive Board's work on the Government Pension Fund Global is advising on the further development of the fund's investment strategy. The Board responded to a number of enquiries from the Ministry of Finance during the year and issued advice, including on the composition of the fund's benchmark index for equities. The Board also submitted a review of the bank's management of the fund. The Ministry and Finance regularly requests reviews of this kind, at the beginning of each parliamentary term.

Responsible investment and active ownership are an integral part of the management of the fund. The Executive Board has noted that this work was strengthened further through 2021. Among other things, Norges Bank began publishing its voting intentions five days ahead of shareholder meetings and introduced pre-screening of companies beeing added to the fund's benchmark index. The bank also responded to a number of enquiries from the Ministry of Finance regarding responsible investment, including the management of climate risk in the Government Pension Fund Global and the possible introduction of a long-term goal for responsible investment of net zero emissions from the companies in which the fund is invested.

The Executive Board
Oslo, 9 February 2022

**Øystein Olsen**
Chair of the Executive Board

**Ida Wolden Bache**
First Deputy Chair
of the Executive Board

**Øystein Børsum**
Second Deputy Chair
of the Executive Board

**Kristine Ryssdal**
Board member

**Arne Hyttnes**
Board member

**Karen Helene Ulltveit-Moe**
Board member

**Hans Aasnæs**
Board member

**Nina Udnes Tronstad**
Board member

**Egil Herman Sjursen**
Board member

Every single Norwegian has a stake in the fund, which is there to benefit both current and future generations.

Oslo, 3 March 2022

Nicolai Tangen
Chief Executive Officer
Norges Bank Investment Management

From the left: Trond Grande, Chief of Staff and Deputy Chief Executive Officer – Dag Huse, Chief Risk Officer – Age Bakker, Chief Technology Officer – Carine Smith Ihenacho, Chief Governance and Compliance Officer – Geir Øivind Nygård, Chief Asset Strategies Officer – Petter Johnsen, Chief Equities Officer – Mie Holstad, Chief Real Assets Officer – Nicolai Tangen, Chief Executive Officer – Birgitte Bryne, Chief Operating Officer

# Well-equipped for the future

The fund celebrated its silver jubilee in 2021, and the period must be seen as an enormous financial success. Only a quarter of a century from the first inflow of just under 2 billion kroner in 1996, the fund ended the year with a value of 12 339 549 465 702 kroner!

The fund returned 14.5 percent or 1,580 billion kroner in 2021, and this in another year hit by the pandemic and volatile markets.

It is in the good times that we need to prepare for rainy days. Record-low interest rates, record-high stock markets, soaring inflation and geopolitical turmoil could prove a treacherous combination for the world's financial markets. We must therefore be prepared for the fund not continuing its ascendancy indefinitely but sometimes dropping back sharply. As a long-term investor, however, we are well-placed to ride out periods of market adversity.

Our 520 employees have shown considerable flexibility and adaptability during the pandemic. At times, they have managed the entire Norwegian population's savings from back home on the kitchen table. Close collaboration and dialogue with the Ministry of Finance and with Norges Bank's Executive Board and Supervisory Council have also been important in a challenging period.

So, what is the fund doing to prepare for the future? First and foremost, we are investing in our people. They are the fund's most important asset. Recruitment, training and leadership are therefore at the top of our agenda. We want to attract and develop the best talent, and together be one of the world's best investment management organisations.

Our job is to generate the highest possible return. We must therefore strive constantly to improve our processes and systems. The fund's investment processes are driven by data and data analysis. Technology has become a critical part of our business. Automation and cybersecurity are two areas we will continue to give special attention, in terms of both increasing our expertise and developing new and even better solutions.

The fund is one of the world's largest investment funds and the Norwegian people's piggybank. Every single Norwegian has a stake in the fund, which is there to benefit both current and future generations. We have seen a connection between awareness of what we do and confidence in the fund. Good communication and maximum transparency are therefore crucial in everything we do.

# Strong growth in fund value

The market value of the Government Pension Fund Global soared by 1,426 billion kroner in 2021, a year again marked by the pandemic and rising equity prices.

The fund returned 14.5 percent in 2021. Equity investments returned 20.8 percent, fixed-income investments -1.9 percent, and unlisted real estate investments 13.6 percent. In April, the fund made its first investment in unlisted renewable energy infrastructure, which returned 4.2 percent over the rest of the year.

## Market value up by 1,426 billion kroner

The fund's market value climbed 1,426 billion kroner during the year to 12,340 billion kroner. The market value is affected by investment returns, capital inflows and withdrawals, and exchange rate movements. The fund returned 1,580 billion kroner in 2021, while withdrawals by the government came to 129 billion kroner net after the payment of management fees. The krone strengthened against many of the currencies in which the fund invests, and in isolation this reduced its market value by 25 billion kroner, but this has no bearing on the fund's international purchasing power. The fund's asset allocation at the end of the year was 72.0 percent equities, 25.4 percent fixed income, 2.5 percent unlisted real estate and 0.1 percent unlisted renewable energy infrastructure.

## Accumulated return of more than 8 trillion kroner

The Norwegian government first allocated capital to the fund in May 1996 and had transferred a total of 2,909 billion kroner net by the end of 2021. Norges Bank Investment Management was set up on 1 January 1998 to handle the operational management of the fund. Between then and the end of 2021, the fund generated a return of 8,007 billion kroner, equivalent to an annual return of 6.6 percent. After management costs and inflation, the annual return has been 4.6 percent. The fund's performance has been particularly strong over the past three years, which have brought a return of 4,342 billion kroner, or more than half of the accumulated return since inception.

## Returns measured in international currency

The fund's investments spanned 70 countries and 44 currencies at the end of 2021. The fund is invested in international securities and unlisted real assets and infrastructure in foreign currency. We measure returns in a basket of international currencies. This basket is defined in the management mandate as a weighted combination of the currencies in the fund's benchmark indices for equities and bonds, and consisted of 36 currencies at the end of 2021. Unless otherwise stated in the text, results are measured in this currency basket.

**Table 1** The fund's ten largest holdings by country as at 31 December 2021. Percent.

| Country | Total | Equity | Fixed income | Unlisted real estate | Unlisted infra-structure |
|---|---|---|---|---|---|
| US | 43.3 | 31.4 | 10.7 | 1.2 | |
| Japan | 8.4 | 5.0 | 3.3 | 0.1 | |
| UK | 6.9 | 5.2 | 1.3 | 0.4 | |
| Germany | 5.1 | 2.9 | 2.1 | 0.1 | |
| France | 5.0 | 3.4 | 1.2 | 0.4 | |
| Switzerland | 3.7 | 3.2 | 0.4 | 0.1 | |
| Canada | 2.9 | 1.4 | 1.5 | | |
| China | 2.7 | 2.7 | 0.0 | | |
| Netherlands | 2.3 | 1.7 | 0.5 | 0.0 | 0.1 |
| Australia | 2.0 | 1.3 | 0.7 | | |

**Chart 1** The fund's investments as at 31 December 2021. Equities, unlisted real estate and infrastructure distributed by country and bonds by currency. Percent.

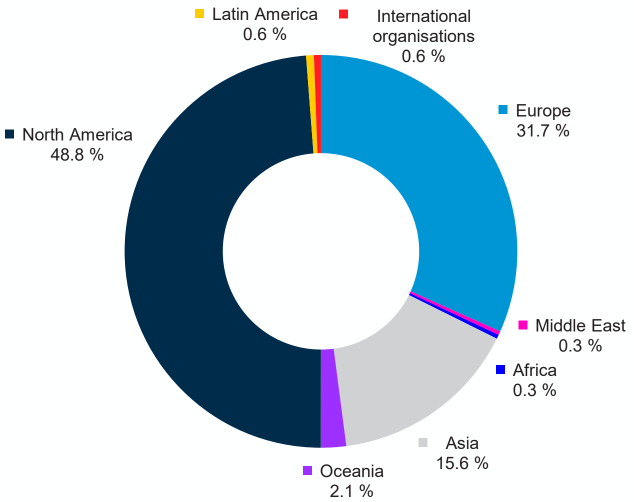


**Table 2** Return figures. Percent.

| | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|
| **Returns measured in the fund's currency basket** | | | | | |
| Equity investments | 20.76 | 12.14 | 26.02 | -9.49 | 19.44 |
| Fixed-income investments | -1.94 | 7.46 | 7.56 | 0.56 | 3.31 |
| Unlisted real estate investments | 13.64 | -0.08 | 6.84 | 7.53 | 7.52 |
| Unlisted infrastructure investments | 4.15 | | | | |
| Return on fund | 14.51 | 10.86 | 19.95 | -6.12 | 13.66 |
| | | | | | |
| Relative return on fund (percentage points) | 0.74 | 0.27 | 0.23 | -0.30 | 0.70 |
| | | | | | |
| Management costs | 0.04 | 0.05 | 0.05 | 0.05 | 0.06 |
| Return on fund after management costs | 14.46 | 10.81 | 19.90 | -6.17 | 13.60 |
| | | | | | |
| **Returns in kroner** | | | | | |
| Equity investments | 20.67 | 12.70 | 28.20 | -6.56 | 19.74 |
| Fixed-income investments | -2.01 | 8.00 | 9.41 | 3.82 | 3.57 |
| Unlisted real estate investments | 13.55 | 0.42 | 8.68 | 11.02 | 7.80 |
| Unlisted infrastructure investments | 7.24 | | | | |
| Return on fund | 14.42 | 11.41 | 22.01 | -3.07 | 13.95 |

**Table 3** Historical key figures as at 31 December 2021. Annualised data, measured in the fund's currency basket.

| | Since 01.01.1998 | Last 15 years | Last 10 years | Last 5 years | Last 12 months |
|---|---|---|---|---|---|
| **Fund return (percent)** | **6.62** | **6.87** | **9.70** | **10.19** | **14.51** |
| Annual price inflation (percent) | 1.86 | 1.93 | 1.77 | 2.23 | 5.20 |
| Annual management costs (percent) | 0.08 | 0.07 | 0.05 | 0.05 | 0.04 |
| Net real return on fund (percent) | 4.60 | 4.78 | 7.74 | 7.74 | 8.81 |
| The fund's actual standard deviation (percent) | 7.98 | 9.24 | 8.17 | 9.64 | 5.79 |
| | | | | | |
| Relative return on fund (percentage points)[1] | 0.27 | 0.14 | 0.25 | 0.30 | 0.74 |
| The fund's tracking error (percentage points)[1] | 0.64 | 0.76 | 0.34 | 0.32 | 0.29 |
| The fund's information ratio (IR)[1,2] | 0.43 | 0.22 | 0.70 | 0.91 | 2.25 |

[1] Based on aggregated equity and fixed-income investments until end of 2016.

[2] The fund's information ratio (IR) is the ratio of the fund's average monthly relative return to the fund's tracking error. The IR indicates how much relative return has been achieved per unit of relative risk.

**Chart 2** The fund's annual return and accumulated annualised return. Percent.

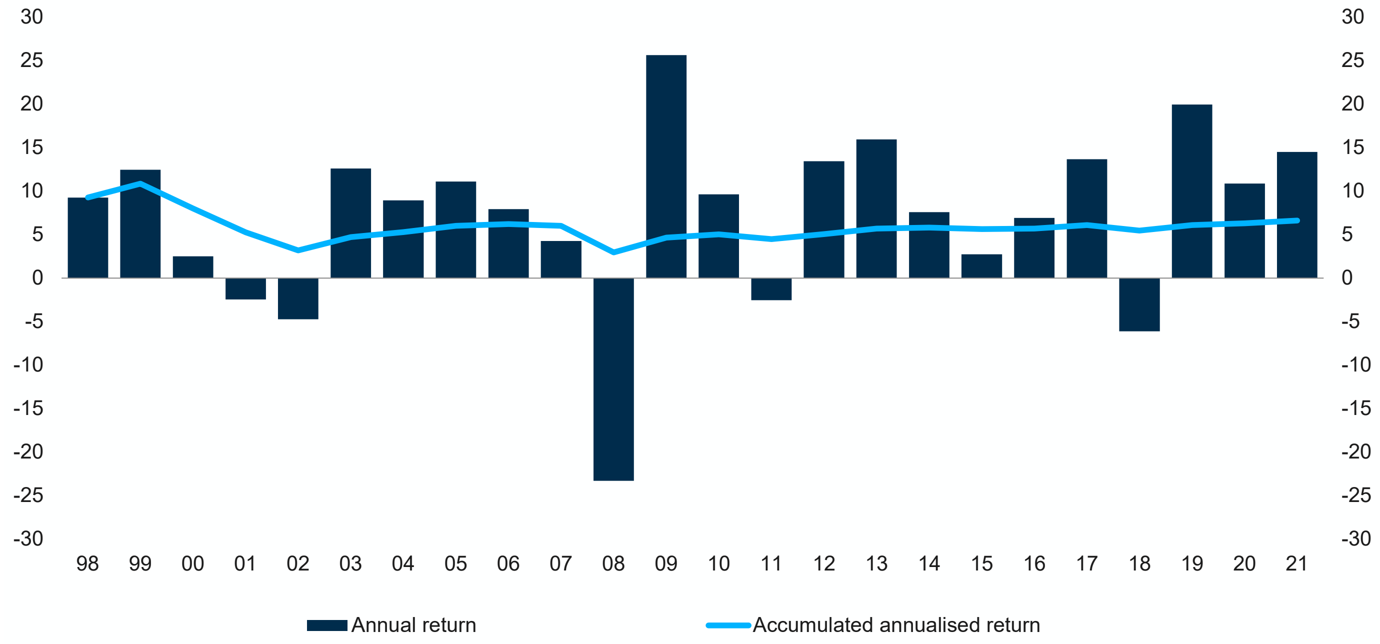



**Chart 3** Historical returns on the fund's investments. Percent.

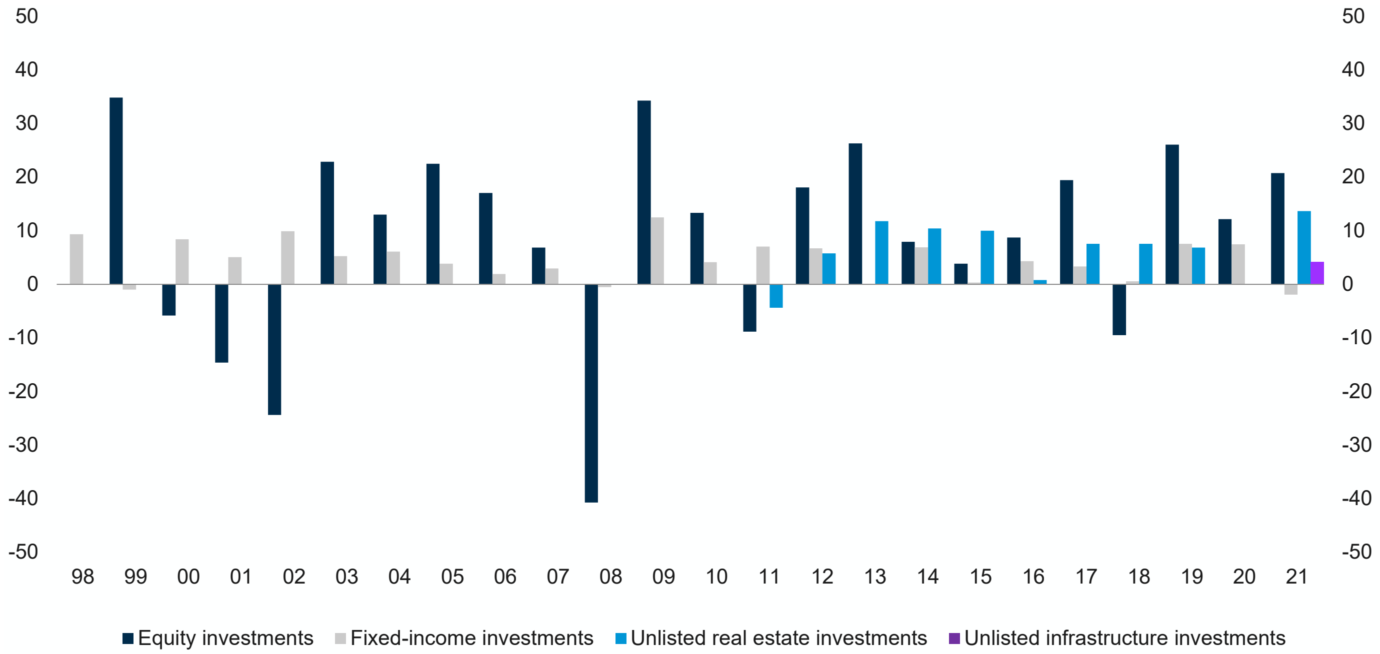


**Table 4** Historical returns on the fund's investments. Percent.

| | Fund | Equity investments | Fixed-income investments | Unlisted real estate investments[1] | Unlisted infrastructure investments |
|---|---|---|---|---|---|
| 2021 | 14.51 | 20.76 | -1.94 | 13.64 | 4.15 |
| 2020 | 10.86 | 12.14 | 7.46 | -0.08 | - |
| 2019 | 19.95 | 26.02 | 7.56 | 6.84 | - |
| 2018 | -6.12 | -9.49 | 0.56 | 7.53 | - |
| 2017 | 13.66 | 19.44 | 3.31 | 7.52 | - |
| 2016 | 6.92 | 8.72 | 4.32 | 0.78 | - |
| 2015 | 2.74 | 3.83 | 0.33 | 9.99 | - |
| 2014 | 7.58 | 7.90 | 6.88 | 10.42 | - |
| 2013 | 15.95 | 26.28 | 0.10 | 11.79 | - |
| 2012 | 13.42 | 18.06 | 6.68 | 5.77 | - |
| 2011 | -2.54 | -8.84 | 7.03 | -4.37 | - |
| 2010 | 9.62 | 13.34 | 4.11 | - | - |
| 2009 | 25.62 | 34.27 | 12.49 | - | - |
| 2008 | -23.31 | -40.71 | -0.54 | - | - |
| 2007 | 4.26 | 6.82 | 2.96 | - | - |
| 2006 | 7.92 | 17.04 | 1.93 | - | - |
| 2005 | 11.09 | 22.49 | 3.82 | - | - |
| 2004 | 8.94 | 13.00 | 6.10 | - | - |
| 2003 | 12.59 | 22.84 | 5.26 | - | - |
| 2002 | -4.74 | -24.39 | 9.90 | - | - |
| 2001 | -2.47 | -14.60 | 5.04 | - | - |
| 2000 | 2.49 | -5.82 | 8.41 | - | - |
| 1999 | 12.44 | 34.81 | -0.99 | - | - |
| 1998 | 9.26 | - | 9.31 | - | - |

[1] Includes listed real estate investments from 01.11.2014 to the end of 2016.

**Table 5** Return on the fund as at 31 December, measured in various currencies. Percent.

| | Since 01.01.1998 Annualised figures | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|---|
| US dollar | 6.83 | 11.09 | 14.35 | 20.24 | -8.44 | 19.92 |
| Euro[1] | 6.68 | 19.53 | 4.90 | 22.45 | -3.83 | 5.33 |
| British pound | 7.73 | 12.12 | 10.82 | 15.59 | -2.75 | 9.54 |
| Norwegian krone | 7.66 | 14.42 | 11.41 | 22.01 | -3.07 | 13.95 |
| Currency basket | 6.62 | 14.51 | 10.86 | 19.95 | -6.12 | 13.66 |

[1] Euro was introduced as currency on 01.01.1999. WM/Reuters' euro rate is used as estimate for 31.12.1997.

**Table 6** Key figures. Billions of kroner.

| | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|
| **Market value** | | | | | |
| Equity investments | 8,878 | 7,945 | 7,145 | 5,477 | 5,653 |
| Fixed-income investments | 3,135 | 2,695 | 2,670 | 2,533 | 2,616 |
| Unlisted real estate investments | 312 | 273 | 273 | 246 | 219 |
| Unlisted infrastructure investments[1] | 14 | | | | |
| **Market value of fund[2]** | **12,340** | **10,914** | **10,088** | **8,256** | **8,488** |
| Accrued, not paid, management fees[3] | 1 | -5 | -4 | -5 | -5 |
| **Owner's capital[2]** | **12,340** | **10,908** | **10,084** | **8,251** | **8,484** |
| | | | | | |
| Inflow of capital | 80 | 4 | 32 | 43 | 0 |
| Withdrawal of capital | -199 | -302 | -14 | -9 | -61 |
| Paid management fees[4] | -10 | -4 | -5 | -5 | -4 |
| Return on fund | 1,580 | 1,070 | 1,692 | -485 | 1,028 |
| Changes due to fluctuations in krone | -25 | 58 | 127 | 224 | 15 |
| **Total change in market value** | **1,426** | **826** | **1,832** | **-233** | **978** |
| | | | | | |
| **Changes in value since first capital inflow in 1996** | | | | | |
| Total inflow of capital | 3,654 | 3,574 | 3,570 | 3,538 | 3,495 |
| Total withdrawal of capital[5] | -687 | -482 | -182 | -167 | -157 |
| Return on equity investments | 6,485 | 4,897 | 4,023 | 2,545 | 3,062 |
| Return on fixed-income investments | 1,401 | 1,446 | 1,249 | 1,052 | 1,037 |
| Return on unlisted real estate investments | 120 | 84 | 85 | 69 | 53 |
| Return on unlisted infrastructure investments[1] | 1 | | | | |
| Management fees[6] | -58 | -53 | -48 | -44 | -39 |
| Changes due to fluctuations in krone | 1,423 | 1,448 | 1,390 | 1,263 | 1,040 |
| **Market value of fund** | **12,340** | **10,914** | **10,088** | **8,256** | **8,488** |
| | | | | | |
| **Return on fund** | **8,007** | **6,427** | **5,358** | **3,666** | **4,151** |
| **Return after management costs** | **7,949** | **6,374** | **5,309** | **3,622** | **4,111** |

[1] First unlisted infrastructure investment was made in second quarter of 2021.

[2] The fund's market value shown in this table does not take into account the management fee. Owner's capital in the financial statements equals the fund's market value less accrued, not paid, management fees.

[3] The amount deducted in connection with management fee for 2021 was based on a forecast and was higher than the final management fee for the year. The difference will be settled in March 2022.

[4] 5.3 billion kroner was used to pay management fee for 2020 and 5.2 billion kroner was used to pay management fee for 2021.

[5] Total withdrawal of capital shown in this table is adjusted for accrued, not paid, management fees.

[6] Management fees are specified in note 12 in the financial statements.

**Chart 4** The fund's market value. Billions of kroner.

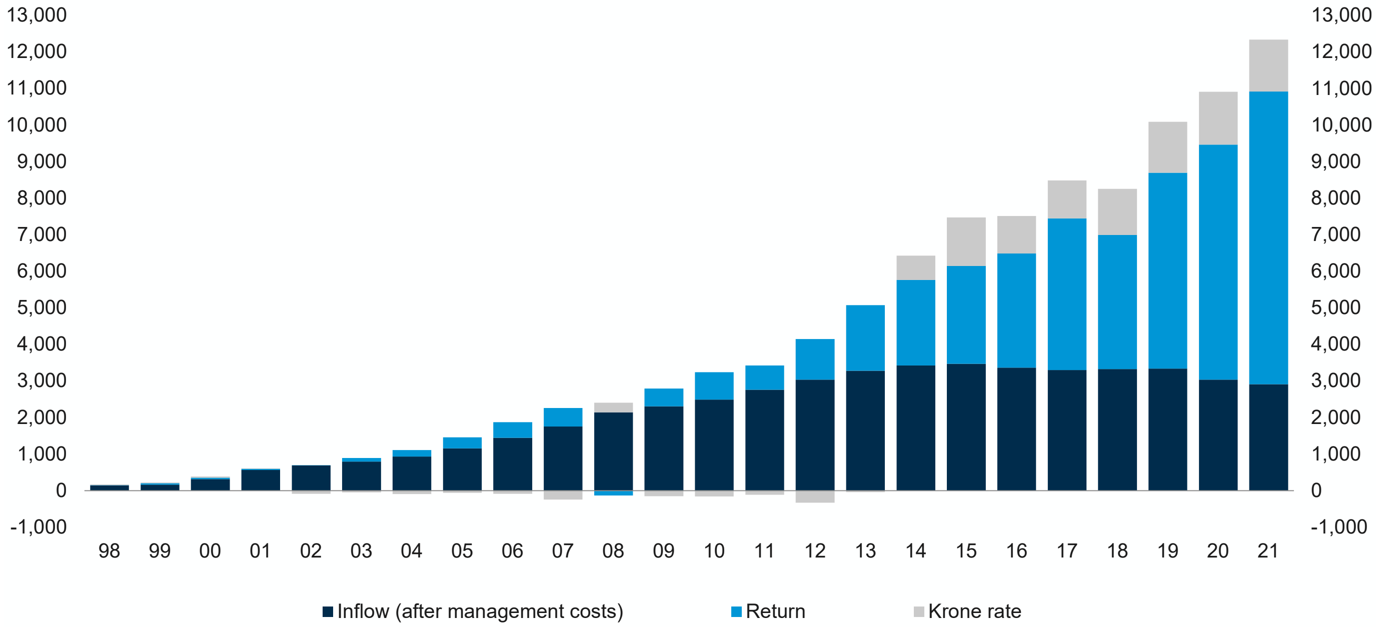



**Chart 5** Changes in the fund's market value. Billions of kroner.

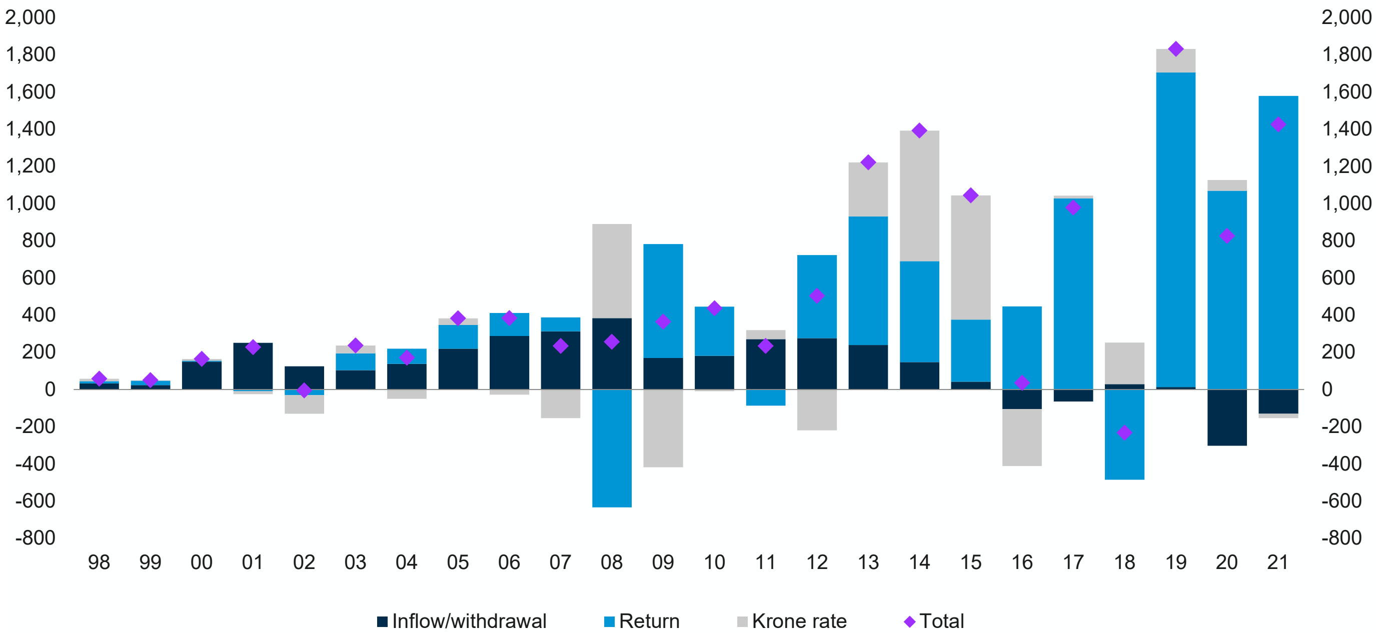


**Chart 6** The fund's market value. Billions of kroner.

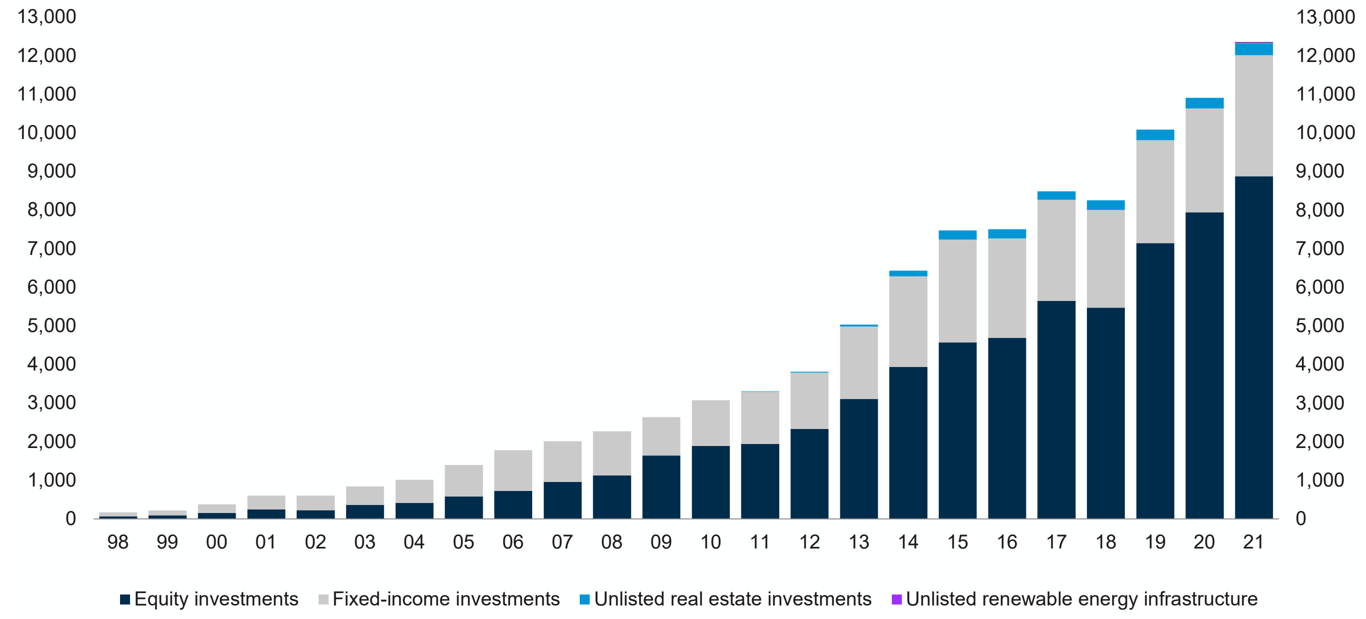



**Table 7** Changes in the fund's market value. Billions of kroner.

| Year | Total | Return | Inflow/ withdrawal[1] | Krone rate |
|---|---|---|---|---|
| 2021 | 1,426 | 1,580 | -129 | -25 |
| 2020 | 826 | 1,070 | -302 | 58 |
| 2019 | 1,832 | 1,692 | 13 | 127 |
| 2018 | -233 | -485 | 29 | 224 |
| 2017 | 978 | 1,028 | -65 | 15 |
| 2016 | 35 | 447 | -105 | -306 |
| 2015 | 1,044 | 334 | 42 | 668 |
| 2014 | 1,393 | 544 | 147 | 702 |
| 2013 | 1,222 | 692 | 239 | 291 |
| 2012 | 504 | 447 | 276 | -220 |
| 2011 | 234 | -86 | 271 | 49 |
| 2010 | 437 | 264 | 182 | -8 |
| 2009 | 365 | 613 | 169 | -418 |
| 2008 | 257 | -633 | 384 | 506 |
| 2007 | 235 | 75 | 314 | -153 |
| 2006 | 385 | 124 | 288 | -28 |
| 2005 | 383 | 127 | 220 | 36 |
| 2004 | 171 | 82 | 138 | -49 |
| 2003 | 236 | 92 | 104 | 41 |
| 2002 | -5 | -29 | 125 | -101 |
| 2001 | 227 | -9 | 251 | -15 |
| 2000 | 164 | 6 | 150 | 8 |
| 1999 | 51 | 23 | 24 | 3 |
| 1998 | 58 | 12 | 33 | 13 |
| Before 1998 | 113 | 0 | 108 | 5 |

[1] After paid management fees.

**Table 8** The fund's market value by asset class. Billions of kroner.

| Year | Total | Equity | Fixed income | Unlisted real estate[1] | Unlisted infrastructure |
|---|---|---|---|---|---|
| 2021 | 12,340 | 8,878 | 3,135 | 312 | 14 |
| 2020 | 10,914 | 7,945 | 2,695 | 273 | - |
| 2019 | 10,088 | 7,145 | 2,670 | 273 | - |
| 2018 | 8,256 | 5,477 | 2,533 | 246 | - |
| 2017 | 8,488 | 5,653 | 2,616 | 219 | - |
| 2016 | 7,510 | 4,692 | 2,577 | 242 | - |
| 2015 | 7,475 | 4,572 | 2,668 | 235 | - |
| 2014 | 6,431 | 3,940 | 2,350 | 141 | - |
| 2013 | 5,038 | 3,107 | 1,879 | 52 | - |
| 2012 | 3,816 | 2,336 | 1,455 | 25 | - |
| 2011 | 3,312 | 1,945 | 1,356 | 11 | - |
| 2010 | 3,077 | 1,891 | 1,186 | - | - |
| 2009 | 2,640 | 1,644 | 996 | - | - |
| 2008 | 2,275 | 1,129 | 1,146 | - | - |
| 2007 | 2,019 | 958 | 1,061 | - | - |
| 2006 | 1,784 | 726 | 1,058 | - | - |
| 2005 | 1,399 | 582 | 817 | - | - |
| 2004 | 1,016 | 416 | 600 | - | - |
| 2003 | 845 | 361 | 484 | - | - |
| 2002 | 609 | 231 | 378 | - | - |
| 2001 | 614 | 246 | 363 | - | - |
| 2000 | 386 | 153 | 227 | - | - |
| 1999 | 222 | 94 | 129 | - | - |
| 1998 | 172 | 70 | 102 | - | - |

[1] Includes listed real estate investments from 01.11.2014 to the end of 2016.

# 2 Investments

# Strong year for equity investments

The fund's equity investments returned no less than 20.8 percent in 2021. There were positive returns in all sectors, but considerable variations between markets, sectors and segments in another year dominated by the coronavirus pandemic.

The fund's equity investments performed strongly again despite the ongoing pandemic, and this came on top of a return of 12.1 percent in 2020. Returns were particularly high on American and European technology, financial and energy stocks, but weaker in Asia-Pacific.

Investments in North America made up 46.8 percent of the fund's equity portfolio and returned 30.4 percent. US stocks returned 26.6 percent in local currency and accounted for 44.7 percent of the fund's equity holdings, making this the fund's single largest market. Measured in the fund's currency basket, the return was 30.5 percent, due to the dollar falling against the currency basket.

European stocks returned 20.2 percent and amounted to 31.1 percent of the fund's equity investments. The UK was the fund's second-largest market behind the US, with 7.3 percent of its equity investments, and returned 18.0 percent in local currency. Measured in the fund's currency basket, the return was 20.5 percent, due to the pound weakening against the currency basket.

Investments in Asia-Pacific made up 20.6 percent of the fund's equity portfolio and returned 4.4 percent. Excluding Japan, the region returned 4.3 percent. Japanese stocks returned 13.1 percent in local currency. Measured in the fund's currency basket, the return was 4.6 percent, due to the yen weakening against the currency basket. Japan was the fund's third-largest market behind the US and the UK and made up 7.1 percent of the fund's equity holdings.

Emerging markets (including frontier markets) accounted for 10.5 percent of the fund's equity investments. Chinese equities returned -21.2 percent in local currency, or -16.7 percent in the fund's currency basket. China accounted for 3.8 percent of the fund's equity investments and was its single largest emerging market, followed by Taiwan at 2.3 percent and India at 1.6 percent. The fund's investments in these last two countries returned 25.6 and 31.3 percent respectively in local currency, or 31.5 and 33.0 percent measured in the fund's currency basket.

Emerging markets as a whole returned 4.4 percent and accounted for 10.5 percent of the fund's equity investments. The investments in developed markets as a whole returned 22.9 percent and accounted for 89.7 percent of the fund's equity investments.

**Chart 7** The fund's holdings in equity markets. Percentage of market value of equities in the benchmark index.

Source: FTSE Russell, Norges Bank Investment Management

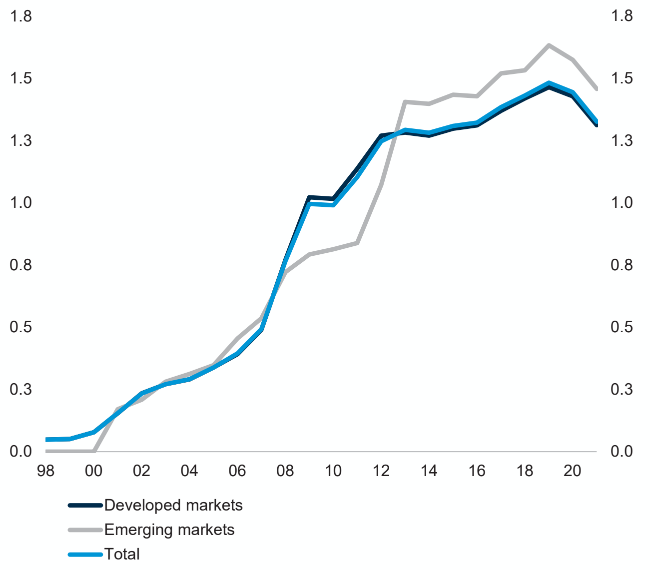



**Chart 8** The fund's holdings in equity markets. Percentage of market value of equities in the benchmark index.

Source: FTSE Russell, Norges Bank Investment Management

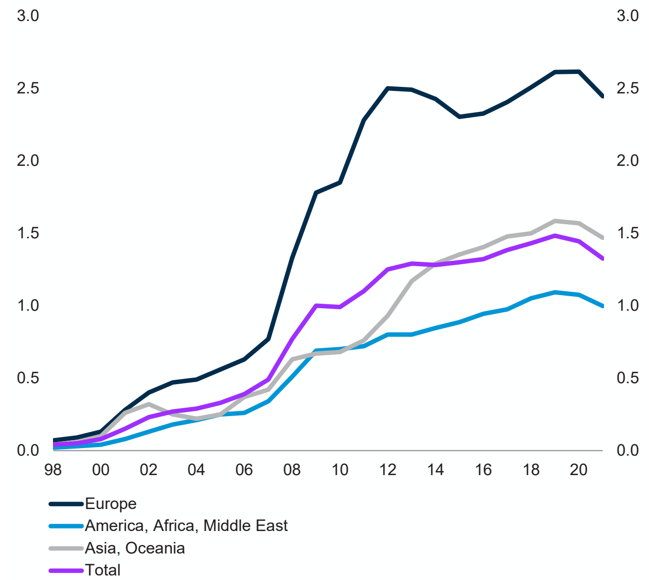



**Table 9** Return on the fund's largest equity investments in 2021 by country. Percent.

| Country | Return in international currency | Return in local currency | Share of equity investments |
|---|---|---|---|
| US | 30.5 | 26.6 | 44.7 |
| UK | 20.5 | 18.0 | 7.3 |
| Japan | 4.6 | 13.1 | 7.1 |
| France | 24.9 | 30.3 | 4.9 |
| Switzerland | 24.6 | 24.6 | 4.6 |
| Germany | 7.3 | 12.0 | 4.1 |
| China | -16.7 | -21.2 | 3.8 |
| Netherlands | 31.2 | 36.9 | 2.4 |
| Taiwan | 31.5 | 25.6 | 2.3 |
| Sweden | 24.8 | 33.5 | 2.0 |

**Chart 9** Price developments in regional equity markets. Measured in US dollars, except for the Stoxx Europe 600, which is measured in euros. Indexed total return 31.12.2020 = 100.

Source: Bloomberg

## Tech stocks perform best

Technology companies were the best performers in 2021 with a return of 30.2 percent. The sector benefited from stronger demand for enterprise software and digital advertising, as well as greatly increased demand and prices for semiconductors.

Energy was the second-strongest sector with a return of 26.8 percent as oil, gas and chemical prices soared on the back of increased demand, low investment levels and supply controls in some of the major oil-producing nations.

Financials returned 26.6 percent. Banks performed particularly well with a return of 31.5 percent. The rollout of vaccination programmes and pent-up demand fuelled a recovery in many economies, and banks saw higher revenue and lower expected loan losses. The return outlook also improved as regulatory restrictions were lifted.

The weakest sector was telecommunications with a return of 6.9 percent. This can be explained partly by the sector's sensitivity to rising interest rates, weak revenue growth and a still challenging competitive environment.

## Largest investments

The fund was invested in 9,338 companies at the end of 2021, up from 9,123 a year earlier. It had holdings of more than 2 percent in 958 companies and more than 5 percent in 40 companies. Its average holding in the world's listed companies was 1.3 percent. The fund's investments spanned 70 countries and 44 currencies.

The investments in technology companies Microsoft Corp. and Alphabet Inc. made the biggest contributions to the return for the year, followed by technology company Apple Inc. All three are US companies. The worst-performing investments were in technology companies Alibaba Group Holding Ltd and Tencent Holdings Ltd and real estate company Vonovia SE.

The largest investment in any one company was in Apple. This investment accounted for 2.4 percent of the fund's equity portfolio and had a market value of 217 billion kroner at the end of the year. Both of the fund's next-largest investments were also in technology companies: 210 billion kroner in Microsoft Corp. and 144 billion kroner in Alphabet Inc., corresponding to 2.4 and 1.6 percent of the fund's equity portfolio respectively.

Excluding listed real estate companies, the largest percentage holding in any one company was in consumer services company Nordic Entertainment Group AB. The fund's 8.9 percent stake was worth 3.2 billion kroner. With the exception of listed real estate companies, the fund may hold no more than 10 percent of the voting shares in a company.

We participated in 460 initial public offerings during the year. The largest of these were at automotive technology company Rivian Automotive Inc and technology companies Kuaishou Technology and Didi Global Inc. The offerings in which the fund invested the most were those at Rivian, e-commerce company Coupang and Didi.

**Table 10** Return on the fund's equity investments in 2021 by sector. International currency. Percent.

| Sector | Return | Share of equity investments[1] |
|---|---|---|
| Technology | 30.2 | 20.5 |
| Consumer discretionary | 12.9 | 14.6 |
| Financials | 26.6 | 14.4 |
| Industrials | 20.8 | 13.4 |
| Health care | 17.2 | 11.4 |
| Real estate | 24.5 | 6.3 |
| Consumer staples | 12.3 | 6.0 |
| Basic materials | 19.0 | 4.4 |
| Energy | 26.8 | 3.7 |
| Telecommunications | 6.9 | 3.2 |
| Utilities | 9.9 | 2.4 |

[1] Does not sum up to 100 percent because cash and derivatives are not included.

**Chart 10** Price developments in stock sectors in the FTSE Global All Cap Index. Measured in US dollars. Indexed total return 31.12.2020 = 100.

Source: FTSE Russell

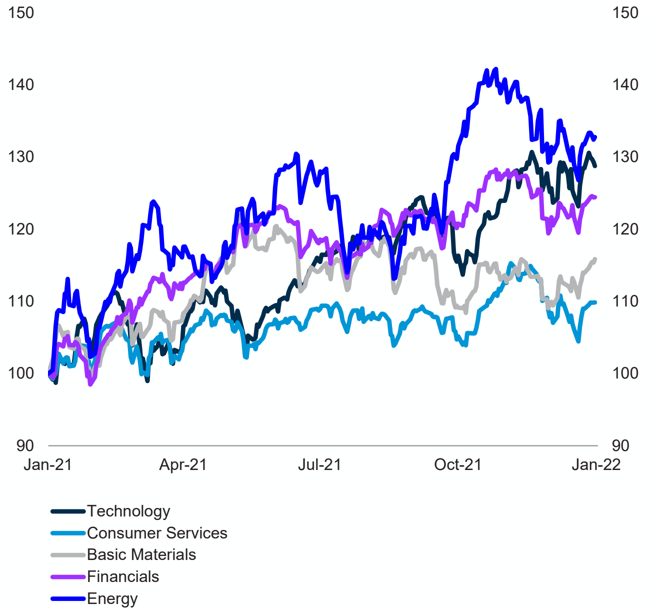


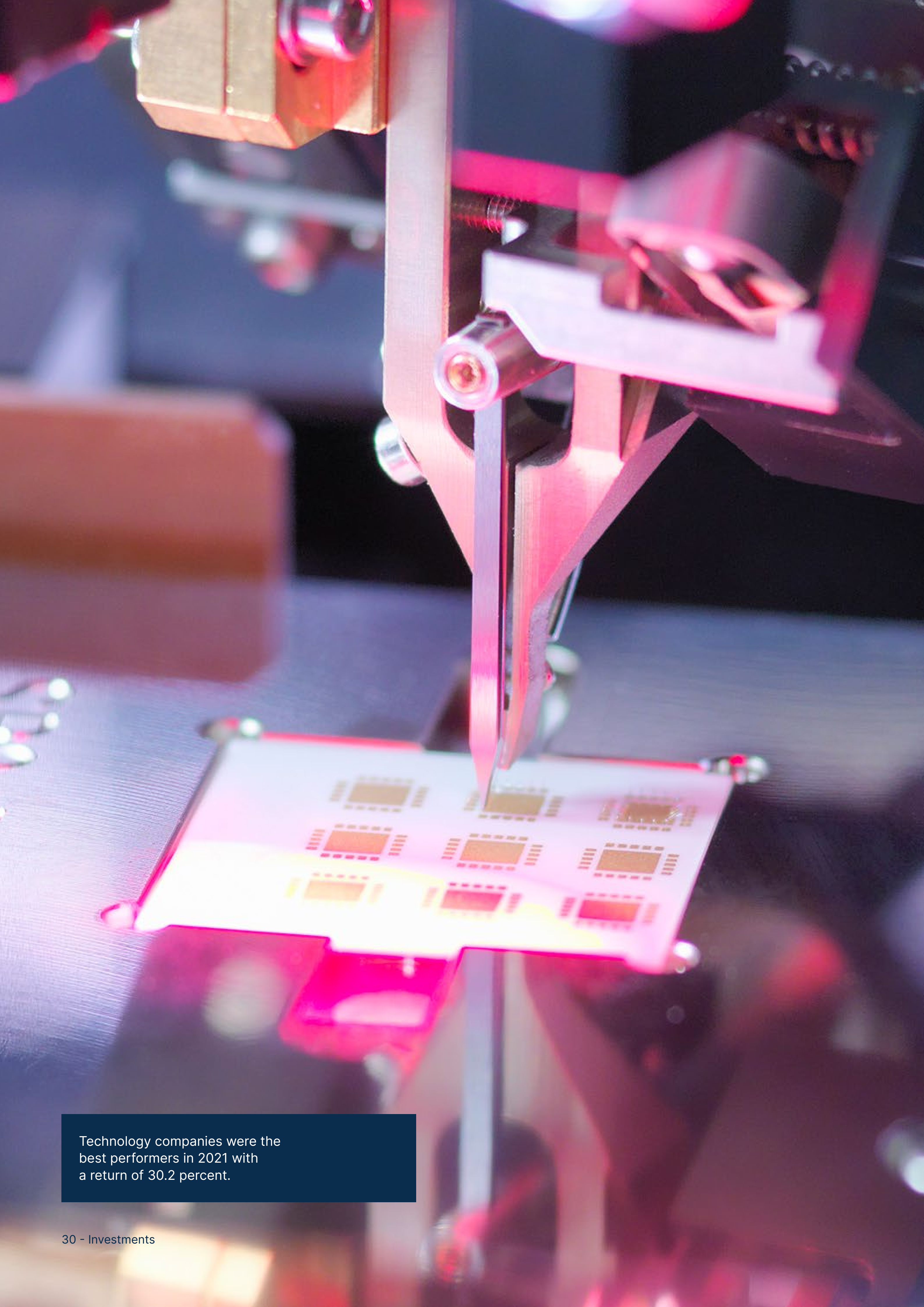

**Table 11** The fund's largest equity holdings as at 31 December 2021. Millions of kroner.

| Company | Country | Holding |
|---|---|---|
| Apple Inc. | US | 216,952 |
| Microsoft Corp. | US | 210,468 |
| Alphabet Inc. | US | 144,417 |
| Amazon.com, Inc. | US | 121,160 |
| Nestlé S.A. | Switzerland | 89,082 |
| Meta Platforms, Inc. | US | 83,016 |
| Taiwan Semiconductor Manufacturing Company, Ltd. | Taiwan | 72,171 |
| Tesla Inc. | US | 68,097 |
| Roche Holding AG | Switzerland | 65,283 |
| ASML Holding N.V. | Netherlands | 64,496 |
| NVIDIA Corp | US | 54,055 |
| Royal Dutch Shell plc | US | 52,988 |
| Samsung Electronics Co., Ltd. | South Korea | 49,665 |
| Tencent Holdings Ltd. | China | 44,267 |
| Berkshire Hathaway Inc. | US | 42,097 |
| Vonovia SE | Germany | 42,007 |
| LVMH Moët Hennessy Louis Vuitton SE | France | 39,949 |
| Novo Nordisk A/S | Denmark | 39,018 |
| Novartis AG | Switzerland | 38,848 |
| UnitedHealth Group Inc | US | 38,526 |

**Table 12** The fund's largest ownership shares in the equity markets as at 31 December 2021. Percent.

| Company[1] | Country | Ownership |
|---|---|---|
| Nordic Entertainment Group AB | Sweden | 8.9 |
| Kepler Weber SA | Brazil | 6.6 |
| Iberpapel Gestion, S.A. | Spain | 6.3 |
| Oponeo.pl S.A. | Poland | 6.3 |
| STS Holding SA | Poland | 6.0 |
| Equitable Holdings, Inc. | US | 5.8 |
| Arkema S.A. | France | 5.7 |
| Coursera Inc. | US | 5.6 |
| Array Technologies Inc. | US | 5.3 |
| Baby Bunting Group Ltd | Australia | 5.2 |
| BHP Group plc | UK | 5.2 |
| Carnival plc | UK | 5.2 |
| Toya S.A. | Poland | 5.1 |
| Bank of Ireland Group plc | Ireland | 5.1 |
| SOMPO Holdings, Inc. | Japan | 5.1 |
| HelloFresh SE | Germany | 5.0 |
| TAC Consumer PCL | Thailand | 5.0 |
| GrainCorp Ltd | Australia | 5.0 |
| Kajaria Ceramics Ltd | India | 4.9 |
| AUB Group Ltd | Australia | 4.9 |

[1] Excluding listed real estate investments



Technology companies were the best performers in 2021 with a return of 30.2 percent.

**Table 13** Regional composition of the fund's equity holdings.

| Region | Millions of kroner[1] | Percent |
|---|---|---|
| **North America** | **4,152,862** | **46.8** |
| US | 3,972,126 | 44.7 |
| Canada | 180,736 | 2.0 |
| **Europe** | **2,764,737** | **31.1** |
| UK | 650,278 | 7.3 |
| France | 433,967 | 4.9 |
| Switzerland | 409,738 | 4.6 |
| Germany | 362,812 | 4.1 |
| Netherlands | 208,862 | 2.4 |
| Sweden | 181,935 | 2.0 |
| Spain | 106,576 | 1.2 |
| Denmark | 104,803 | 1.2 |
| Italy | 103,877 | 1.2 |
| Finland | 66,523 | 0.7 |
| Belgium | 47,092 | 0.5 |
| **Asia** | **1,652,139** | **18.6** |
| Japan | 629,943 | 7.1 |
| China | 335,004 | 3.8 |
| Taiwan | 201,929 | 2.3 |
| South Korea | 151,953 | 1.7 |
| India | 144,090 | 1.6 |
| Hong Kong | 78,337 | 0.9 |
| **Oceania** | **179,457** | **2.0** |
| Australia | 169,158 | 1.9 |
| **Latin America** | **71,222** | **0.8** |
| Brazil | 39,942 | 0.4 |
| **Africa** | **39,892** | **0.4** |
| South Africa | 33,007 | 0.4 |
| **Middle East** | **37,541** | **0.4** |

[1] Does not sum up to total market value of the equity holdings because cash and derivatives are not included.

**Table 14** Sector composition of the fund's equity holdings.

| Sector | Millions of kroner[1] | Percent |
|---|---|---|
| **Technology** | **1,822,542** | **20.5** |
| Technology | 1,822,542 | 20.5 |
| **Consumer discretionary** | **1,292,382** | **14.6** |
| Retail | 402,173 | 4.5 |
| Consumer products and services | 383,835 | 4.3 |
| Automobiles and parts | 252,197 | 2.8 |
| Travel and leisure | 143,678 | 1.6 |
| Media | 110,498 | 1.2 |
| **Financials** | **1,275,524** | **14.4** |
| Banks | 614,790 | 6.9 |
| Financial services | 380,558 | 4.3 |
| Insurance | 280,176 | 3.2 |
| **Industrials** | **1,189,980** | **13.4** |
| Industrial goods and services | 999,283 | 11.3 |
| Construction and materials | 190,698 | 2.1 |
| **Health care** | **1,013,017** | **11.4** |
| Health care | 1,013,017 | 11.4 |
| **Real estate** | **558,606** | **6.3** |
| Real estate | 558,606 | 6.3 |
| **Consumer Staples** | **531,917** | **6.0** |
| Food, beverage and tobacco | 334,921 | 3.8 |
| Personal care, drug and grocery Stores | 196,996 | 2.2 |
| **Basic materials** | **390,132** | **4.4** |
| Basic resources | 200,160 | 2.3 |
| Chemicals | 189,971 | 2.1 |
| **Energy** | **331,571** | **3.7** |
| Energy | 331,571 | 3.7 |
| **Telecommunications** | **281,873** | **3.2** |
| Telecommunications | 281,873 | 3.2 |
| **Utilities** | **210,307** | **2.4** |
| Utilities | 210,307 | 2.4 |

[1] Does not sum up to total market value of the equity holdings because cash and derivatives are not included.

# Negative return on fixed income

The fund’s fixed-income investments returned -1.9 percent in 2021. Financial markets were buoyed by further expansionary monetary policy, with policy rates held near or below zero in the main markets and bond purchases expanding central bank balance sheets.

Fixed-income investments accounted for 25.4 percent of the fund at the end of the year. These investments were primarily in bonds, and the remainder in short-term securities and bank deposits. The fixed-income market was again affected by the pandemic, with monetary policy geared mainly towards greater economic growth. Inflation was above central bank targets, leading to higher policy rates in many emerging markets and a debate in developed markets about whether the higher rate of inflation was temporary or more permanent.

## Yields still low

The fund's government bond holdings returned -3.2 percent in 2021 and accounted for 61.1 percent of its fixed-income investments at the end of the year. Government bonds in developed markets, which made up 58.6 percent of fixed-income investments, returned -3.1 percent.

US Treasuries returned -2.6 percent in local currency and 0.4 percent measured in the fund's currency basket, and accounted for 24.8 percent of fixed-income investments,

**Chart 11** The fund's holdings in fixed-income markets. Percentage of market value of bonds in the benchmark index.

Source: Bloomberg Barclays Indices, Norges Bank Investment Management

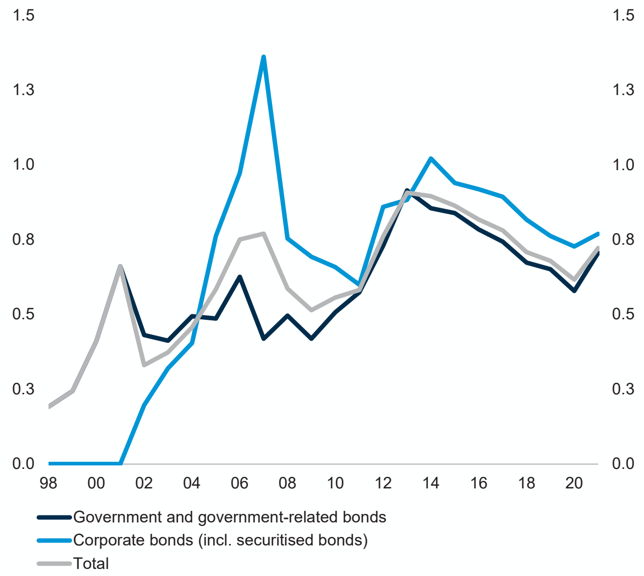
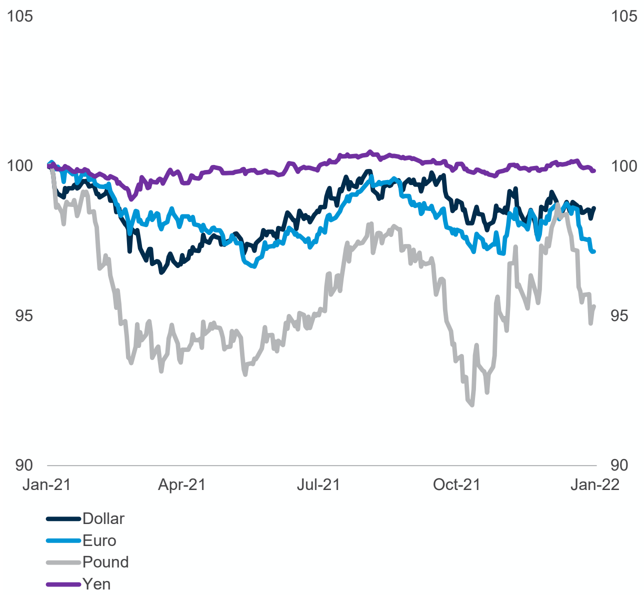



**Chart 12** Price developments for bonds issued in dollars, euros, pounds and yen. Measured in local currencies. Indexed total return 31.12.2020 = 100.

Source: Bloomberg Barclays Indices



making them the fund’s largest holding of government debt from a single issuer. Ten-year Treasury yields began the year at 0.9 percent before spiking to 1.7 percent in the first quarter. After dropping back by more than half a point during the spring and summer, yields picked up again towards the end of the year and ended 2021 at just over 1.5 percent. The Federal Reserve kept its policy rate close to zero and supplied liquidity to the market through bond purchases. A winding down of these purchases began in December and is expected to be completed in March 2022. The dollar appreciated against most other currencies during the year.

Euro-denominated government bonds returned -3.9 percent in local currency and -7.9 percent in the fund’s currency basket, and made up 11.8 percent of fixed-income investments. The European Central Bank kept its deposit rate at -0.5 percent all year and continued to supply liquidity, mostly through its Pandemic Emergency Purchase Programme. This contributed to calm fixed-income markets with limited fluctuations in risk premiums. The euro depreciated against many other currencies during the year.

Japanese government bonds accounted for 11.7 percent of fixed-income holdings and returned 0.7 percent in local currency and -6.9 percent in the fund’s currency basket. There were no major changes to either monetary policy or interest rates in Japan. The yen depreciated against most other currencies.

UK gilts accounted for 2.1 percent of the fund’s fixed-income investments and returned -6.0 percent in local currency and -4.0 percent in the fund’s currency basket. The Bank of England kept its policy rate at 0.1 percent until December, when it was raised by 15 basis points to 0.25 percent. The central bank also purchased gilts throughout the year to

**Table 15** Return on the fund's largest bond holdings by currency in 2021. Percent.

| Currency | Return in international currency | Return in local currency | Share of fixed-income investments |
|---|---|---|---|
| US dollar | 1.8 | -1.2 | 46.9 |
| Euro | -6.4 | -2.3 | 27.6 |
| Japanese yen | -6.9 | 0.7 | 12.8 |
| British pounds | -1.0 | -3.1 | 4.7 |
| Singapore dollar | -1.8 | -2.8 | 4.6 |
| Canadian dollar | 1.7 | -2.2 | 4.5 |
| Australian dollar | -5.6 | -2.8 | 2.5 |
| Swedish krona | -7.0 | -0.5 | 1.1 |
| Swiss franc | -2.3 | -2.3 | 0.6 |
| Danish krone | -6.3 | -2.3 | 0.5 |

support the economy. This quantitative easing will not be continued in 2022.

Government bonds in emerging-market currencies, which made up 2.5 percent of fixed-income investments, returned -3.9 percent. Interest rates were raised to curb inflationary pressures in many of these markets, especially in Latin America. Bonds from emerging-market issuers were removed from the fund's benchmark index in 2019 but remain part of the investment universe and are limited to 5 percent of the fund's fixed-income investments.

Inflation-linked bonds, all of which are issued by governments, returned 6.4 percent and amounted to 6.2 percent of fixed-income investments. Actual inflation was high, and inflation expectations increased, leading to much stronger returns on bonds of this type than on the equivalent nominal bonds.

The fund also held bonds from government-related institutions such as Kreditanstalt für Wiederaufbau, Canada Mortgage and Housing Corp, and the European Investment Bank. These returned -3.3 percent and accounted for 11.7 percent of fixed-income investments at the end of the year.

Corporate bonds returned 0.1 percent and represented 23.9 percent of fixed-income investments at the end of 2021. There were only minor fluctuations in the credit premium during the year, and the stronger return was due mainly to a higher share of investments in US dollars than in the rest of the bond portfolio.

Securitised debt, consisting mainly of covered bonds denominated in euros, returned -4.6 percent and made up 6.1 percent of the fund's fixed-income holdings.

**Chart 13** Price developments in fixed-income sectors. Measured in US dollars. Indexed total return 31.12.2020 = 100.

Source: Bloomberg Barclays Indices


**Chart 14** Price developments for 10-year government bonds issued in emerging market currencies. Measured in US dollars. Indexed total return 31.12.2020 = 100.

Source: Bloomberg Barclays Indices

**Chart 15** 10-year government bond yields. Percent.

Source: Bloomberg

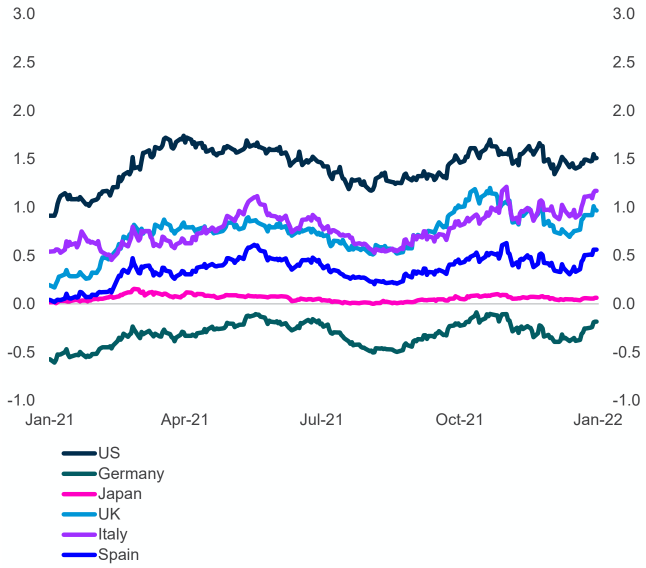



**Table 16** Return on the fund's fixed-income investments in 2021 by sector. International currency. Percent.

| Sector | Return | Share of fixed-income investments[1] |
|---|---|---|
| Government bonds[2] | -3.2 | 61.1 |
| Government-related bonds[2] | -3.3 | 11.7 |
| Inflation-linked bonds[2] | 6.4 | 6.2 |
| Corporate bonds | 0.1 | 23.9 |
| Securitised bonds | -4.6 | 6.1 |

[1] Does not sum up to 100 percent because cash and derivatives are not included.

[2] Governments may issue different types of bonds, and the fund's investments in these bonds are grouped accordingly. Bonds issued by a country's government in the country's own currency are categorised as government bonds. Bonds issued by a country's government in another country's currency are government-related bonds. Inflation-linked bonds issued by governments are grouped with inflation-linked bonds.

**Table 17** Sector composition of the fund's fixed-income investments.

| Sector | Millions of kroner [1] | Percent |
|---|---|---|
| **Government bonds** | **1,914,848** | **61.1** |
| Government bonds | 1,914,848 | 61.1 |
| **Government-related bonds** | **367,840** | **11.7** |
| Bonds issued by federal agencies | 155,965 | 5.0 |
| Bonds issued by local authorities | 131,218 | 4.2 |
| Bonds issued by supranational bodies | 70,640 | 2.3 |
| Sovereign bonds | 10,016 | 0.3 |
| **Inflation-linked bonds** | **195,879** | **6.2** |
| Inflation-linked bonds | 195,879 | 6.2 |
| **Corporate bonds** | **748,389** | **23.9** |
| Bonds issued by industrial companies | 354,885 | 11.3 |
| Bonds issued by financial institutions | 327,240 | 10.4 |
| Bonds issued by utilities | 66,264 | 2.1 |
| **Securitised bonds** | **191,948** | **6.1** |
| Covered bonds | 191,948 | 6.1 |

[1] Does not sum up to total market value of the fixed-income investments because cash and derivatives are not included.

**Table 18** The fund's largest bond holdings sorted by issuer as at 31 December 2021. Millions of kroner.

| Issuer | Country | Holding |
|---|---|---|
| Government of United States of America | US | 877,936 |
| Government of Japan | Japan | 370,519 |
| Monetary Authority of Singapore | Singapore | 132,622 |
| Government of Germany | Germany | 121,399 |
| United Kingdom Government | UK | 93,596 |
| Government of France | France | 74,825 |
| Government of Italy | Italy | 63,741 |
| Government of Canada | Canada | 55,754 |
| Government of Australia | Australia | 45,988 |
| Government of Spain | Spain | 45,547 |
| Canada Mortgage & Housing Corp | Canada | 41,476 |
| Kreditanstalt fur Wiederaufbau | Germany | 26,729 |
| Government of the Netherlands | Netherlands | 25,786 |
| Government of Austria | Austria | 23,115 |
| Bank of America Corp | US | 19,412 |
| Goldman Sachs Group, Inc./The | US | 18,268 |
| European Union | International organisations | 17,875 |
| Government of Sweden | Sweden | 17,607 |
| Government of Belgium | Belgium | 17,508 |
| Government of Ireland | Ireland | 17,276 |

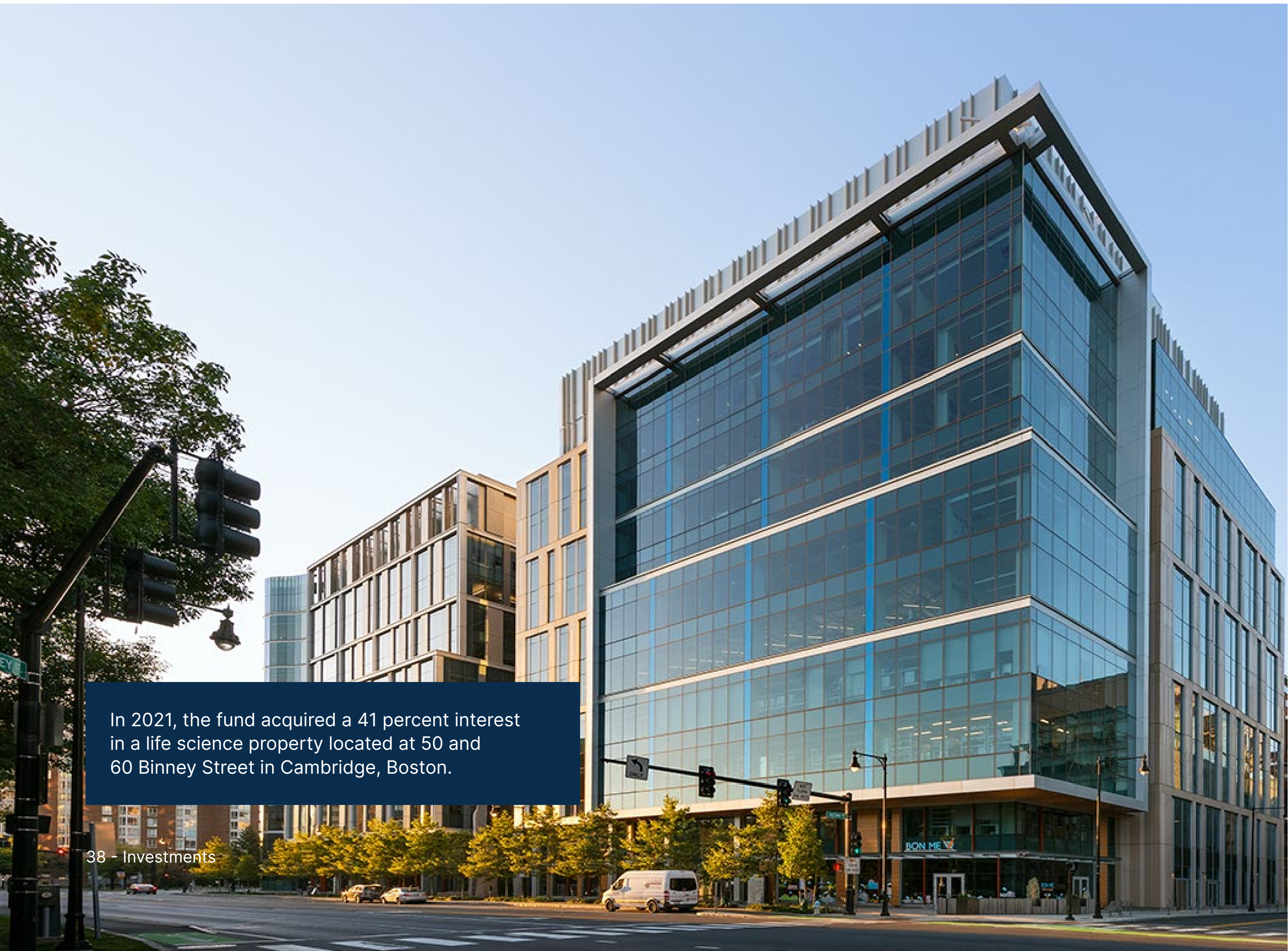
**Table 19** Currency composition of the fund's bond holdings.

| Currency | Millions of kroner[1] | Percent |
|---|---|---|
| US dollar | 1,469,043 | 46.9 |
| Euro | 866,527 | 27.6 |
| Japanese yen | 400,341 | 12.8 |
| British pounds | 148,592 | 4.7 |
| Singapore dollar | 145,597 | 4.6 |
| Canadian dollar | 141,304 | 4.5 |
| Australian dollar | 78,240 | 2.5 |
| Swedish krona | 35,724 | 1.1 |
| Swiss franc | 20,118 | 0.6 |
| Danish krone | 17,040 | 0.5 |
| New Zealand dollar | 15,585 | 0.5 |
| South Korean won | 13,571 | 0.4 |
| Brazilian real | 13,065 | 0.4 |
| South African rand | 7,907 | 0.3 |
| Mexican peso | 7,145 | 0.2 |
| Colombian peso | 6,824 | 0.2 |
| Malaysian ringgit | 6,583 | 0.2 |
| Indian rupee | 6,384 | 0.2 |
| Indonesian rupiah | 5,603 | 0.2 |
| Israeli shekel | 4,700 | 0.1 |
| Chilean peso | 2,850 | 0.1 |
| Thai baht | 2,348 | 0.1 |

[1] Does not sum up to total market value of the bond holdings because cash and derivatives are not included.

# Strong return on real estate investments

The fund's investments in real estate returned 18.6 percent in 2021 and made up 4.6 percent of the fund at the end of the year. Unlisted real estate investments returned 13.6 percent, and listed real estate investments 26.8 percent.



In 2021, the fund acquired a 41 percent interest in a life science property located at 50 and 60 Binney Street in Cambridge, Boston.

The fund's real estate strategy covers both unlisted and listed real estate investments. Together, these amounted to 573 billion kroner at the end of the year.

## Unlisted real estate

The fund's unlisted real estate investments are not part of the strategic benchmark index, which consists solely of equities and bonds. It is up to Norges Bank to determine the scope and mix of real estate investments within the upper limit set in the management mandate of 7 percent of the fund.

Our unlisted real estate investments had a market value of 312 billion kroner at the end of the year, equivalent to 2.5 percent of the fund and 54.3 percent of our total real estate investments.

The return on the fund's unlisted real estate investments depends on rental income, operating costs, changes in the value of properties and debt, movements in exchange rates, and transaction costs for property purchases and sales. Measured in local currency, income return contributed positively with 3.4 percentage points to the return in 2021. Operating costs consist of interest on external debt, taxes, fixed management fees, costs at management companies and costs in the holding structure. Changes in the value of properties and debt contributed 9.8 percentage points to the return in local currency. These consist of realised gains and losses, changes in the value of properties, external debt and other assets, and variable management fees. Transaction costs contributed -0.1 percent, while exchange rate movements made a slight positive contribution of 0.2 percentage point as a result of differences between the currency composition of the real estate portfolio and the fund's currency basket.

It was a good year for real estate investments after a challenging 2020 on account of the pandemic. The acute effects of pandemic restrictions have been accompanied by an acceleration of existing trends in the market. Trading in physical stores has increasingly been replaced with shopping online, a phenomenon that has been very positive for the logistics sector. The return on our unlisted logistics properties in 2021 was 38.5 percent in local currency, driven by rapidly rising rents and falling capitalisation rates. The return was particularly strong in the US. The retail portfolio had a weak year but fared better than in 2020. In the office segment, there is still great uncertainty about long-term trends, but our investments produced a solid return, especially in Europe. The growing focus on environmental and sustainability assessments of properties was a key element in our work on the fund's real estate portfolio in 2021.

Investments in Europe returned 8.8 percent in local currency and accounted for 47.3 percent of the fund's unlisted real estate investments at the end of the year.

Logistics was also the strongest segment in Europe, followed by offices. Retail performed much better than in 2020, with values bottoming out somewhat in the UK and rising slightly in Paris.

Real estate investments in the US returned 18.9 percent in local currency and made up 50.1 percent of the fund's unlisted real estate investments at the end of the year. The return on the logistics portfolio was particularly strong in 2021, while values for office properties were relatively flat.

Real estate investments in Japan returned 0.6 percent in local currency and accounted for 2.6 percent of the fund's unlisted real estate investments at the end of the year. Office values were largely unchanged, while retail values fell slightly.

**Table 20** Value of real estate investments as at 31 December 2021. Millions of kroner.

| | Value[1] |
|---|---|
| Unlisted real estate investments | 311,538 |
| Listed real estate investments | 261,672 |
| **Aggregated real estate investments** | **573,211** |

[1] Including bank deposits and other receivables

**Table 21** Return on the fund's unlisted real estate investments. Percentage points.

| | Since 01.04.2011 | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|---|
| Rental income | 3.8 | 3.4 | 3.4 | 3.6 | 3.6 | 3.7 |
| Change in value | 3.4 | 9.8 | -3.5 | 3.1 | 4.1 | 3.8 |
| Transaction costs | -0.9 | -0.1 | -0.2 | -0.1 | -0.2 | -0.2 |
| Currency effect | 0.1 | 0.2 | 0.3 | 0.1 | -0.1 | 0.1 |
| **Total (percent)** | **6.5** | **13.6** | **-0.1** | **6.8** | **7.5** | **7.5** |

**Table 22** The fund's largest unlisted real estate investments, excluding logistics, by city as at 31 December 2021.

| City | Percent |
|---|---|
| Paris | 23.1 |
| London | 19.7 |
| New York | 17.5 |
| Boston | 13.4 |
| San Francisco | 6.0 |
| Washington, D.C. | 5.4 |
| Zürich | 5.3 |
| Berlin | 4.6 |
| Tokyo | 3.8 |
| Sheffield | 0.5 |

**Table 23** The fund's largest unlisted real estate investments. Logistics by country as at 31 December 2021.

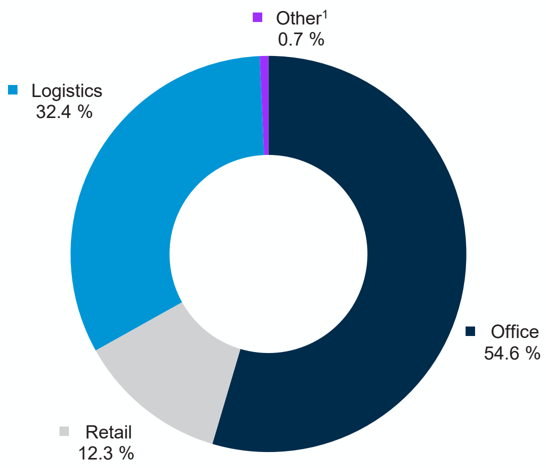
| Country | Percent |
|---|---|
| US | 65.5 |
| UK | 12.6 |
| France | 4.8 |
| Spain | 3.4 |
| Netherlands | 3.1 |
| Italy | 2.5 |
| Germany | 2.5 |
| Czech Republic | 1.9 |
| Poland | 1.8 |
| Hungary | 0.9 |

**Table 24** Announced new investments and disposals in 2021.

| | City | Partner | Sector | Ownership Percent | Currency | Price Millions |
|---|---|---|---|---|---|---|
| **New investments** | | | | | | |
| One logistics property in the UK | Daventry, UK | Prologis | Logistics | 50 | GBP | 27.1 |
| 11 logistics properties in Berlin and Rhine-Ruhr area | Berlin and Rhine-Ruhr area, Germany | Prologis | Logistics | 47 | EUR | 108,0 |
| One Memorial Drive, Cambridge | Boston, US | MetLife | Office | 47.5 | USD | 391.9 |
| 50-60 Binney Street, Cambridge | Boston, US | Alexandria Real Estate and MetLife | Life sciences | 41 | USD | 485.9 |
| **Disposal of assets** | | | | | | |
| One logistics property in Jeffersonville, Indiana | Jeffersonville, USA | Prologis | Logistics | 45 | USD | 45,0[1] |
| 27 logistics properties in the US | US | Prologis | Logistics | 45 | USD | 206,0 |

[1] In june 2021, the limit for when purchases and sales are announced was raised from 25 million dollars to 100 million dollars.

**Chart 16** The fund's unlisted real estate investments by sector as at 31 December 2021. Percent.




[1] Other sectors, bank deposits and other claims.

**Chart 17** The fund's unlisted real estate investments by country as at 31 December 2021. Percent.

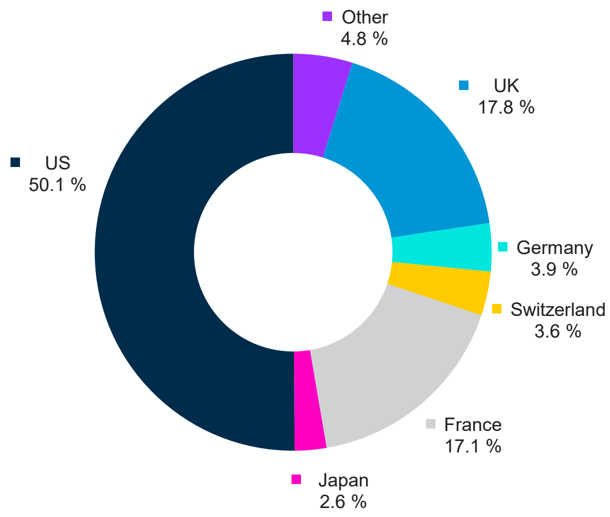



**Chart 18** Changes in the fund's market value by unlisted real estate investments in 2021. Billions of kroner.

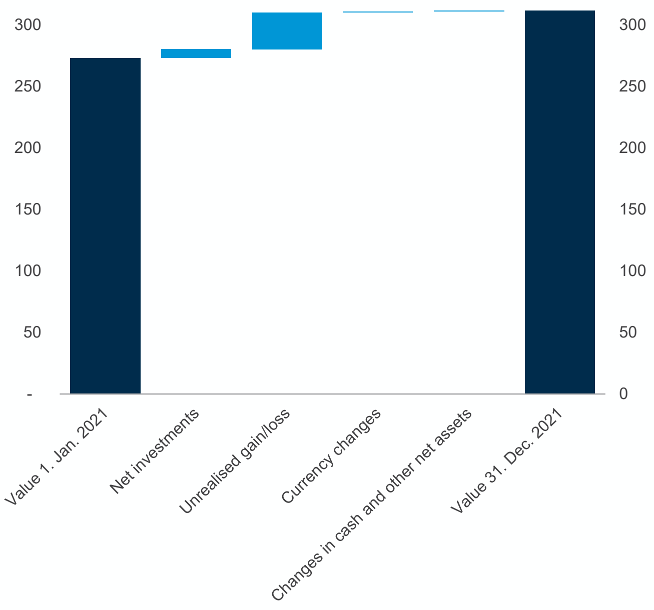
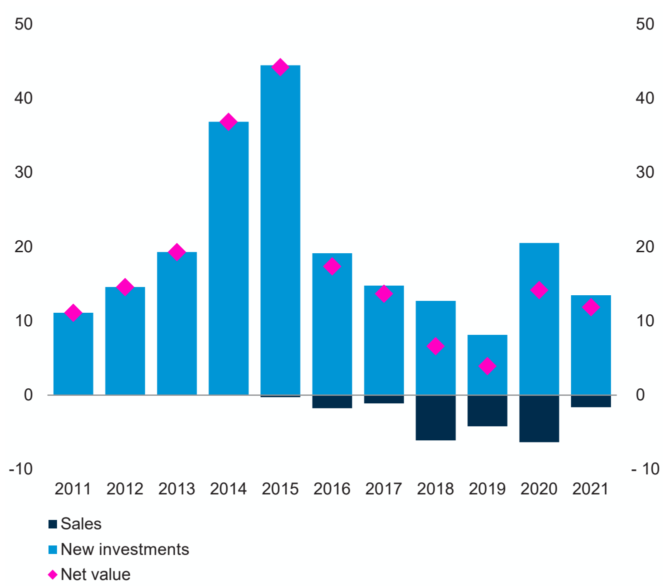



**Chart 19** Annual investments in unlisted real estate. Completed transactions. Billions of kroner.



# Real estate investments

Share of market value

| | | | | | |
|---|---|---|---|---|---|
| US | 56.9% | Germany | 8.0% | Sweden | 1.3% |
| UK | 15.3% | Switzerland | 2.2% | Netherlands | 1.0% |
| France | 11.1% | Japan | 1.4% | Other countries | 2.8% |

## Listed real estate

Investments in listed real estate generated a very strong return of 26.8 percent in 2021. Following the decision to manage unlisted and listed real estate under a combined strategy, investments in listed real estate grew from 147 billion kroner at the end of 2020 to 262 billion kroner at the end of 2021, equivalent to 2.1 percent of the fund and 45.7 percent of our total real estate investments.

The fund’s investments in listed real estate companies have exposure to high-quality properties in attractive cities and sectors globally that complement the fund’s unlisted real estate portfolio. The listed portfolio is mainly invested in the residential, office and retail sectors. Geographically, it is split almost equally between the US and Europe.

The fund’s listed real estate investments consisted of 63 companies. The fund's largest ownership share was in Shafesbury plc with a 25.7 percent stake. The company was one of four investments in the listed portfolio where the fund had a holding above 10 percent at the end of the year. The single largest holding in absolute terms was in Vonovia SE.

**Table 25** Ownership shares for the 20 largest listed investments in real estate mangement as at 31 December 2021, sorted by ownership share.[1] Ownership shares in percent and holdings in million kroner.

| Company | Country | Ownership | Holding |
|---|---|---|---|
| Shaftesbury PLC | UK | 25.7 | 7,267 |
| Great Portland Estates plc | UK | 15.4 | 3,399 |
| Capital & Counties Properties plc | UK | 15.0 | 2,568 |
| Vonovia SE | Germany | 11.1 | 42,007 |
| Derwent London plc | UK | 9.6 | 4,376 |
| Regency Centers Corp | US | 9.4 | 10,725 |
| Vornado Realty Trust | US | 9.4 | 6,660 |
| Gecina S.A. | France | 9.3 | 8,811 |
| Federal Realty Investment Trust | US | 9.2 | 8,649 |
| Land Securities Group plc | UK | 9.2 | 6,308 |
| Paramount Group Inc. | US | 9.1 | 1,462 |
| JBG SMITH Properties | US | 9.0 | 2,966 |
| British Land Company plc/The | UK | 8.8 | 5,187 |
| Alexandria Real Estate Equities, Inc. | US | 8.7 | 26,449 |
| Boston Properties, Inc. | US | 8.3 | 13,206 |
| Equity Residential | US | 8.0 | 24,001 |
| Kilroy Realty Corp. | US | 7.8 | 5,308 |
| Svenska Cellulosa AB SCA | Sweden | 7.2 | 7,892 |
| Hudson Pacific Properties, Inc. | US | 6.0 | 1,995 |
| UDR, Inc. | US | 5.8 | 9,553 |

[1] The figures for ownership share and holdings also include holdings that are a part of the equity management.

The fund's first investment in unlisted renewable energy infrastructure. The Borssele 1 & 2 offshore wind farm located in the Netherlands.

# Unlisted renewable energy infrastructure

## The fund made its first investment in unlisted renewable energy infrastructure in 2021. It generated a return of 4.2 percent and made up 0.1 percent of the fund at the end of the year.

In April 2021, the fund announced an agreement to purchase 50 percent of the Borssele 1 & 2 wind farm off the Netherlands for 1,375 million euros, or around 13.9 billion kroner. The transaction was completed in May. This is the first, and as yet only, investment the fund has made in unlisted renewable energy infrastructure.

The stake in the wind farm was bought from Ørsted, which has retained the remaining 50 percent stake and is responsible for the operation and maintenance of the wind farm. With an installed production capacity of 752 MW, the turbines produce enough electricity to cover the consumption of around 1 million Dutch households.

The return for 2021 was 4.2 percent measured in the fund's currency basket. This stemmed mainly from an increase in the value of the asset and cash flows from the power generated during the year. Both components were boosted by high power prices in the market. The value of the wind farm will be written down to zero over the life of the project.

The management mandate from the Ministry of Finance sets an upper limit for the investments in unlisted renewable energy infrastructure of 2 percent of the fund's value. They are also to be made within the limit of 120 billion kroner set for the fund's environment-related investment mandates.

**Table 26** Value of unlisted renewable energy infrastructure investments as at 31 December 2021. Millions of kroner.

| | Value[1] |
|---|---:|
| **Unlisted infrastructure investments** | **14,288** |

[1] Including bank deposits and other receivables.

**Table 27** Return of unlisted renewable energy infrastructure investments as at 31 December 2021. Percentage points.

| | Return[1] |
|---|---:|
| **Unlisted infrastructure investments** | **4.2** |

[1] First unlisted infrastructure investment were made in second quarter of 2021.

# Global investments

Number of investments by asset class

## North America

2,236 companies

2,549 bonds from
706 issuers

446 properties

## Latin America

281 companies

86 bonds from
25 issuers

## International organisations

152 bonds from
19 issuers

## Africa

144 companies

10 bonds from
1 issuer

## Europe

1,866 companies

2,027 bonds from
507 issuers

433 properties

1 unlisted renewable
energy infrastructure

## Middle East

127 companies

9 bonds from
1 issuer

## Asia

4,295 companies

537 bonds from
69 issuers

6 properties

## Oceania

389 companies

198 bonds from
37 issuers

# 3 Management

# Higher return than the benchmark index

## We aim to leverage the fund's long-term investment horizon and considerable size to generate a high return with acceptable risk. In 2021, the fund's return was 0.74 percentage point higher than the return on the benchmark index.

The return on the fund's investments is measured against the return on the fund's benchmark index from the Ministry of Finance, which is made up of global equity and bond indices. The equity portion of the benchmark index is based on the FTSE Global All Cap index and was comprised of 8,816 listed companies. The bond portion of the benchmark index is based on indices from Bloomberg Barclays Indices and was comprised of 16,055 bonds from 1,721 issuers.

At the end of 2021, the fund was invested in 9,338 listed companies, including listed real estate companies, and 5,568 bonds from 1,365 issuers. The fund also had investments in 867 unlisted properties and an offshore wind farm. To make all these investments in a way that contributes to the objective of the highest possible return after costs, we delegate the responsibility for individual investments to our portfolio managers through individual investment mandates.These mandates are awarded within the fund's three main strategies: fund allocation, security selection and asset management. A delegated mandate structure helps us build deep insight into selected market segments and companies. This insight puts us in a better position to be a responsible investor. At the end of 2021, we had 248 individual equity and bond mandates, of which 97 were assigned to external equity managers. This approach ensures precise management and control of risk, performance measurement, costs and incentives for each investment mandate.

The fund's investments in real estate and renewable energy infrastructure are funded through sales of equities and bonds tailored to the currency of each investment. The relative return on equities and bonds is therefore measured against an index adjusted for this funding.

Which equities and bonds are sold depends on the country and currency in which the investment is made. The relative return for equity and bond management is measured against the benchmark index adjusted for the equities and bonds sold to fund investments in real estate and unlisted renewable energy infrastructure. The return on real estate and infrastructure investments is measured against the equities and bonds sold to fund them, but also against a broader set of return metrics.

In 2021, the fund's return was 0.74 percentage point higher than the return on the benchmark index. The fund has outperformed the benchmark index by 0.27 percentage point since 1998, 0.25 percentage point over the past decade, and 0.30 percentage point over the past five years.

**Chart 20** The fund's annual relative return and accumulated annualised relative return. Calculations based on aggregated equity and fixed-income investments until end of 2016. Percentage points.

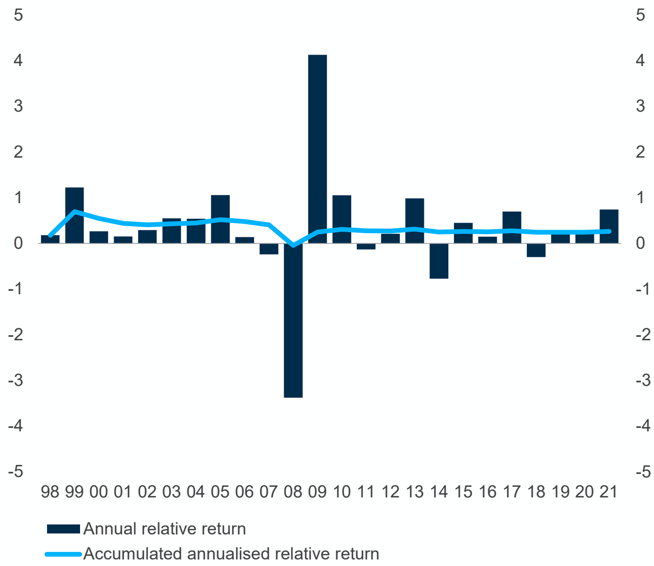



**Table 28** Relative return. Percentage points.

| | 2021 |
|---|---|
| Fund | 0.74 |
| Equity investments | 0.78 |
| Fixed-income investments | -0.03 |

## Equity management

Equity management is measured against the equity portion of the benchmark index, adjusted for sales of stocks to fund investments in real estate and renewable energy infrastructure. The return on equity management was 0.78[1] percentage point higher than on this adjusted benchmark in 2021 and made a positive contribution of 0.53 percentage point to the fund's total relative return. Investments in the consumer goods, technology and basic materials sectors contributed most to the relative return, while investments in power companies and telecommunications made a negative contribution. Of the countries the fund was invested in, Chinese, US and Brazilian stocks made the greatest contributions to the relative return, while Indian and Spanish stocks made negative contributions.

Equity management has outperformed the benchmark index by 0.48 percentage point since 1999, 0.39 percentage point over the past decade, and 0.41 percentage point over the past five years.

## Fixed-income management

Fixed-income management is measured against the bond portion of the benchmark index, adjusted for sales of bonds to fund investments in real estate. The return on fixed-income management was 0.05 percentage point lower than on this adjusted benchmark in 2021, contributing -0.02 percentage point to the fund's relative return. There were negative contributions from corporate bonds and from government bonds issued in emerging markets, and positive contributions from government bonds issued in North America and Asia.

Fixed-income management has outperformed the benchmark index by 0.16 percentage point since 1998, 0.04 percentage point over the past decade, and 0.23 percentage point over the past five years.

## Real estate management

We invest in real estate to improve the fund's risk/return profile. The fund's overall strategy for real estate covers both unlisted and listed real estate investments. The relative return for real estate management is the difference between the return on the fund's total real estate investments and the return on the bonds and equities sold to buy them. Real estate management contributed 0.31 percentage point to the fund's relative return in 2021. Unlisted real estate investments made a contribution of 0.16 percentage point, most of this coming from the fund's investments in logistics, while listed real estate investments contributed 0.15 percentage point.

We report unlisted real estate returns quarterly and annually, but longer time series paint a better picture of the performance of our investments. From the fund's first unlisted real estate investment through to the end of 2016, the annual return on unlisted real estate investments was 7.67 percent. During this period, real estate investments were funded by selling bonds. The annual return on bond investments in the same period was 3.62 percent. Since 2017, unlisted real estate has been funded through sales of equities as well as bonds. The annual return on this funding from 2017 to 2021 was 6.6 percent, compared with 7.0 percent for the unlisted real estate portfolio.

## Unlisted renewable energy infrastructure

We invest in unlisted renewable energy infrastructure to improve the fund's risk/return profile. The fund's strategy is to build up a portfolio of high-quality wind and solar power generation assets. The relative return for renewable energy is the difference between the return on the fund's total infrastructure investments in renewable energy infrastructure and the return on the bonds and equities sold to buy them. The fund made its first unlisted renewable energy infrastructure investment in April 2021, generating a return of 8.77 percent in local currency over the rest of the year.

[1] Since 2019, the fund has recognised a provision for future tax obligations relating to capital gains in India which is not included in the benchmark index. This reduced the relative result in 2021 by 3,469 million kroner.

**Table 29** Relative return on the fund's asset management. Percentage points.

| Year | Fund[1] | Equity management[2] | Fixed-income management[2] | Real estate management[2] | Infrastructure management |
|---|---|---|---|---|---|
| 2021 | 0.74 | 0.78 | -0.05 | 7.36 | 8.04 |
| 2020 | 0.27 | 0.98 | 0.76 | -13.81 | - |
| 2019 | 0.23 | 0.51 | 0.11 | -3.89 | - |
| 2018 | -0.30 | -0.69 | -0.01 | 5.49 | - |
| 2017 | 0.70 | 0.79 | 0.39 | 0.70 | - |
| 2016 | 0.15 | 0.15 | 0.16 | - | - |
| 2015 | 0.45 | 0.83 | -0.24 | - | - |
| 2014 | -0.77 | -0.82 | -0.70 | - | - |
| 2013 | 0.99 | 1.28 | 0.25 | - | - |
| 2012 | 0.21 | 0.52 | -0.29 | - | - |
| 2011 | -0.13 | -0.48 | 0.52 | - | - |
| 2010 | 1.06 | 0.73 | 1.53 | - | - |
| 2009 | 4.13 | 1.86 | 7.36 | - | - |
| 2008 | -3.37 | -1.15 | -6.60 | - | - |
| 2007 | -0.24 | 1.15 | -1.29 | - | - |
| 2006 | 0.14 | -0.09 | 0.25 | - | - |
| 2005 | 1.06 | 2.16 | 0.36 | - | - |
| 2004 | 0.54 | 0.79 | 0.37 | - | - |
| 2003 | 0.55 | 0.51 | 0.48 | - | - |
| 2002 | 0.30 | 0.07 | 0.49 | - | - |
| 2001 | 0.15 | 0.06 | 0.08 | - | - |
| 2000 | 0.27 | 0.49 | 0.07 | - | - |
| 1999 | 1.23 | 3.49 | 0.01 | - | - |
| 1998 | 0.18 | - | 0.21 | - | - |

[1] Includes real estate management from 2017. The fund's relative return prior to 2017 is calculated on equity and fixed-income management only.

[2] Measured against actual funding from 2017. The relative return on equity and fixed-income management before 2017 is measured against the respective Ministry of Finance asset class indices.

## Investment strategies

We employ a range of investment strategies in our management of the fund. They are grouped into three main categories: fund allocation, security selection and asset management. These strategies are pursued across equity, fixed-income and real asset management.

Asset management strategies consist of positioning and securities lending, and contributed 0.21 percentage point to the fund's relative return in 2021. The positioning strategy for equities implements market exposures with a view to increasing investment returns and reducing transaction costs for the fund. This strategy contributed 0.14 percentage point to the relative return in 2021, with Chinese and US stocks the main contributors. When it comes to bonds, the positioning strategy contributed 0.03 percentage point to the fund's relative return, with positive contributions from Asia, Europe and North America. This strategy consists primarily of relative value positions across instruments, sectors and issuers, but also includes positions related to movements in interest rates, inflation and exchange rates. There are also positions related to transition activity to reduce transaction costs. Securities lending contributed 0.04 percentage point to the fund's relative return.

Security selection strategies are based on company analysis to enhance returns, with the aim to provide deep insights into the fund's largest investments, and support the fund's work as a responsible and active owner. This contributed 0.18 percentage point to the fund's relative return in 2021. Internal equity selection contributed 0.12 percentage point, with investments in financials and basic materials making particularly positive contributions, and investments in telecommunications a slightly negative contribution. External equity selection contributed 0.07 percentage point to the relative return, with positive contributions from all regions, especially Asia.

When it comes to fixed-income management, security selection focuses on corporate bonds. This strategy contributed -0.01 percentage point to the fund's relative return.

Fund allocation consists of a number of strategies that aim to improve the fund's long-term exposure to markets and risks. These strategies contributed 0.36 percentage point to the fund's relative return in 2021.

Systematic risk factors contributed 0.15 percentage point, with positive contributions from allocations to small companies and value stocks.

Real estate is included in real asset management in our strategy reporting and contributed 0.31 percentage point to the relative return in 2021.

The dedicated environment-related mandates are a strategy within fund allocation. The return on investments in equities under this strategy in 2021 was in line with that on the stocks sold to fund them. Investments in renewable energy infrastructure are reported as part of the environment-related mandates and contributed 0.01 percentage point to the fund's relative return.

For large parts of 2021, the fund was underweight in equities and overweight in bonds, and overweight in emerging-market bonds. The bond portfolio also had a lower duration than the benchmark index for much of the year. Taken together, allocation decisions of this kind contributed 0.11 percentage point to the relative return, with negative contributions from the above components.

**Table 30** Contributions to the fund's relative return from investment strategies in 2021. Percentage points.

| | Equity management | Fixed-income management | Real assets management | Allocation | Total |
|---|---|---|---|---|---|
| **Asset management** | 0.18 | 0.03 | | -0.00 | 0.21 |
| Asset positioning | 0.14 | 0.03 | | -0.00 | 0.17 |
| Securities lending | 0.03 | 0.00 | | | 0.04 |
| **Security selection** | 0.19 | -0.01 | | | 0.18 |
| Internal security selection | 0.12 | -0.01 | | | 0.10 |
| External security selection | 0.07 | | | | 0.07 |
| **Fund allocation** | 0.16 | -0.03 | 0.33 | -0.09 | 0.36 |
| Systematic factors | 0.15 | | | | 0.15 |
| Real estate | | | 0.31 | | 0.31 |
| Unlisted real estate | | | 0.16 | | 0.16 |
| Listed real estate | | | 0.15 | | 0.15 |
| Enviromental related mandates | 0.00 | | 0.01 | | 0.01 |
| Allocation | 0.01 | -0.03 | | -0.09 | -0.11 |
| **Total** | **0.53** | **-0.02** | **0.33** | **-0.09** | **0.74** |

**Table 31** Contributions to the fund's relative return from investment strategies for 2013-2021. Annualised. Percentage points.

| | Equity management | Fixed-income management | Real assets management | Allocation | Total |
|---|---|---|---|---|---|
| **Asset management** | 0.11 | 0.07 | | 0.00 | 0.19 |
| Asset positioning | 0.07 | 0.07 | | 0.00 | 0.14 |
| Securities lending | 0.05 | 0.01 | | | 0.05 |
| **Security selection** | 0.17 | 0.01 | | | 0.18 |
| Internal security selection | 0.07 | 0.01 | | | 0.08 |
| External security selection | 0.10 | | | | 0.10 |
| **Fund allocation** | -0.03 | -0.07 | -0.02 | 0.01 | -0.12 |
| Systematic factors | -0.03 | | | | -0.03 |
| Real estate | | | -0.03 | | -0.03 |
| Unlisted real estate | | | 0.00 | | 0.00 |
| Listed real estate | | | -0.03 | | -0.03 |
| Enviromental related mandates | 0.03 | 0.00 | 0.00 | | 0.03 |
| Allocation | -0.03 | -0.07 | 0.00 | 0.01 | -0.10 |
| **Total** | **0.25** | **0.02** | **-0.02** | **0.01** | **0.25** |

# Large fluctuations in the fund's value

## The fund's market value can fluctuate widely. In 2021, it ranged from a low of 10,819 billion kroner on 4 March to a high of 12,478 billion kroner on 15 December.

The fund's market risk is determined by the composition of its investments and by movements in share prices, exchange rates, interest rates, credit risk premiums and the value of properties and renewable energy infrastructure assets. As no single measure or analysis can fully capture the fund's market risk, we use a variety of measures and analyses – including expected volatility, factor exposures, concentration analysis, liquidity risk and stress testing – to obtain the broadest possible picture of the fund's market risk. Some investment strategies expose the fund to elevated tail risks, and we monitor these risks carefully.

The fund's expected absolute volatility, calculated using the statistical measure standard deviation, uses a three-year price history to estimate how much the annual return on the fund's investments can normally be expected to fluctuate. Expected absolute volatility was 10.3 percent at the end of the year, or about 1,270 billion kroner, compared with 10.4 percent a year earlier.

With an equity share of around 70 percent and such a large fund, we have to be prepared for considerable fluctuations in the fund's return and market value. We perform both historical and hypothetical stress tests to evaluate potential losses. For a global portfolio with a 70/30 split between equities and fixed income, a historical analysis back to 1900 reveals annual losses in stressed periods as high as 33 percent. Long historical time series can reveal vulnerabilities that have not been observed in recent crises, such as when equity and bond prices fall simultaneously. The fund also stress tests the portfolio in hypothetical scenarios. Since the pandemic erupted in 2020, fiscal stimulus and monetary easing have shaped the macroeconomic landscape. There is also a sizable gap between real interest rates and the growth outlook. In a future stagflation scenario where the fund incurs losses in all asset classes, the fund could lose 40 percent of its value. Based on the size of the fund at the end of 2021, this corresponds to a loss of just under 5,000 billion kroner. A more detailed report on this stress testing can be found on our website: www.nbim.no.

The Ministry of Finance and Norges Bank's Executive Board have set limits for how far the fund's investments may deviate from the benchmark index.

One of these limits is for expected relative volatility, or tracking error, and puts a ceiling on how much the return on the fund's investments can be expected to deviate from the return on the benchmark index. The management mandate requires all of the fund's investments to be included in the calculation of expected relative volatility and measured against the fund's benchmark index, which consists solely of global equity and bond indices. The limit for expected relative volatility for the fund is 1.25 percentage points. The actual level at the end of the year was 0.50 percentage point, down from 0.56 percentage point at the end of 2020.

The fund invests in real estate to create a more diversified portfolio. We expect real estate investments to have a different return profile to equities and bonds in both the short and the longer term. The relative risk that this entails will impact on calculations of the fund's expected relative

**Chart 21** Expected relative volatility of the fund. Basis points.


**Chart 22** Expected absolute volatility of the fund. Percent (left-hand axis) and billions of kroner (right-hand axis).

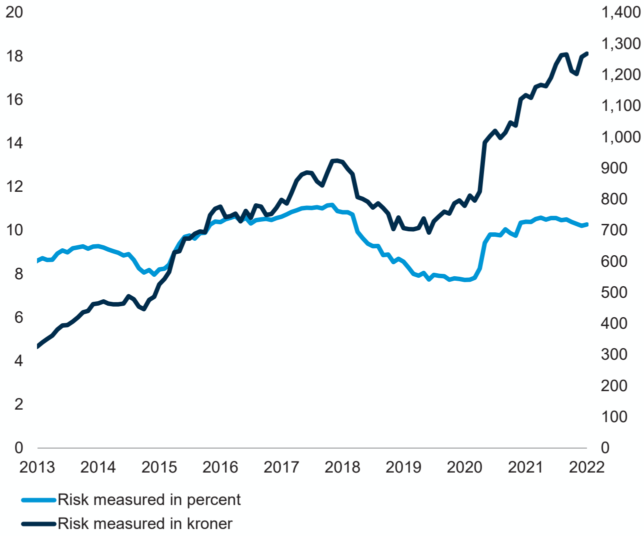



**Chart 23** Annual return of 70 equity/30 fixed income. Measured in dollars. Percent.

Source: Dimson-Marsh-Staunton global return data.

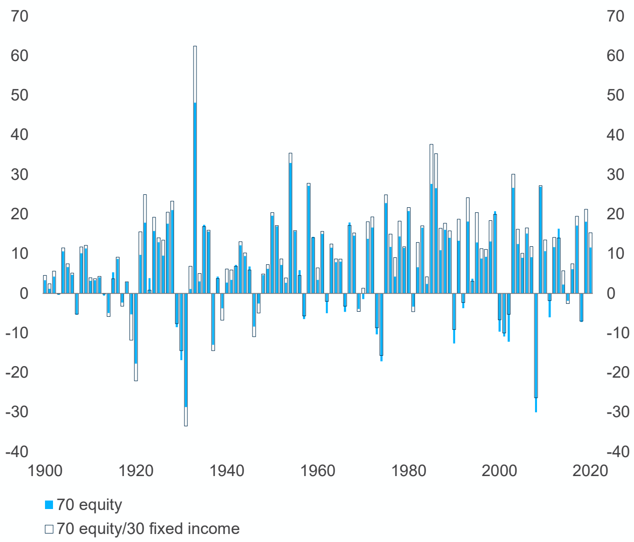
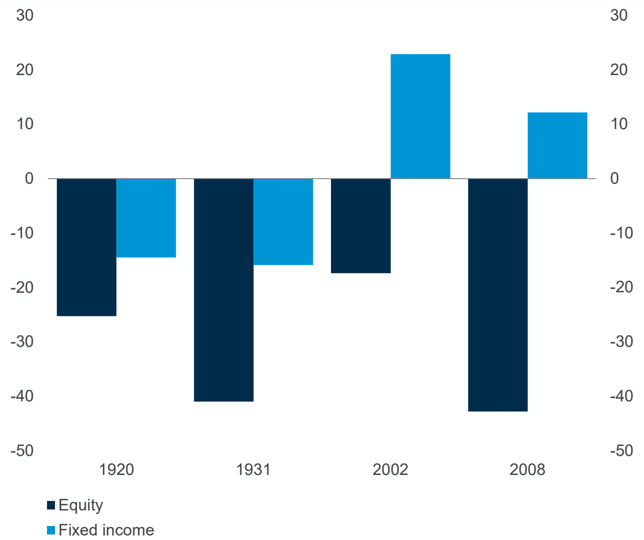



**Chart 24** Asset class returns in recent and past stressed years. Measured in dollars. Percent.

Source: Dimson-Marsh-Staunton global return data.



volatility. As daily pricing is not available for our unlisted real estate investments, we use a model from MSCI to calculate the relative risk for these investments.

Norges Bank's Executive Board has also set a limit for expected shortfall for the relative return between the fund and the benchmark index. The fund is to be managed in such a way that the expected negative relative return in extreme situations does not exceed 3.75 percentage points. The actual figure was 1.52 percentage points at the end of the year, down from 1.80 percentage points at the end of 2020.

## Relative exposures

The fund is invested differently to its benchmark index along various dimensions, including asset classes, currencies, sectors, countries, regions, individual stocks and individual bond issuers.

At the end of 2021, the equity portfolio had a higher weight of high-volatility stocks and value stocks than the benchmark. The equity portfolio was also overweight in some growth segments, for example through its investments under the environment-related mandates. The fixed-income portfolio had a lower duration and less exposure to corporate bonds than the benchmark index, but greater exposure to bonds from emerging markets and government-related bonds.

The fund had 312 billion kroner invested in unlisted real estate and an allocation to listed real estate investments of 262 billion kroner at the end of the year. These real estate investments were funded through the sale of equities and bonds in the same currency. All of the fund's investments, including those in real estate, are measured against the fund's benchmark index, which is made up of global equity and bond indices. Real estate investments were among the fund's largest relative exposures at the end of the year.

**Table 32** Key figures for the fund's risk and exposure.

| | Limits set by the Ministry of Finance | 31.12.2021 |
|---|---|---|
| Allocation | Equity portfolio 60–80 percent of fund's market value[1] | 71.8 |
| | Unlisted real estate no more than 7 percent of the fund's market value | 2.5 |
| | Fixed-income portfolio 20–40 percent of fund's market value[1] | 27.1 |
| | Unlisted renewable energy infrastructure no more than 2 percent of the fund's market value | 0.1 |
| Market risk | 1.25 percentage points expected relative volatility for the fund's investments | 0.5 |
| Credit risk | Maximum 5 percent of fixed-income investments may be rated below BBB- | 1.2 |
| Emerging markets | Maximum 5 percent of fixed-income investments may be in emerging markets | 3.2 |
| Ownership | Maximum 10 percent of voting shares in a listed company in the equity portfolio[2] | 9.6 |

[1] Derivatives are represented with their underlying economic exposure.

[2] Investments in listed and unlisted real estate companies are exempt from this restriction.

**Table 33** The fund's fixed-income investments as at 31 December 2021 based on credit ratings. Percentage of bond holdings.

| | AAA | AA | A | BBB | Lower rating | Total |
|---|---|---|---|---|---|---|
| Government bonds | 34.7 | 5.4 | 13.0 | 2.3 | 0.6 | 56.0 |
| Government-related bonds | 4.8 | 3.8 | 1.7 | 0.4 | 0.1 | 10.8 |
| Inflation-linked bonds | 3.9 | 1.3 | 0.2 | 0.3 | 0.0 | 5.7 |
| Corporate bonds | 0.2 | 1.5 | 8.9 | 10.9 | 0.4 | 21.9 |
| Securitised bonds | 4.7 | 0.8 | 0.0 | 0.0 | 0.0 | 5.6 |
| **Total** | **48.3** | **12.9** | **23.8** | **13.9** | **1.1** | **100.0** |

**Table 34** Expected relative volatility of investment strategies as at 31 December 2021. Each strategy measured stand-alone with the other strategies positioned in line with the benchmarks. All numbers measured at fund level. Basis points.

| | Equity management | Fixed-income management | Real assets management | Allocation | Total |
|---|---|---|---|---|---|
| **Asset management** | 5 | 2 | | 0 | 5 |
| Asset positioning | 5 | 2 | | 0 | 5 |
| **Security selection** | 13 | 5 | | | 14 |
| Internal security selection | 10 | 5 | | | 12 |
| External security selection | 8 | | | | 8 |
| **Fund allocation** | 22 | 15 | 47 | 13 | 53 |
| Systematic factors | 8 | | | | 8 |
| Real estate | | | 47 | | 47 |
| Unlisted real estate | | | 23 | | 23 |
| Listed real estate | | | 30 | | 30 |
| Enviromental related mandates | 7 | | 1 | | 8 |
| Allocations | 13 | 15 | | 13 | 19 |
| **Total** | **25** | **16** | **47** | **14** | **50** |

# Long-term and responsible

## The fund's future value is dependent on the value created by the companies we invest in. We exercise our ownership rights and contribute to market standards in order to promote good corporate governance and responsible business practices.

The objective for the management of the fund is the highest possible return with acceptable risk. Responsible investment supports this objective in two ways. First, we seek to improve the long-term economic performance of our investments. Second, we aim to reduce the financial risk associated with the environmental and social behaviour of the companies we invest in. We work to promote well-functioning markets, develop the fund's assets and support responsible business practices at companies.

### Market

The fund is global and owns a small slice of the world's largest listed companies. We are therefore dependent on global solutions to common challenges such as climate change. We take our starting point in international principles and standards from the UN and the OECD, which provide a framework for our work with companies and other stakeholders.

We contribute to the further development of standards. In 2021, we participated in 14 public consultations relating to responsible investment and were in regular contact with international organisations, regulators and other standard setters. These consultations concerned topics that are important to us, such as good corporate governance, climate reporting and responsible business practices. We also had meetings with the Task Force on Climate-Related Financial Disclosures (TCFD), the International Financial Reporting Standards (IFRS) Foundation, the European Commission, the European Securities and Markets Authority (ESMA), the UK Financial Reporting Council (FRC) and national standard setters in Germany and Sweden.

We express clear expectations of the companies and markets we invest in. Companies must have effective governance, and our rights as a shareholder must be protected. Companies must also understand how they impact on the environment and society. We followed up our eight expectation documents during the year by engaging with selected companies, assessing companies' sustainability reporting, and supporting various industry initiatives.

In January 2021, we took a big step in openness by publishing all our voting intentions five days before shareholder meetings.

In August, we published a new set of expectations for how companies should take biodiversity and sustainable uses of ecosystems into account in their business activities. Ever-increasing losses of species and deterioration of ecosystems may reduce companies' ability to create value for investors in the long term. Companies should therefore understand both their dependency and their impact on nature, and integrate these considerations into their governance structure, strategy, risk management, measurement and reporting. We also updated our expectation documents on climate change and children's rights.

We published a new position paper during the year on board diversity. Diversity brings different perspectives and approaches to the board which can contribute to better decision-making and so increase the value created by a company in the longer term. It can also increase a company's credibility. The board should have a formal nomination process to identify potential candidates who can add diversity. Boards where either gender has less than 30 percent representation should consider setting targets for gender balance and report on progress towards them.

We support initiatives that bring companies or investors together to find common standards for sustainable business conduct. These initiatives work best when numerous companies in a particular industry or value chain face the same challenge. The initiatives we support look at challenges such as supply chain management and reporting.

We support and initiate research projects with a view to understanding and improving market practices. We collaborate with academic institutions to access the latest research and obtain analyses that can inform our investment strategy, risk management and ownership. In 2021, we supported two research projects looking at the financial consequences of climate change and three projects studying corporate governance and ownership structure. We initiated a pilot project led by Saphira Rekker of the University of Queensland Business School to compare different methods of measuring long-term transition risk associated with climate change.

## Portfolio

We integrate environmental, social and corporate governance considerations into the management of the fund. We gather data on markets, industries and companies to gain a broader understanding of risks and opportunities in our investments. This information forms the starting point for our active ownership with individual companies.

To perform analyses of this kind, we need relevant, comparable and reliable data on environmental, social and governance topics. We collect corporate sustainability data in an internal database, assess companies' reporting, and analyse greenhouse gas emissions from companies in the portfolio.

We conducted a total of 4,196 assessments of companies' reporting in 2021. We assessed the reporting of 1,500 companies on climate change, 701 on human rights, 500 on children's rights, 500 on water management, 250 on anti-corruption, 250 on ocean sustainability, 268 on deforestation, 200 on tax and 27 on biodiversity. The companies assessed accounted for 75.8 percent of the equity portfolio's market value at the end of the year.

We contact companies we consider to have weak or limited disclosure. We wrote to 110 companies in 2021 to urge them to improve their reporting. The average improvement in performance at the companies we contacted in 2020 was 11.9 percentage points. The overall improvement from 2020 to 2021 at the companies covered by our assessments was 4.7 percentage points. The difference was greatest at companies we contacted about climate change, human rights and ocean sustainability, and least for water management and tax transparency. All in all, we saw improvements at 64.9 percent of the companies we contacted.

We support the recommendations of the Task Force on Climate-Related Financial Disclosures set up by the G20's Financial Stability Board. We are working with companies to ensure that they are equipped for the transition to a low-carbon economy. We invest specially in climate solutions, adjust the portfolio through divestments, and consider climate issues in our investment decisions. We also analyse various climate scenarios for the fund. Based on our percentage holdings, companies in the equity portfolio emitted 90.2 million tonnes of $CO_2$-equivalents in 2021.

We take three main approaches to identifying and managing environmental, social and governance risks in the portfolio. The first is to screen companies prior to inclusion in the fund's equity benchmark. The second is continuous monitoring of companies in the portfolio through incident analysis or more in-depth thematic analyses of specific markets and industries. The third is an annual review of companies against our sustainability expectations.

Our environment-related equity mandates returned 21.6 percent in 2021. Since its inception in 2010, the annualized return on equity investments has been 10.4 percent. At the end of 2021, we had 107.7 billion kroner invested in environment-related equity mandates.

Our environment-related investments are in three main areas: i) low-carbon energy and alternative fuels, ii) clean energy and energy efficiency and iii) natural resource management. Companies must have at least 20 percent of their business in one of these areas to be included in our environmental universe.

Unlisted real estate investments amounted to 2.5 percent of the fund at the end of 2021. We invest and manage our portfolio responsibly and sustainably in order to help achieve our objective of the highest possible return over time and reduce the long-term risk in the portfolio. To measure improvements in the management of our real estate portfolio, we use the international sustainability benchmark developed by GRESB. We scored 84/100 points overall in 2021, compared with 79/100 in 2020, and performed 6 percent better than comparable buildings. We began work during the year on benchmarking the carbon intensity of the real estate portfolio against decarbonisation pathways consistent with the Paris Agreement produced by the Carbon Risk Real Estate Monitor (CRREM), an investor-driven project we have also co-financed and helped develop.

When we identify a company with high risk exposure, we carry out further research to assess whether to monitor

the company, initiate dialogue, vote against the board or consider risk-based divestment. In emerging markets, we may also consult our external managers, who have in-depth knowledge of the industries and companies they invest in. This is particularly important, because it can often be harder to source relevant company data in these markets.

We divested from 52 companies in 2021 following assessments of environmental, social and governance risks. Nine of these companies were identified through our pre-screening of companies being added to the FTSE Global All Cap index, which is the fund's underlying benchmark index.

## Companies

We held a total of 2,628 meetings with 1,163 companies in 2021. The size of our investments gives us access to board members, senior management and specialists at companies. We are interested in understanding how companies are governed and how they address key sustainability issues.

In 2021, we launched new dialogues on net-zero targets for companies with a large carbon footprint, risks and opportunities relating to natural resources for producers of consumer goods, children's rights online, and climate challenges for integrated oil and gas companies.

We also continued our dialogues on the environmental impact of cement and concrete production, sustainability in the apparel industry, the energy transition and responsible dismantling in the shipping industry, tax management policies, corruption risks at industrial companies, banks' financing of carbon-intensive industries, the low-carbon transition in the steel industry, climate lobbying in European heavy industry, forest materials in the production of consumer goods, working conditions in delivery and transport services, due diligence in conflict-affected areas, sustainable fisheries, activities in low-tax environments and closed jurisdictions, targets and metrics for water consumption, forced labour in technology and consumer goods companies' supply chains, and responsible marketing of breast-milk substitutes.

The fund has holdings in 9,338 companies all around the world. We voted on 116,525 items at 11,601 shareholder meetings in 2021. We voted in line with the board's recommendation in 95.2 percent of cases, which was on a par with our voting in 2020.

**Table 35** Return on the environment-related equity mandates, funding and other return series. Annualised data, measured in the fund's currency basket. Percent.

| | Since 01.01.2010 | Last 5 years | Last 3 years | 2021 |
|---|---|---|---|---|
| Return on the environment-related equity mandates | 10.4 | 19.9 | 30.4 | 21.6 |
| Return on the financing of the environment-related equity mandates[1] | 5.8 | 10.5 | 15.9 | 24.0 |
| | | | | |
| Return on the FTSE Environmental Technology 50 index | 11.3 | 24.6 | 40.8 | 15.1 |
| Return on the FTSE Environmental Opportunities All-Share index | 14.3 | 19.7 | 30.2 | 24.2 |
| Return on the MSCI Global Environment index | 15.0 | 26.3 | 41.6 | 19.9 |
| Return on the benchmark index for equities | 10.6 | 12.8 | 19.0 | 20.0 |

[1] The financing of the environment-related equity mandates includes dedicated allocation to environment-related equity mandates in the equity management.

Director elections account for nearly 40 percent of the resolutions we vote on. Who sits on the board is the most important decision we make. As a minority investor in thousands of companies, we leave most decisions to the board. We expect the board to set strategy, supervise management and act in shareholders' interests. This is in keeping with the principles of good corporate governance. We voted in line with the board's recommendation in 94.4 percent of director elections in 2021, compared with 94.6 percent in 2020. The main reasons for voting against board candidates were a lack of independence on the board, combination of the roles of CEO and chairperson, and directors being overcommitted. We have set out our expectations when it comes to directors' independence and time commitments in public position papers which we have shared with companies.

We have seen an increase in the number of shareholder resolutions addressing environmental and social issues over the years. We support well-founded resolutions that are aligned with our own priorities, especially in areas covered by our expectation documents. We voted in favour of 31.4 percent of these resolutions in 2021, compared with 35.1 percent in 2020.

The Ministry of Finance has issued ethically motivated guidelines for observation and exclusion of companies from the fund. These guidelines set out criteria for exclusion based either on companies' products or on their conduct. The fund must not be invested in companies that produce certain types of weapon, base their operations on coal, or produce tobacco. Companies whose operations contribute to violations of fundamental ethical norms may also be excluded based on recommendation from the Council on Ethics. In 2021, Norges Bank's Executive Board excluded 12 companies, placed 3 companies under observation, and decided on active ownership for 1 company, while reversing the exclusion of 5 companies and removing another 4 from observation.

### Responsible investment report

Section 3-3c of the Norwegian Accounting Act requires Norges Bank to report on what it "is doing to integrate human rights, labour rights, gender equality and non-discrimination, social, environmental and anti-corruption matters into its business strategies, its day-to-day operations and its relations with stakeholders".

The bank meets this requirement with its responsible investment report. The reporting follows the structure of the bank's sustainability strategy: climate and environment, corporate governance, ethics and culture, and community and social issues.

# 4 Organisation

We believe that the more diverse we are, the broader our perspectives will be, the more creative we will become, and the better the decisions we will make.

# Our employees are the heart of our business

## Our employees are our most important asset. We aim to attract and retain leading talent and ensure that they can work efficiently, innovatively and fearlessly to achieve our common goals.

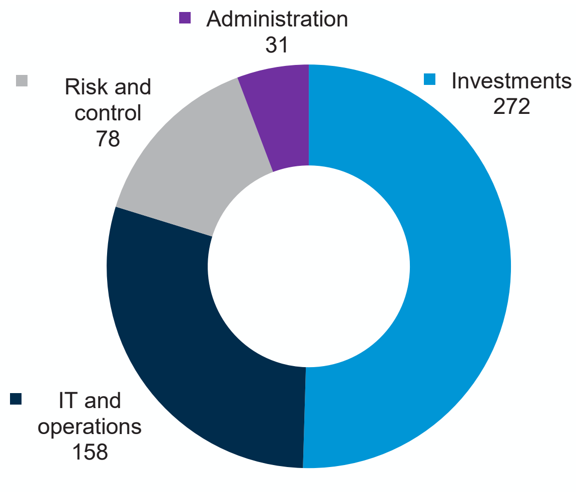
We are a global organisation. It is by collaborating closely across locations and by exchanging knowledge and working together that we will achieve the fund’s objective of the highest possible return after costs. In 2021, we offered greater flexibility for working from home and increased our focus on mobility between offices.

We also continued to invest in training and developing our people. We work systematically on lifelong learning and give employees opportunities to build relevant skills throughout their careers. For example, we began offering training in a number of core competencies during the year that we want all of our staff to possess. A total of 91 courses with 645 participants were held during the year.

Norges Bank has a strategy of actively highlighting the important role women have to play. In 2021, the bank signed the Women in Finance Charter, which aims to increase the percentage of women in senior positions in the Norwegian financial sector. In signing the charter, the bank made a commitment to set internal targets for gender balance at management level and in specialist positions.

Norges Bank Investment Management had 519 employees at the end of 2021, of whom 27 percent were women, compared with 25 percent a year earlier. The share of women in senior management was 23 percent, compared with 21 percent in 2020. We want to increase the proportion of women working for the fund both in general and at management level. In 2021, 42 percent of new recruits were women, compared with 48 percent the year before.

**Chart 25** Number of employees by area, including subsidiaries.



# The organisation

Number of employees and offices

| New York | London | Oslo | Singapore | Shanghai |
|---|---|---|---|---|
| 72 | 107 | 292 | 41 | 7 |

519
Employees

33
Nationalities

We are also prioritising a diverse and inclusive workplace more generally. We are looking for diversity of mindset, ethnicity, age, academic background and life experience. We believe that the more diverse we are, the broader our perspectives will be, the more creative we will become, and the better the decisions we will make.

The focus areas for achieving this goal of greater diversity are reputation management, career development, flexibility, working environment and recruitment. In 2021, for example, we raised our profile among students by giving a number of talks and presentations. We also offer guest lectures from experts at the fund through the NBIM Teach initiative, and there were 29 such lectures in 2021. The aim is to give students a more practical insight into investment management, increase knowledge about the fund and share our expertise with a younger target group.

We operate in global investment markets. Proximity to the markets is important for safeguarding the fund's long-term return. At the end of 2021, 44 percent of our employees worked from our offices in London, New York, Singapore and Shanghai, compared with 43 percent a year earlier. There were also 20 employees at subsidiaries linked to the management of the real estate portfolio.

It was another year dominated by the coronavirus pandemic, but we were still in a position to manage the fund in line with the strategy set by the Executive Board. A large proportion of our employees worked from home at times. Flexibility, good IT solutions and local powers to take the necessary decisions helped this to function well once again.

## Remuneration system

Norges Bank's Executive Board establishes the principles for the remuneration system at Norges Bank Investment Management. Members of the leader group receive only a fixed salary. The CEO's salary and pay bands for other members of the leader group are set by the Executive Board. CEO Nicolai Tangen was paid a salary of 6.3 million kroner in 2021.

In addition to a fixed salary, those working directly on investment decisions and various other employees may also be entitled to performance-based pay. This is calculated on the basis of the performance of the fund, group and individual measured against set targets, and is paid over a number of years. Half is paid the year after it is accrued, while half is held back and paid over the following three years. The amount held back is adjusted in line with the return on the fund. Where employees accrue performance-based pay in excess of 100 percent of fixed salary, 40 percent is paid the year after it is accrued, and the remaining 60 percent is held back and paid over the following three years. Performance-based pay may not normally exceed 100 percent of fixed salary for employees in Norway, but for a limited number of employees at the overseas offices the maximum permitted limit is 200 percent. Employees eligible for performance-based pay accrued 76 percent of the limit for 2021 based on multi-year performance.

A total of 216 employees were entitled to performance-based pay at the end of 2021, including 12 at subsidiaries. The total upper limit for performance-based pay for these employees was 425 million kroner.

The remuneration system is reviewed annually. Norges Bank's Internal Audit unit also issues an independent statement on compliance with rules and guidelines on remuneration. The review in 2021 confirmed that the remuneration system was operated in line with applicable rules in 2020. As stipulated by the management mandate from the Ministry of Finance, the remuneration system complies with the requirements of the regulations issued under the Norwegian Securities Funds Act with necessary adjustments. There were no significant changes to the remuneration system in 2021.

**Chart 26** Performance-based pay relative to upper limit in 2021. Percentage of workforce.

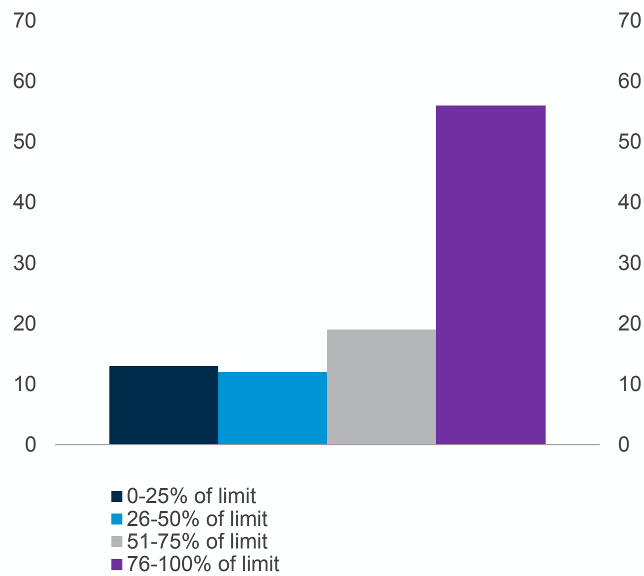


**Table 36** Remuneration of Senior Management in 2021. Kroner.

| Position | Name | Paid salary | Performance-based pay | Value of other benefits[4] | Pension benefit earned | Employee loan |
|---|---|---|---|---|---|---|
| Chief Executive Officer | Nicolai Tangen | 6,285,080 | | 9,768 | 398,628 | |
| Chief of Staff/Deputy Chief Executive Officer | Trond Grande | 4,713,889 | | 8,866 | 389,615 | |
| Chief Technology Officer | Age Bakker | 3,807,453 | | 9,852 | 458,735 | |
| Chief Operating Officer | Birgitte Bryne[1] | 3,400,726 | | 10,683 | 423,164 | |
| Chief Real Assets Officer | Mie Caroline Holstad[1] | 2,983,050 | | 8,295 | 325,485 | |
| Chief Risk Officer | Dag Huse | 4,561,828 | | 7,764 | 652,734 | |
| Chief Governance and Compliance Officer | Carine Smith Ihenacho[2, 3] | 4,715,388 | 79,651 | 93,012 | 471,539 | |
| Chief Equities Officer | Petter Johnsen[2] | 8,251,932 | | 106,903 | 825,193 | |
| Chief Real Assets Strategies Officer | Geir Øivind Nygård | 4,492,583 | | 7,764 | 296,300 | |

[1] Paid salary includes holiday pay. Some of the holiday pay was accrued in a different position in Norges Bank Investment Management.

[2] Receives a salary in GBP. The amount is converted to NOK and includes the currency effect.

[3] Members of the Norges Bank Investment Management leader group only receive a fixed salary. Members of the leader group that previously were entitled to performance-based pay are no longer a part of this arrangement, but over the coming years will receive accrued performance-based pay that has been held back. The amounts reported in the table are performance-based pay disbursed during the financial year, but accrued and expensed in earlier periods.

[4] Consist mainly of electronic communication tools, personnel insurance and certain travel costs.

**Table 37** Remuneration of Senior Management, employees with performance-based pay and other employees paid in 2021. Million kroner[1].

| | Number of employees | Fixed Remuneration | Variable Remuneration | Total Remuneration |
|---|---|---|---|---|
| Senior Management[2] | 9 | 43.2 | 0.08 | 43.3 |
| Employees with performance pay[3] | 239 | 416.9 | 244.6 | 661.5 |
| Other employees[4] | 373 | 374.7 | | 374.7 |

[1] Remuneration paid in foreign currency is converted to Norwegian kroner.

[2] Senior managers receive only a fixed salary. Senior managers who were previously in receipt of performance-based pay will, expensed in earlier periods. however, still receive any such pay that has been held back. The amounts reported in the table are performance-based pay disbursed during the financial year, but accrued and expensed in earlier periods.

[3] Of which 13 were employees in subsidiaries.

[4] Of which 10 were employees in subsidiaries.

# Limits for operational risk

Norges Bank's Executive Board sets limits for operational risk management and internal controls at Norges Bank Investment Management. We work systematically to identify operational risks and improve our processes.

The Executive Board has decided there must be less than a 20 percent probability that operational risk factors will result in financial consequences of 750 million kroner or more over a 12-month period. This is referred to as the Executive Board's operational risk tolerance.

Our estimated operational risk exposure was within this limit throughout 2021. We work systematically to identify operational risks and improve our processes to prevent unwanted incidents. Reporting and following up on these incidents is an important part of our efforts to improve operations and internal controls.

## Unwanted incidents in 2021

We registered 254 unwanted incidents in 2021, up from 250 in 2020. Most had no financial consequences. Altogether, these unwanted incidents had an estimated financial impact of 793.5 million kroner. One incident was considered critical, and six were considered significant.

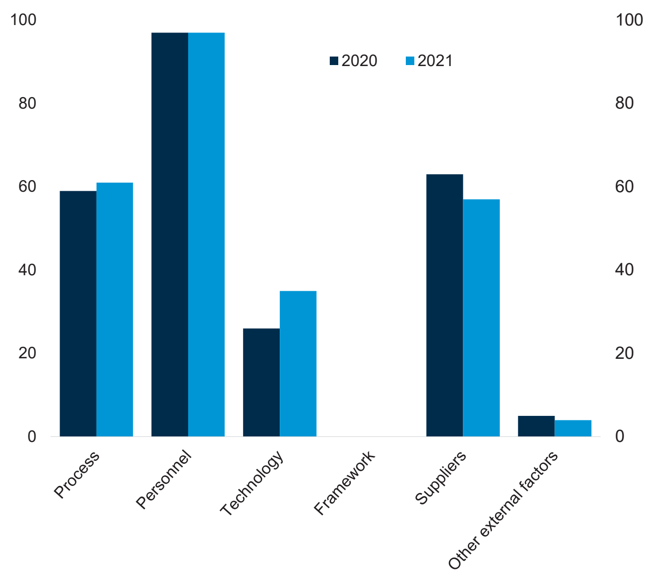
Most of the financial impact in 2021 related to a gain of 582 million kroner caused by a manual error in the portfolio management process for listed securities. The error led to us being allocated more shares in a company than planned, and the market value of the securities in question moved in our favour. A number of improvements have been made to reduce the risk of similar occurrences in the future. This incident was classified as critical and was communicated to the market in connection with the half year report for 2021.

The six significant incidents accounted for around 181.7 million kroner of the total financial impact and were related to portfolio management, trading and management of corporate actions.

## Compliance with guidelines

The Ministry of Finance has issued guidelines for the fund's management. No significant breaches of these guidelines were registered in 2021, and we did not receive any notifications from local supervisory authorities of any significant breaches of market rules or general legislation.

**Chart 27** Unwanted events at Norges Bank Investment Management sorted by cause.



# Low management costs

## We maintain a high level of cost awareness in our management of the fund and work continually to automate processes and streamline operations in order to realise economies of scale. Several large initiatives have been carried out in recent years to achieve this.

We place emphasis on high returns, responsible investment and transparency as important priorities for the fund. At the same time, we want to ensure cost efficiency without compromising robust control, good risk management and the opportunity to create value in the fund's management. Internal management costs as a share of assets under management have fallen in recent years, despite the build-up of a portfolio of unlisted investments and increased expectations and requirements related to responsible investment and reporting. The fund's objective as set out in the management mandate from the Ministry of Finance is to achieve the highest possible return after costs, within the management framework. The management of the fund should be cost efficient, but low costs are not a goal in themselves.

Management costs measured as a share of assets under management are low compared to other funds. Management costs in 2021 amounted to 0.04 percent of assets under management. An annual report prepared by CEM Benchmarking Inc. for the Ministry of Finance, which compares the fund's management costs with those of other large investment funds, shows that the fund's management costs have been between 11 and 17 basis points lower than for the peer group since 2012. In this comparison, differences in the fund's size and composition of different asset classes are taken into account. The CEM report is considered the best source of information on cost levels at comparable funds.

### Management costs

Total management costs in Norges Bank were 4.6 billion kroner in 2021, down from 5.3 billion kroner in 2020. The decrease is mainly due to currency effects, lower fees to external managers and a one-off accounting adjustment following a change in the method for accruing performance-based pay. Personnel costs were reduced by 265 million kroner in 2021 as a result of this accounting adjustment. The change has no impact on earned or paid out performance-based pay for employees. Personnel costs excluding this adjustment were 1,367 million kroner in 2021, which is somewhat lower than in 2020. Performance-based fees to external managers have decreased compared to 2020, due to lower excess returns from external management. Base fees to external managers have increased due to a higher share of the fund being managed externally in 2021.

Each year, the Ministry of Finance sets an upper limit for the reimbursement of management costs. Norges Bank is only reimbursed for costs incurred up to this limit. Management costs in subsidiaries are measured against the upper limit but are not reimbursed because they are expensed directly in the portfolio result. Norges Bank is also reimbursed for performance-based fees to external managers, which are not included in the limit. Total management costs incurred in Norges Bank and in subsidiaries, excluding performance-based fees to external managers, are limited to 5.4 billion kroner for 2021. Total management costs measured against the upper cost limit amounted to 3.9 billion kroner in 2021, consisting of management costs in Norges Bank, excluding performance-based fees to external managers, of 3.8 billion kroner and management costs in subsidiaries of 0.1 billion kroner. This corresponds to 0.034 percent of assets under management, a decrease from 0.040 percent in 2020.

Fixed and variable fees to external managers accounted for 37 percent of management costs in 2021. External managers are used in segments and markets where it is not appropriate to build up internal expertise. Our strategy is to primarily use external managers for equity investments in emerging markets and for investments in small- and mid-cap companies. The use of external managers has played an important role in achieving the fund's goal of highest possible return after costs with moderate risk. Up to and including 2021, the cumulative excess return after costs for the external equity mandates was 73 billion kroner.

A share of the fees to external managers varies with the excess return achieved in relation to a benchmark index. Agreements with external managers for performance-based fees are structured so that the bulk of the positive excess return is retained by the fund, and the agreements include caps on the fees that can be paid. Performance-based fees

**Chart 28** Management costs as a share of assets under management. Basis points.

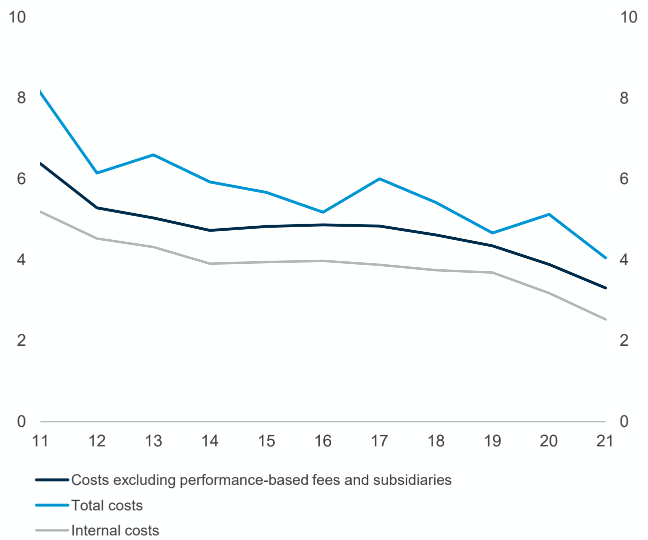
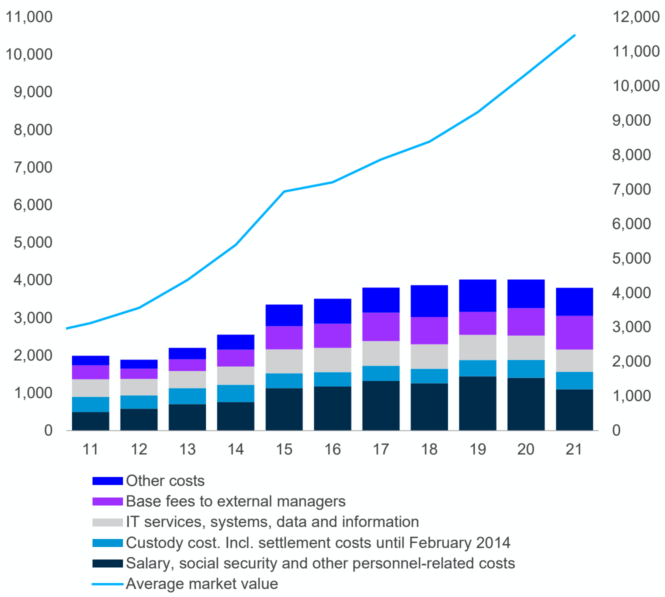



**Chart 29** Development of individual cost components. Costs[1] (millions of kroner, left-hand axis) and average market value (billions of kroner, right-hand axis).




[1] Excluding performance-based fees and subsidiaries.

to external managers are therefore expected to be more than offset by excess returns for the fund and will increase when excess returns increase.

The fund's investments in equities and bonds must be registered with local securities depositories around the world. We use a global custodian institution to assist us with this process. Custody costs as a share of assets under management have fallen in recent years and accounted for 10 percent of management costs in 2021.

The fund's reporting currency is Norwegian kroner. Exchange rate fluctuations can have a significant accounting impact even if actual costs in foreign currency are unchanged. Over 70 percent of costs are invoiced and paid in foreign currency. This means, for example, that a 25 percent change in the krone exchange rate against other currencies will increase or decrease operating costs by around 1,100 million kroner. The weakening of the Norwegian krone against other currencies in recent years has resulted in a substantial increase in costs measured in kroner.

## Transaction costs

Transaction costs are defined as all costs directly attributable to completed transactions. For equities and bonds, these normally consist of commission fees and transaction taxes, including stamp duty. For unlisted real estate and unlisted renewable energy infrastructure, this includes one-off costs for the purchase and sale of investments, including stamp duty, registration fees, due diligence costs and insurance.

We work continuously to keep transaction costs low. We do this by taking account of these costs in our investment strategies and minimising the number of transactions. There may therefore be less activity in markets with high commissions or taxes than in markets with lower fixed transaction costs. We also choose counterparties that can execute our investment decisions most cost-effectively. Transaction costs are expensed directly in the portfolio result and are not included in management costs. Transaction costs amounted to 3.5 billion kroner in 2021, compared to 3.6 billion kroner in 2020. This includes 3.3 billion kroner related to equity investments and 0.2 billion kroner related to investments in unlisted real estate and unlisted renewable energy infrastructure.

In addition to the direct costs described above, indirect costs are incurred because prices change from the time investment decisions are made until they are implemented in the market, or because prices reflect the liquidity the counterparty provides. Indirect costs are included in the portfolio result.

## Management costs broken down by investment strategy

We pursue a variety of investment strategies in our management of the fund. These strategies complement and influence one another, and there are cost synergies between the strategies. We allocate costs to the different strategies in line with actual costs or using allocation keys based on factors such as number of employees or volumes.

Management costs for unlisted real estate were equivalent to 0.08 percent of assets under management in 2021. Management costs for external security selection during the same period amounted to 0.36 percent of assets under management, compared to 0.03 percent for internal security selection. Management costs for asset management amounted to 0.02 percent of assets under management.

Table 38 Management costs per investment strategy in 2021. Costs as reimbursed by the Ministry of Finance. Basis points.

| 2021 | Contribution to the fund's management costs | Management costs based on assets under management |
|---|---|---|
| **Asset management** | 1.6 | 2.2 |
| **Securities selection** | 2.1 | 10.7 |
| Internal security selection | 0.5 | 3.2 |
| External security selection[1] | 1.6 | 35.8 |
| **Fund allocation** | 0.4 | |
| of which unlisted real estate | 0.2 | 8.4 |
| **Total** | **4.0** | |

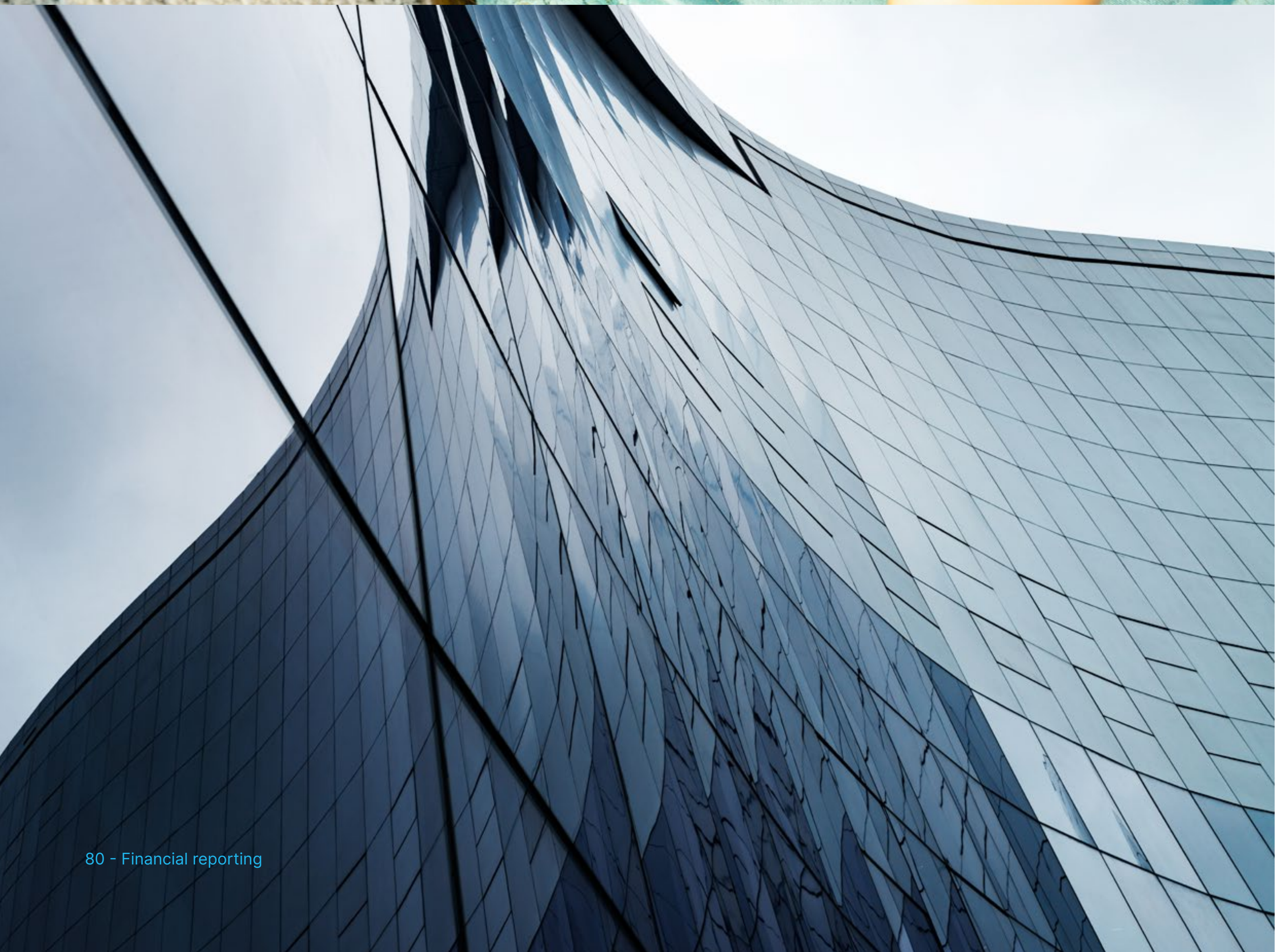
[1] Includes all externally managed capital.

**Table 39** Management cost per investment strategy 2013–2021. Costs as reimbursed by the Ministry of Finance. Basis points.

| 2013-2021 | Contribution to the fund's management costs | Management costs based on assets under management |
|---|---|---|
| **Asset management** | 2.2 | 2.8 |
| **Securities selection** | 2.5 | 15.0 |
| Internal security selection | 0.7 | 5.4 |
| External security selection[1] | 1.8 | 43.8 |
| **Fund allocation** | 0.3 | |
| Unlisted real estate[2] | 0.4 | 20.1 |
| **Total** | **5.4** | |

[1] Includes all externally managed capital.

[2] Unlisted real estate is part of the Fund allocation strategy from 2017, but is presented on a separate line for 2013–2021.

# 5 Financial reporting

# Content

# Financial reporting 2021

# 1 Financial statements



# 2 Notes to the financial reporting



# 3 Auditor

# Income statement

| Amounts in NOK million | Note | 2021 | 2020 |
|---|---|---|---|
| **Profit/loss on the portfolio before foreign exchange gain/loss** | | | |
| Income/expense from: | | | |
| - Equities | 4 | 1 593 618 | 883 788 |
| - Bonds | 4 | -40 905 | 198 080 |
| - Unlisted real estate | 6 | 35 811 | -1 017 |
| - Unlisted infrastructure | 7 | 1 198 | - |
| - Financial derivatives | 4 | -4 839 | -6 891 |
| - Secured lending | 13 | 3 842 | 4 028 |
| - Secured borrowing | 13 | 21 | -751 |
| Tax expense | 10 | -8 887 | -7 513 |
| Interest income/expense | | -13 | 25 |
| Other income/expense | | 11 | -35 |
| **Profit/loss on the portfolio before foreign exchange gain/loss** | | **1 579 857** | **1 069 713** |
| Foreign exchange gain/loss | 11 | -24 589 | 57 948 |
| **Profit/loss on the portfolio** | | **1 555 269** | **1 127 661** |
| Management fee | 12 | -4 640 | -5 305 |
| **Profit/loss and total comprehensive income** | | **1 550 628** | **1 122 356** |

# Balance sheet

| Amounts in NOK million | Note | 31.12.2021 | 31.12.2020 |
|---|---|---|---|
| **Assets** | | | |
| Deposits in banks | | 18 450 | 18 258 |
| Secured lending | 13,14 | 297 405 | 192 526 |
| Cash collateral posted | 14 | 3 725 | 5 715 |
| Unsettled trades | | 15 767 | 4 460 |
| Equities | 5 | 8 383 302 | 7 538 156 |
| Equities lent | 5,13 | 505 117 | 438 353 |
| Bonds | 5 | 2 795 536 | 2 343 362 |
| Bonds lent | 5,13 | 623 367 | 520 978 |
| Financial derivatives | 5,14 | 7 879 | 2 551 |
| Unlisted real estate | 6 | 310 134 | 272 507 |
| Unlisted infrastructure | 7 | 14 287 | - |
| Withholding tax receivable | 10 | 3 427 | 2 234 |
| Other assets | 17 | 1 860 | 1 340 |
| Management fee receivable | | 536 | - |
| **Total assets** | | **12 980 791** | **11 340 440** |
| | | | |
| **Liabilities and owner's capital** | | | |
| Secured borrowing | 13,14 | 591 960 | 390 380 |
| Cash collateral received | 14 | 11 848 | 6 004 |
| Unsettled trades | | 22 607 | 20 326 |
| Financial derivatives | 5,14 | 9 055 | 7 619 |
| Deferred tax | 10 | 5 180 | 2 308 |
| Other liabilities | 17 | 56 | 42 |
| Management fee payable | | - | 5 305 |
| **Total liabilities** | | **640 706** | **431 983** |
| Owner's capital | | 12 340 085 | 10 908 457 |
| **Total liabilities and owner's capital** | | **12 980 791** | **11 340 440** |

# Statement of cash flows

## Accounting policy

The statement of cash flows is prepared in accordance with the direct method. Major classes of gross cash receipts and payments are presented separately, with the exception of specific transactions that are presented on a net basis, primarily relating to the purchase and sale of financial instruments.

Inflows and withdrawals between the GPFG and the Norwegian government are financing activities. These transfers have been settled in the period. Accrued inflows/withdrawals are shown in the statement of changes in owner's capital.

| Amounts in NOK million, receipt (+) / payment (-) | Note | 2021 | 2020 |
|---|---|---|---|
| **Operating activities** | | | |
| Receipts of dividend from equities | | 166 040 | 152 788 |
| Receipts of interest from bonds | | 46 449 | 60 255 |
| Receipts of interest and dividend from unlisted real estate | 6 | 6 088 | 8 375 |
| Receipts of interest and dividend from unlisted infrastructure | 7 | 80 | - |
| Net receipts of interest and fee from secured lending and borrowing | | 3 883 | 3 053 |
| Receipts of dividend, interest and fee from holdings of equities, bonds, unlisted real estate and unlisted infrastructure | | 222 540 | 224 470 |
| | | | |
| Net cash flow from purchase and sale of equities | | 495 674 | -80 610 |
| Net cash flow from purchase and sale of bonds | | -646 867 | 102 085 |
| Net cash flow to/from investments in unlisted real estate | 6 | -7 056 | -15 997 |
| Net cash flow to/from investments in unlisted infrastructure | 7 | -13 375 | - |
| Net cash flow financial derivatives | | -542 | -5 499 |
| Net cash flow cash collateral related to derivative transactions | | 8 502 | -6 080 |
| Net cash flow secured lending and borrowing | | 74 976 | 94 317 |
| Net payment of taxes | 10 | -7 202 | -5 724 |
| Net cash flow related to interest on deposits in banks and bank overdraft | | -42 | -10 |
| Net cash flow related to other income/expense, other assets and other liabilities | | 878 | -623 |
| Management fee paid to Norges Bank | 15 | -10 481 | -4 312 |
| **Net cash inflow/outflow from operating activities** | | **117 005** | **302 018** |
| | | | |
| **Financing activities** | | | |
| Inflow from the Norwegian government | | 78 846 | 5 032 |
| Withdrawal by the Norwegian government | | -199 000 | -301 800 |
| **Net cash inflow/outflow from financing activities** | | **-120 154** | **-296 768** |
| | | | |
| **Net change deposits in banks** | | | |
| Deposits in banks at 1 January | | 18 258 | 14 476 |
| Net increase/decrease of cash in the period | | -3 149 | 5 250 |
| Net foreign exchange gain/loss on cash | | 3 341 | -1 467 |
| **Deposits in banks at end of period** | | **18 450** | **18 258** |

# Statement of changes in owner’s capital

## Accounting policy

Owner’s capital for the GPFG comprises contributed capital in the form of accumulated net inflows from the Norwegian government and retained earnings in the form of total comprehensive income. Owner’s capital corresponds to the Ministry of Finance’s krone account in Norges Bank.

| Amounts in NOK million | Inflows from owner | Retained earnings | Total owner's capital |
|---|---|---|---|
| 1 January 2020 | 3 384 240 | 6 699 531 | 10 083 771 |
| Profit/loss and total comprehensive income | - | 1 122 356 | 1 122 356 |
| Inflow during the period[1] | 4 130 | - | 4 130 |
| Withdrawal during the period[1] | -301 800 | - | -301 800 |
| **31 December 2020** | **3 086 570** | **7 821 887** | **10 908 457** |
| | | | |
| 1 January 2021 | 3 086 570 | 7 821 887 | 10 908 457 |
| Profit/loss and total comprehensive income | - | 1 550 628 | 1 550 628 |
| Inflow during the period[1] | 80 000 | - | 80 000 |
| Withdrawal during the period[1] | -199 000 | - | -199 000 |
| **31 December 2021** | **2 967 570** | **9 372 515** | **12 340 085** |

[1] There was an inflow to the krone account of NOK 80 billion in 2021, while NOK 209.5 billion was withdrawn from the krone account. Of this, NOK 5.3 billion was used to pay the management fee for 2020 and NOK 5.2 billion was used to pay the management fee for 2021. The management fee for 2021 was settled prior to year-end, based on a forecast. This was higher than the final management fee for the year and the difference will be settled in March 2022. There was an inflow of NOK 4.1 billion to the krone account in 2020, while NOK 306.1 billion was withdrawn from the krone account. Of this, NOK 4.3 billion was used to pay the accrued management fee for 2019.

# Notes

## Financial reporting

# Note 1 General Information

## 1. Introduction

Norges Bank is Norway's central bank. The bank is a separate legal entity and is owned by the state. Norges bank manages the Government Pension Fund Global (GPFG) on behalf of the Ministry of Finance, in accordance with section 3, second paragraph of the Government Pension Fund Act and the management mandate for the GPFG, issued by the Ministry of Finance.

The GPFG shall support government saving to finance future expenditure and underpin long-term considerations relating to the use of Norway's petroleum revenues. The Norwegian Parliament has established the legal framework in the Government Pension Fund Act, and the Ministry of Finance has formal responsibility for the fund's management. The Executive Board of Norges Bank has delegated day-to-day management of the GPFG to Norges Bank Investment Management (NBIM).

The Ministry of Finance has placed funds for investment in the GPFG in the form of a Norwegian krone deposit with Norges Bank (the krone account). Norges Bank manages the krone account in its own name by investing the funds in an investment portfolio consisting of listed equities, bonds, real estate and renewable energy infrastructure. The GPFG is invested in its entirety outside of Norway.

Transfers are made to and from the krone account in accordance with the management mandate. When the Norwegian State's petroleum revenue exceeds the use of petroleum revenue in the fiscal budget, deposits will be made into the krone account. In the opposite situation, withdrawals will be made. Transfers to and from the krone account lead to a corresponding change in Owner's capital.

For further information on the management mandate for the GPFG, Norges Bank's governance structure and risk management, see note 9 Investment risk.

## 2. Approval of the financial statements

The annual financial reporting for the GPFG is an excerpt from Norges Bank's financial reporting and is included in Norges Bank's annual financial statements as note 20. The annual financial statements of Norges Bank for 2021 were approved by the Executive Board on 9 February 2022 and approved by the Supervisory Council on 23 February 2022.

# Note 2 Accounting policies

This note describes accounting policies, significant estimates and accounting judgements that are relevant to the financial statements as a whole. Additional accounting policies, significant estimates and accounting judgements are included in the respective statements and notes.

**Significant estimates and accounting judgements**

The preparation of the financial statements involves the use of uncertain estimates and assumptions relating to future events that affect the reported amounts for assets, liabilities, income and expenses. Estimates are based on historical experience and reflect management's expectations about future events. Actual outcomes may deviate from estimates. The preparation of the financial statements also involves the use of judgement when applying accounting policies, which may have a significant impact on the financial statements.

In cases where there are particularly uncertain estimates or accounting judgements, this is described in the respective notes.

## 1. Basis of preparation

In accordance with the Regulation on the financial reporting of Norges Bank (the Regulation), which has been laid down by the Ministry of Finance, the financial reporting for the GPFG is prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, subject to the additions and exemptions specified in the Accounting Act and the Regulation. The annual financial statements are prepared with a closing date of 31 December, and are presented in Norwegian kroner (NOK), rounded to the nearest million. Rounding differences may occur.

## 2. Changes in accounting policies, including new and amended standards and interpretations, in the period

Accounting policies are applied consistently with those of the previous financial year. There are no new or amended IFRS standards and interpretations that have become effective for the financial year starting 1 January 2021, that have had a material impact on the financial statements.

## 3. New and amended standards and interpretations effective from 2022 or later

Issued IFRS standards, changes in existing standards and interpretations with effective dates from 2022 or later, are expected to be immaterial or not applicable for the financial reporting for the GPFG at the time of implementation.

## 4. Accounting policies for the financial statements as a whole

### 4.1 Financial assets and liabilities

**Recognition and derecognition**

Financial assets and liabilities are recognised in the balance sheet upon becoming a party to the instrument's contractual provisions.

Financial assets are derecognised when the contractual rights to the cash flows expire, or when the financial assets and substantially all the risks and rewards of ownership are transferred. See note 13 Secured lending and borrowing for details of transferred assets that are not derecognised.

Financial liabilities are derecognised when the obligation is extinguished, i.e. when the obligation specified in the contract is discharged, cancelled or expires.

Purchase or sale of a financial asset where the contractual terms require settlement in accordance with normal market conditions, is recognised on the trade date.

**Classification and measurement**

Financial assets are classified based on the business model used for managing the assets and their contractual cash flow characteristics. The investment portfolio of the GPFG is managed in accordance with the management mandate issued by the Ministry of Finance, the investment mandate issued by the Executive Board of Norges Bank and investment strategies issued by the management of Norges Bank Investment Management. These mandates and strategies, including the risk management strategies, entail that financial assets are managed and evaluated on a fair value basis. The GPFG's financial assets are therefore measured at fair value through profit or loss, except for Management fee receivable which is not part of the investment portfolio. Management fee receivable is measured at amortised cost.

Financial liabilities, except for Management fee payable, are integrated in the investment portfolio which is managed and evaluated on a fair value basis. These are therefore designated at fair value through profit or loss. Management fee payable is measured at amortised cost.

Financial derivatives are measured at fair value through profit or loss.

### 4.2 Subsidiaries

Investments in real estate and renewable energy infrastructure are made through subsidiaries of Norges Bank, which are exclusively established as part of the management of the fund. The subsidiaries are controlled by the GPFG. Control over an entity exists when the GPFG is exposed to, or has rights to, variable returns from its involvement in the entity and is able to influence those returns through its power over the entity. For further information, see note 16 Interests in other entities.

The GPFG is an investment entity in accordance with IFRS 10 Consolidated financial statements. IFRS 10 defines an investment entity and introduces a mandatory exemption from consolidation for investment entities.

#### Subsidiaries measured at fair value through profit or loss

Subsidiaries that invest in real estate or renewable energy infrastructure through ownership interests in other entities, are investment entities. These subsidiaries are measured at fair value through profit or loss in accordance with the principles for financial assets, as described in section 4.1 above. Subsidiaries that invest in real estate are presented in the balance sheet as Unlisted real estate. Subsidiaries that invest in renewable energy infrastructure are presented in the balance sheet as Unlisted infrastructure. See note 6 Unlisted real estate and note 7 Unlisted renewable energy infrastructure for supplementary policies.

#### Consolidated subsidiaries

Subsidiaries that perform investment-related services, and which are not investment entities themselves, are consolidated. Consolidated subsidiaries do not own, neither directly nor indirectly, investments in real estate or renewable energy infrastructure.

#### Accounting judgement

The GPFG is an investment entity based on the following:

a) The GPFG receives funds from the Norwegian government, a related party and its sole owner, and delivers professional investment services in the form of management of the fund, to the Norwegian government,
b) The GPFG commits to the Norwegian government that it will invest solely for capital appreciation and investment income,
c) The GPFG measures and evaluates returns for all investments exclusively on a fair value basis.

An investment entity shall have a strategy that defines the time horizon for the realisation of investments. The GPFG has a very long time horizon. Following an overall assessment, it has been concluded that the GPFG meets the criteria in the definition of an investment entity.

# Note 3 Returns

**Table 3.1** Returns

| | 2021 | 2020 |
|---|---|---|
| **Returns measured in the fund's currency basket (percent)** | | |
| Return on equity investments | 20.76 | 12.14 |
| Return on fixed-income investments | -1.94 | 7.46 |
| Return on unlisted real estate investments | 13.64 | -0.08 |
| Return on unlisted infrastructure investments | 4.15 | - |
| Return on fund | 14.51 | 10.86 |
| | | |
| Relative return on fund (percentage points) | 0.74 | 0.27 |
| | | |
| **Returns measured in Norwegian kroner (percent)** | | |
| Return on equity investments | 20.67 | 12.70 |
| Return on fixed-income investments | -2.01 | 8.00 |
| Return on unlisted real estate investments | 13.55 | 0.42 |
| Return on unlisted infrastructure investments | 7.24 | - |
| Return on fund | 14.42 | 11.41 |

Table 3.1 shows return for the fund and for each asset class. A time-weighted rate of return methodology is applied, where the fair value of holdings is determined at the time of cash flows into and out of the asset classes and the fund as a whole, and periodic returns are geometrically linked. Returns are calculated net of non-reclaimable withholding taxes on dividends and interest, and taxes on capital gains. Returns are measured both in Norwegian kroner and in the fund's currency basket. The currency basket is weighted according to the currency composition of the benchmark index for equities and bonds. Returns measured in the fund's currency basket are calculated as the geometric difference between the fund's returns measured in Norwegian kroner and the return of the currency basket.

The fund's relative return is calculated as the arithmetic difference between the fund's return and the return of the fund's benchmark index. The fund's benchmark index consists of global equity and bond indices determined by the Ministry of Finance and is calculated by weighting the monthly returns of the benchmark indices for each of the two asset classes, using the weight in the actual benchmark at the beginning of the month for the respective asset class.

The first investment in unlisted renewable energy infrastructure was completed on 31 May 2021. Therefore, return figures for the asset class apply from June 2021.

# Note 4 Income/expense from equities, bonds and financial derivatives

## Accounting policy

The following accounting policies relate to the respective income and expense elements presented in tables 4.1 to 4.3:

Dividends are recognised when the dividend is formally approved by the general meeting or equivalent decision-making body.

Interest income is recognised when the interest is accrued. Interest expense is recognised as incurred.

Realised gain/loss mainly represents amounts realised when assets or liabilities are derecognised. Average acquisition cost is assigned upon derecognition. Realised gain/loss includes transaction costs, which are expensed as incurred. Transaction costs are defined as all costs directly attributable to the completed transaction. For investments in equities and bonds, these normally comprise commission fees and stamp duty.

Unrealised gain/loss represents changes in fair value for the related balance sheet item during the period, that are not attributable to the aforementioned categories.

Tables 4.1 to 4.3 specify the income and expense elements for equities, bonds and financial derivatives, respectively, where the line Income/expense shows the amount recognised in profit or loss for the relevant income statement line.

**Table 4.1** Specification Income/expense from equities

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Dividends | 170 556 | 157 477 |
| Realised gain/loss | 652 455 | 103 946 |
| Unrealised gain/loss | 770 608 | 622 365 |
| **Income/expense from equities before foreign exchange gain/loss** | **1 593 618** | **883 788** |

**Table 4.2** Specification Income/expense from bonds

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Interest | 47 885 | 62 213 |
| Realised gain/loss | 6 | 71 432 |
| Unrealised gain/loss | -88 796 | 64 436 |
| **Income/expense from bonds before foreign exchange gain/loss** | **-40 905** | **198 080** |

**Table 4.3** Specification Income/expense from financial derivatives

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Interest | -877 | -1 186 |
| Realised gain/loss | -2 223 | -5 702 |
| Unrealised gain/loss | -1 738 | -3 |
| **Income/expense from financial derivatives before foreign exchange gain/loss** | **-4 839** | **-6 891** |

# Note 5 Holdings of equities, bonds and financial derivatives

## Accounting policy

Investments in equities and bonds are measured at fair value through profit or loss. Accrued dividends and interest are presented in the balance sheet on the same line as the underlying financial instruments, and are specified in tables 5.1 and 5.2 for equities and bonds, respectively. The balance sheet line Equities includes investments in depository certificates (GDR/ADR) and units in listed funds, such as REITs. Lent equities and bonds are presented separately. For more information on lent securities, see note 13 Secured lending and borrowing.

Financial derivatives are measured at fair value through profit or loss. Variation margin for exchange traded futures is considered to be settlement, and amounts are presented in the balance sheet as Deposits in banks. Norges Bank does not engage in hedge accounting, therefore no financial instruments are designated as hedging instruments.

For further information on fair value measurement of equities, bonds and financial derivatives, see note 8 Fair value measurement. Changes in fair value are recognised in the income statement and specified in note 4 Income/expense from equities, bonds and financial derivatives.

**Table 5.1** Equities

| | 31.12.2021 | | 31.12.2020 | |
|---|---|---|---|---|
| Amounts in NOK million | Fair value incl. accrued dividends | Accrued dividends | Fair value incl. accrued dividends | Accrued dividends |
| Equities | 8 888 419 | 7 353 | 7 976 509 | 6 973 |
| **Total equities** | **8 888 419** | **7 353** | **7 976 509** | **6 973** |
| Of which equities lent | 505 117 | | 438 353 | |

Table 5.2 specifies investments in bonds per category. Nominal value represents the amount that shall be returned at maturity, also referred to as the par value of the bond.

**Table 5.2** Bonds

| | 31.12.2021 | | | 31.12.2020 | | |
|---|---|---|---|---|---|---|
| Amounts in NOK million | Nominal value | Fair value incl. accrued interest | Accrued interest | Nominal value | Fair value incl. accrued interest | Accrued interest |
| **Government bonds** | | | | | | |
| Government bonds issued in the government's local currency | 1 855 432 | 1 914 848 | 5 585 | 1 389 636 | 1 523 986 | 6 406 |
| **Total government bonds** | **1 855 432** | **1 914 848** | **5 585** | **1 389 636** | **1 523 986** | **6 406** |
| **Government-related bonds** | | | | | | |
| Sovereign bonds | 10 034 | 10 016 | 42 | 5 251 | 5 525 | 45 |
| Bonds issued by local authorities | 125 037 | 131 218 | 600 | 108 392 | 121 827 | 600 |
| Bonds issued by supranational bodies | 69 365 | 70 640 | 167 | 53 855 | 57 155 | 219 |
| Bonds issued by federal agencies | 154 055 | 155 965 | 394 | 122 001 | 128 258 | 399 |
| **Total government-related bonds** | **358 941** | **367 840** | **1 204** | **289 498** | **312 765** | **1 263** |
| **Inflation-linked bonds** | | | | | | |
| Inflation-linked bonds issued by government authorities | 160 158 | 195 879 | 371 | 141 583 | 169 965 | 350 |
| **Total inflation-linked bonds** | **160 158** | **195 879** | **371** | **141 583** | **169 965** | **350** |
| **Corporate bonds** | | | | | | |
| Bonds issued by utilities | 61 423 | 66 264 | 622 | 55 620 | 63 618 | 591 |
| Bonds issued by financial institutions | 321 224 | 327 240 | 2 149 | 255 026 | 272 234 | 2 039 |
| Bonds issued by industrial companies | 331 394 | 354 885 | 2 771 | 328 095 | 366 365 | 2 855 |
| **Total corporate bonds** | **714 041** | **748 389** | **5 542** | **638 741** | **702 216** | **5 485** |
| **Securitised bonds** | | | | | | |
| Covered bonds | 200 604 | 191 948 | 544 | 160 209 | 155 409 | 657 |
| **Total securitised bonds** | **200 604** | **191 948** | **544** | **160 209** | **155 409** | **657** |
| **Total bonds** | **3 288 727** | **3 418 903** | **13 246** | **2 619 667** | **2 864 341** | **14 161** |
| Of which bonds lent | | 623 367 | | | 520 978 | |

## Financial derivatives

Financial derivatives such as foreign exchange derivatives, interest rate derivatives, credit derivatives and futures, are used to adjust the exposure in various portfolios as a cost-efficient alternative to trading in the underlying securities. Foreign exchange derivatives are also used in connection with liquidity management. Equity derivatives with an option component are often a result of corporate actions, and can be converted into equities or sold. The GPFG also uses equity swaps in combination with purchase and sale of equities.

Table 5.3 specifies financial derivatives recognised in the balance sheet. Notional amounts are the basis for calculating any cash flows and gains/losses for derivative contracts. This provides information on the extent to which different types of financial derivatives are used.

**Table 5.3** Financial derivatives

| | 31.12.2021 | | | 31.12.2020 | | |
|---|---|---|---|---|---|---|
| | | Fair value | | | Fair value | |
| Amounts in NOK million | Notional amount | Asset | Liability | Notional amount | Asset | Liability |
| Foreign exchange derivatives | 791 724 | 5 920 | 5 278 | 359 170 | 1 620 | 6 475 |
| Interest rate derivatives | 199 485 | 1 330 | 2 870 | 37 523 | 725 | 1 144 |
| Credit derivatives | 29 563 | 164 | 902 | - | - | - |
| Equity derivatives[1] | - | 349 | - | - | 206 | - |
| Exchange-traded futures contracts[2] | 57 062 | 116 | 5 | 28 587 | - | - |
| **Total financial derivatives** | **1 077 834** | **7 879** | **9 055** | **425 280** | **2 551** | **7 619** |

[1] Notional amounts are not considered relevant for equity derivatives and are therefore not included in the table.
[2] Exchange-traded futures contracts are settled daily with margin payments and fair value is normally zero at the balance sheet date, with the exception of futures contracts in certain markets where there is different timing for setting the market value for recognition in the balance sheet and daily margining.

### Foreign exchange derivatives
This consists of foreign currency exchange contracts (forwards), which are agreements to buy or sell a specified quantity of foreign currency on an agreed future date.

### Interest rate derivatives
Interest rate swaps are agreements between two parties to exchange interest payment streams based on different interest rate calculation methods, where one party pays a floating rate of interest and the other pays a fixed rate.

### Credit derivatives
This comprises credit default swaps indices (CDS Indices) for corporate bonds, where one party (the seller) assumes the credit risk and the other party (the buyer) reduces the credit risk on the underlying index of corporate bonds. Under a CDS Index contract, the seller receives a periodic coupon from the buyer as compensation for assuming the credit risk. The buyer only receives payment if the credit protection is triggered by for instance default on the underlying credit in the index (credit event).

### Equity derivatives
Equity derivatives are derivatives with exposure to an underlying equity. Equity derivatives recognised in the balance sheet include instruments with an option component, such as rights and warrants. These instruments grant the owner the right to purchase an equity at an agreed price within a certain time frame.

### Futures contracts
Futures contracts are listed contracts to buy or sell a specified asset (security, index, interest rate or similar assets) at an agreed price at a future point in time.

### Equity swaps in combination with purchase or sale of equities
Equity swaps are not recognised in the balance sheet. See the accounting policy in note 13 Secured lending and borrowing for further information. At the end of 2021, equities purchased in combination with offsetting equity swaps amounted to NOK 80 billion (NOK 56 billion at the end of 2020). Equity sales in combination with offsetting equity swaps amounted to NOK 64 billion (NOK 54 billion at the end of 2020). See also table 14.1 in note 14 Collateral and offsetting. The GPFG has virtually no net exposure from equity swaps in combination with purchase or sale of equities.

# Note 6 Unlisted real estate

## Accounting policy

Investments in unlisted real estate are made through subsidiaries of Norges Bank, exclusively established as part of the management of the GPFG. Subsidiaries presented as Unlisted real estate in the balance sheet are measured at fair value through profit or loss. See note 2 Accounting policies for further information.

The fair value of unlisted real estate is determined as the sum of the GPFG's share of assets and liabilities in the underlying subsidiaries, measured at fair value. For further information, see note 8 Fair value measurement.

Changes in fair value are recognised in the income statement and presented as Income/expense from unlisted real estate.

The following accounting policies apply to the respective income and expense elements presented in table 6.1:

Interest is recognised when it is accrued.

Dividends are recognised when the dividend is formally approved by the general meeting or equivalent decision-making body, or is paid out in accordance with the company's articles of association.

**Table 6.1** Income/expense from unlisted real estate

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Payments of interest and dividend from unlisted real estate | 6 088 | 8 375 |
| Unrealised gain/loss[1] | 29 723 | -9 392 |
| **Income/expense from unlisted real estate before foreign exchange gain/loss** | **35 811** | **-1 017** |

[1] Accrued interest and dividends which are not cash-settled are included in Unrealised gain/loss.

**Table 6.2** Changes in carrying amounts unlisted real estate

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| **Unlisted real estate at 1 January** | **272 507** | **264 538** |
| Net cash flow to/from investments in unlisted real estate | 7 056 | 15 997 |
| Unrealised gain/loss | 29 723 | -9 392 |
| Foreign exchange gain/loss | 849 | 1 363 |
| **Unlisted real estate, closing balance for the period** | **310 134** | **272 507** |

## Cash flows between the GPFG and subsidiaries presented as unlisted real estate

The GPFG makes cash contributions to subsidiaries in the form of equity and long-term loan financing, to fund investments in real estate assets, primarily properties. Net income in the underlying real estate companies can be distributed back to the GPFG in the form of interest and dividend as well as repayment of equity and long-term loan financing. Net income generated in the underlying real estate companies that is not distributed back to the GPFG, is reinvested in the underlying entities to finance for instance property development and repayment of external debt. There are no significant restrictions on the distribution of interest and dividend from subsidiaries to the GPFG.

Tables 6.3 specifies cash flows between the GPFG and subsidiaries presented as Unlisted real estate, related to ongoing operations and other activities.

**Table 6.3** Cash flow unlisted real estate

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Interest and dividend from ongoing operations | 6 037 | 5 976 |
| Repayments of intercompany loans from ongoing operations | 1 692 | 1 697 |
| **Cash flow from ongoing operations unlisted real estate** | **7 729** | **7 673** |
| | | |
| Payments for new real estate investments | -13 486 | -20 531 |
| Payments for property development | -866 | -1 109 |
| Net payments external debt | 4 039 | - |
| Repayments of intercompany loans from sales | 1 565 | 3 945 |
| Interest and dividend from sales | 51 | 2 399 |
| **Cash flow to/from other activities unlisted real estate** | **-8 697** | **-15 295** |
| | | |
| **Net cash flow unlisted real estate[1]** | **-968** | **-7 622** |

[1] Shown in the statement of cash flows as Receipts of interest and dividend from unlisted real estate and Net cash flow to/from investments in unlisted real estate.

Net income in the underlying real estate companies which is distributed back to the GPFG in the form of interest and dividends, is presented in the statement of cash flows as Receipts of interest and dividend from unlisted real estate. In 2021 this amounted to NOK 6 088 million (NOK 8 375 million in 2020).

Cash flows between the GPFG and real estate subsidiaries in the form of equity and loan financing, as well as repayment of these, are presented in the statement of cash flows as Net cash flows to/from investments in unlisted real estate. In 2021 this amounted to NOK -7 056 million (NOK -15 997 million in 2020).

A net cash flow from the GPFG to subsidiaries will result in an increase in the value of Unlisted real estate in the balance sheet, while a net cash flow from subsidiaries to the GPFG will result in a decrease.

## Underlying real estate companies

Real estate subsidiaries have investments in other non-consolidated, unlisted companies. For further information, see note 16 Interests in other entities.

### Principles for measurement and presentation

The following principles apply for the respective income and expense elements presented in table 6.4:

Rental income is recognised on a straight-line basis over the lease term. Net rental income mainly comprises accrued rental income, less costs relating to the operation and maintenance of properties.

Asset management fees are directly related to the underlying properties and are primarily linked to the operation and development of properties and leases. Fixed fees are expensed as incurred. Variable fees to external asset managers are based on achieved performance over time. The provision for variable fees is based on the best estimate of the incurred fees to be paid. The change in best estimate in the period is recognised in profit or loss.

Transaction costs and fees from purchases and sales of properties are incurred as one-off costs and expensed as incurred.

Table 6.4 specifies the GPFG's share of net income generated in the underlying real estate companies, which is the basis for Income/expense from unlisted real estate presented in table 6.1.

**Table 6.4** Income from underlying real estate companies

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Net rental income | 11 173 | 11 609 |
| External asset management - fixed fees | -819 | -728 |
| External asset management - variable fees | -30 | -71 |
| Internal asset management - fixed fees[1] | -84 | -65 |
| Operating costs in wholly-owned subsidiaries[2] | -63 | -64 |
| Operating costs in joint ventures | -109 | -110 |
| Interest expense external debt | -673 | -555 |
| Tax expense | -253 | -211 |
| **Net income from ongoing operations** | **9 141** | **9 805** |
| | | |
| Realised gain/loss | 424 | 2 151 |
| Unrealised gain/loss[3] | 26 387 | -12 472 |
| **Realised and unrealised gain/loss** | **26 811** | **-10 321** |
| | | |
| **Transaction costs and fees from purchases and sales** | **-141** | **-500** |
| | | |
| **Net income underlying real estate companies** | **35 811** | **-1 017** |

[1] Internal asset management is carried out on 100 percent owned properties by employees in a wholly-owned, consolidated subsidiary.
[2] Operating costs in wholly-owned subsidiaries are measured against the upper limit from the Ministry of Finance, see note 12 Management costs for more information.
[3] Unrealised gain/loss presented in table 6.1 includes net income in the underlying real estate companies which is not distributed back to the GPFG, and will therefore not correspond to Unrealised gains/loss presented in table 6.4.

Table 6.5 specifies the GPFG's share of assets and liabilities in the underlying real estate companies, which comprises the closing balance for Unlisted real estate as presented in table 6.2.

**Table 6.5** Assets and liabilities underlying real estate companies

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| Properties | 336 332 | 293 408 |
| External debt | -22 780 | -18 783 |
| Net other assets and liabilities[1] | -3 417 | -2 118 |
| **Total assets and liabilities underlying real estate companies** | **310 134** | **272 507** |

[1] Net other assets and liabilities comprise cash, tax and operational receivables and liabilities.

## Agreements for purchases and sales of real estate

When purchasing and selling property, there will normally be a time period between entering into the agreement and completion of the transaction. Properties are recognised or derecognised in the underlying real estate companies upon transfer of control. This will normally be the date the consideration is transferred and the transaction is completed. Transactions are normally announced when the agreement is entered into. Purchases and sales above USD 100 million are announced. Previously announced agreements for purchases and sales which are not yet completed at the end of 2021, are described in the following paragraph.

In the second quarter of 2019, Norges Bank entered into agreements to acquire a 48 percent interest in two to-be-constructed buildings in New York at 561 Greenwich Street and 92 Avenue of the Americas, with expected completion in the first quarter of 2023 and the fourth quarter of 2024, respectively. The buildings will be purchased, and the final purchase price determined upon completed construction.

# Note 7 Unlisted renewable energy infrastructure

## Accounting policy

Investments in unlisted renewable energy infrastructure (Unlisted infrastructure) are made through subsidiaries of Norges Bank, exclusively established as part of the management of the GPFG. Subsidiaries presented as Unlisted infrastructure in the balance sheet are measured at fair value through profit or loss. See note 2 Accounting policies for further information.

The fair value of unlisted infrastructure is determined as the sum of the GPFG's share of assets and liabilities in the underlying subsidiaries, measured at fair value. For further information, see note 8 Fair value measurement.

Changes in fair value are recognised in the income statement and presented as Income/expense from unlisted infrastructure.

The following accounting policies apply to the respective income and expense elements presented in table 7.1:

Interest is recognised when it is accrued.

Dividends are recognised when the dividend is formally approved by the general meeting or equivalent decision-making body, or is paid out in accordance with the company's articles of association.

**Table 7.1** Income/expense from unlisted infrastructure

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Payments of interest and dividend from unlisted infrastructure | 80 | - |
| Unrealised gain/loss[1] | 1 118 | - |
| **Income/expense from unlisted infrastructure before foreign exchange gain/loss** | **1 198** | **-** |

[1] Accrued interest and dividends which are not cash-settled are included in Unrealised gain/loss.

**Table 7.2** Changes in carrying amounts unlisted infrastructure

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| **Unlisted infrastructure at 1 January** | **-** | **-** |
| Net cash flow to/from investments in unlisted infrastructure | 13 375 | - |
| Unrealised gain/loss | 1 118 | - |
| Foreign exchange gain/loss | -207 | - |
| **Unlisted infrastructure, closing balance for the period** | **14 287** | **-** |

### Cash flows between the GPFG and subsidiaries presented as Unlisted infrastructure

The GPFG makes cash contributions to subsidiaries in the form of equity and long-term loan financing, to fund investments in renewable energy infrastructure. Net income in the underlying infrastructure companies can be distributed back to the GPFG in the form of interest and dividend as well as repayment of equity and long-term loan financing. There are no significant restrictions on the distribution of interest and dividend from subsidiaries to the GPFG.

Tables 7.3 specifies cash flows between the GPFG and subsidiaries presented as Unlisted infrastructure, related to ongoing operations and other activities.

**Table 7.3** Cash flow unlisted infrastructre

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Interest and dividend from ongoing operations | 80 | - |
| Repayments of intercompany loans from ongoing operations | 648 | - |
| **Cash flow from ongoing operations unlisted infrastructure** | **728** | **-** |
| | | |
| Payments for new infrastructure investments | -14 023 | - |
| **Cash flow to/from other activities unlisted infrastructure** | **-14 023** | **-** |
| | | |
| **Net cash flow unlisted infrastructure**[1] | **-13 295** | **-** |

[1] Shown in the statement of cash flows as Receipts of interest and dividend from unlisted infrastructure and Net cash flow to/from investments in unlisted infrastructure.

Net income in the underlying infrastructure companies which is distributed back to the GPFG in the form of interest and dividends, is presented in the statement of cash flows as Receipts of interest and dividend from unlisted infrastructure. In 2021 this amounted to NOK 80 million (NOK 0 million in 2020).

Cash flows between the GPFG and infrastructure subsidiaries in the form of equity and loan financing, as well as repayment of these, are presented in the statement of cash flows as Net cash flows to/from investments in unlisted infrastructure. In 2021 this amounted to NOK -13 375 million (NOK 0 million in 2020).

A net cash flow from the GPFG to subsidiaries will result in an increase in the value of Unlisted infrastructure in the balance sheet, while a net cash flow from subsidiaries to the GPFG will result in a decrease.

### Underlying infrastructure companies

Infrastructure subsidiaries have investments in other non-consolidated, unlisted companies. For further information, see note 16 Interests in other entities.

### Principles for measurement and presentation

The following principles apply for the respective income and expense elements presented in table 7.4:

Income from the sale of renewable energy is recognised at time of delivery. Net income from the sale of renewable energy mainly comprises accrued income from power sales, less costs relating to the operation and maintenance of infrastructure assets.

Transaction costs and fees from purchases and sales of renewable energy infrastructure are incurred as one-off costs and expensed as incurred.

Table 7.4 specifies the GPFG's share of net income generated in the underlying infrastructure companies, which is the basis for Income/expense from unlisted infrastructure presented in table 7.1.

**Table 7.4** Income from underlying infrastructure companies

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Net income from sale of renewable energy | 747 | - |
| Operating costs in wholly-owned subsidiaries[1] | -7 | - |
| Operating costs in joint ventures | 9 | - |
| Tax expense | -160 | - |
| **Net income from ongoing operations** | **589** | **-** |
| | | |
| **Unrealised gain/loss[2]** | **639** | **-** |
| | | |
| **Transaction costs and fees from purchases and sales** | **-31** | **-** |
| | | |
| **Net income underlying infrastructure companies** | **1 198** | **-** |

[1] Operating costs in wholly-owned subsidiaries are measured against the upper limit from the Ministry of Finance, see note 12 Management costs for more information.
[2] Unrealised gain/loss presented in table 7.1 includes net income in the underlying infrastructure companies which is not distributed back to the GPFG, and will therefore not correspond to Unrealised gains/loss presented in table 7.4.

Table 7.5 specifies the GPFG's share of assets and liabilities in the underlying infrastructure companies, which comprises the closing balance for Unlisted infrastructure as presented in table 7.2.

**Table 7.5** Assets and liabilities underlying infrastructure companies

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| Wind farm | 14 290 | - |
| Net other assets and liabilities[1] | -3 | - |
| **Total assets and liabilities underlying infrastructure companies** | **14 287** | **-** |

[1] Net other assets and liabilities comprise cash, tax and operational receivables and liabilities.

# Note 8 Fair value measurement

## Accounting policy

All assets and liabilities presented as Equities, Bonds, Unlisted real estate, Unlisted infrastructure, Financial derivatives, Secured lending and borrowing, Deposits in banks, Withholding tax receivable, Deferred tax and Cash collateral posted and received are measured at fair value through profit or loss.

Fair value, as defined by IFRS 13 Fair value measurement, is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

### 1. Introduction

Fair value for the majority of assets and liabilities is based on quoted market prices or observable market inputs. If the market is not active, fair value is established using standard valuation techniques. Estimating fair value can be complex and requires the use of judgement, in particular when observable inputs are not available. This valuation risk is addressed by the control environment in Norges Bank Investment Management, which is described in section 6 of this note.

### 2. The fair value hierarchy

All assets and liabilities measured at fair value are classified in the three categories in the fair value hierarchy presented in table 8.1. The classification is determined by the observability of the market inputs used in the fair value measurement:

- Level 1 comprises assets that are valued based on unadjusted quoted prices in active markets. An active market is defined as a market in which transactions take place with sufficient frequency and volume to provide pricing information on an ongoing basis.
- Assets and liabilities classified as Level 2 are valued using models with market inputs that are either directly or indirectly observable. Inputs are considered observable when they are developed using market data reflecting actual events and transactions.
- Assets classified as Level 3 are valued using models with significant use of unobservable inputs. Inputs are considered to be unobservable when market data is not available, and the input is developed using the best available information on the assumptions that market participants would use when pricing the asset.

An overview of models and valuation techniques with their respective observable and unobservable inputs, categorised by type of instrument, is provided in section 4 of this note.

## Significant estimate

Level 3 investments consist of instruments held at fair value that are not traded or quoted in active markets. Fair value is determined using valuation techniques that use models with significant use of unobservable inputs. A considerable degree of judgement is applied in determining the assumptions that market participants would use when pricing the asset or liability, when observable market data is not available.

**Table 8.1** Categorisation of the investment portfolio by level in the fair value hierarchy

| | Level 1 | | Level 2 | | Level 3 | | Total | |
|---|---|---|---|---|---|---|---|---|
| Amounts in NOK million | 31.12.2021 | 31.12.2020 | 31.12.2021 | 31.12.2020 | 31.12.2021 | 31.12.2020 | 31.12.2021 | 31.12.2020 |
| **Equities** | **8 849 354** | **7 932 488** | **37 716** | **43 424** | **1 349** | **597** | **8 888 419** | **7 976 509** |
| Government bonds | 1 494 936 | 1 319 168 | 419 912 | 204 818 | - | - | 1 914 848 | 1 523 986 |
| Government-related bonds | 278 345 | 235 974 | 89 495 | 76 791 | - | - | 367 840 | 312 765 |
| Inflation-linked bonds | 177 457 | 153 784 | 18 422 | 16 181 | - | - | 195 879 | 169 965 |
| Corporate bonds | 674 632 | 591 372 | 73 750 | 110 816 | 7 | 28 | 748 389 | 702 216 |
| Securitised bonds | 162 737 | 128 141 | 29 211 | 27 268 | - | - | 191 948 | 155 409 |
| **Total bonds** | **2 788 107** | **2 428 439** | **630 790** | **435 874** | **7** | **28** | **3 418 903** | **2 864 341** |
| Financial derivatives (assets) | 246 | 76 | 7 633 | 2 471 | - | 4 | 7 879 | 2 551 |
| Financial derivatives (liabilities) | - | - | -9 055 | -7 619 | - | - | -9 055 | -7 619 |
| **Total financial derivatives** | **246** | **76** | **-1 422** | **-5 148** | **-** | **4** | **-1 176** | **-5 068** |
| **Unlisted real estate** | **-** | **-** | **-** | **-** | **310 134** | **272 507** | **310 134** | **272 507** |
| **Unlisted infrastructure** | **-** | **-** | **-** | **-** | **14 287** | **-** | **14 287** | **-** |
| Other (assets)[1] | - | - | 340 634 | 224 533 | - | - | 340 634 | 224 533 |
| Other (liabilities)[2] | - | - | -631 651 | -419 059 | - | - | -631 651 | -419 059 |
| **Total** | **11 637 707** | **10 361 003** | **376 067** | **279 623** | **325 777** | **273 136** | **12 339 549** | **10 913 762** |
| **Total (percent)** | **94.3** | **94.9** | **3.1** | **2.6** | **2.6** | **2.5** | **100.0** | **100.0** |

[1] Other (assets) consists of the balance sheet lines Deposits in banks, Secured lending, Cash collateral posted, Unsettled trades (assets), Withholding tax receivable and Other assets.
[2] Other (liabilities) consists of the balance sheet lines Secured borrowing, Cash collateral received, Unsettled trades (liabilities), Deferred tax and Other liabilities.

The majority of the total portfolio is priced based on observable market prices. At the end of 2021, 97.4 percent of the portfolio was classified as Level 1 or 2, which is a marginal decrease compared to year-end 2020. Movements between levels in the fair value hierarchy are described in section 3 of this note.

### Equities

Measured as a share of total value, virtually all equities (99.56 percent) are valued based on official closing prices from stock exchanges and are classified as Level 1. A small share of equities (0.42 percent) are classified as Level 2. These are mainly equities for which trading has recently been suspended, or illiquid securities that are not traded daily. For a few securities (0.02 percent) that are not listed, or where trading has been suspended and an adjustment has been applied to the last traded price based on company-specific factors, unobservable inputs are used to a significant extent in the fair value measurement. These holdings are therefore classified as Level 3.

### Bonds

The majority of bonds (81.55 percent) have observable, executable market quotes in active markets and are classified as Level 1. The share of the bond portfolio classified as Level 2 amounts to 18.45 percent. These are securities that do not have a sufficient number of observable quotes or that are priced based on comparable liquid bonds. An insignificant share of bond holdings that do not have observable quotes are classified as Level 3, since the valuation is based on significant use of unobservable inputs.

### Unlisted real estate

All unlisted real estate investments are classified as Level 3, since models are used to value the underlying assets and liabilities with extensive use of unobservable market inputs. All unlisted real estate investments are measured at the value determined by external valuers. Exceptions to this policy are newly acquired properties where the purchase price, excluding transaction costs, is normally considered to be the best estimate of fair value, or where there are indications that external valuation reports do not reflect fair value and adjustments to valuations are therefore warranted.

### Unlisted renewable energy infrastructure

The first investment in unlisted renewable energy infrastructure was completed on 31 May 2021. See note 7 Unlisted renewable energy infrastructure for further information. Investments in unlisted infrastructure are classified as Level 3, since models are used to value the underlying assets and liabilities with extensive use of unobservable market inputs.

Investments in unlisted infrastructure are measured at the value determined by external valuers. Exceptions to this policy are newly acquired infrastructure assets where the purchase price, excluding transaction costs, is normally considered to be the best estimate of fair value, or where there are indications that external valuation reports do not reflect fair value and adjustments to valuations are therefore warranted.

### Financial derivatives

Some equity derivatives (rights and warrants) that are actively traded on exchanges are classified as Level 1. The majority of derivatives are classified as Level 2, as the valuation of these is based on standard models using observable market inputs. Certain derivatives are valued based on models with significant use of unobservable inputs and are classified as Level 3.

Other assets and liabilities are classified as Level 2.

## 3. Movements between the levels in the fair value hierarchy

**Accounting policy**

Transfers between levels in the fair value hierarchy are deemed to have occurred at the beginning of the reporting period.

### Reclassifications between Level 1 and Level 2

The share of equities classified as Level 1 is virtually unchanged compared to year-end 2020. There have been no significant reclassifications of equities between Level 1 and Level 2.

The share of bonds classified as Level 2 has increased by 3.2 percentage points compared to year-end 2020. The increase is mainly due to the purchase of government bonds classified as Level 2 just prior to year-end, of NOK 214 543 million. This impact is partly offset by a net reclassification from Level 2 to Level 1 of NOK 17 490 million, due to improved liquidity. The reclassified holdings mainly consist of corporate bonds denominated in US dollar.

**Table 8.2** Changes in Level 3 holdings

| Amounts in NOK million | 01.01.2021 | Pur-chases | Sales | Settle-ments | Net gain/loss | Transferred into Level 3 | Transferred out of Level 3 | Foreign exchange gain/loss | 31.12.2021 |
|---|---|---|---|---|---|---|---|---|---|
| Equities | 597 | 908 | -16 | - | -327 | 242 | -68 | 13 | 1 349 |
| Bonds | 28 | - | - | - | -22 | - | - | 1 | 7 |
| Financial derivatives (assets) | 4 | - | - | - | - | - | -4 | - | - |
| Unlisted real estate[1] | 272 507 | 7 056 | - | - | 29 723 | - | - | 849 | 310 134 |
| Unlisted infrastructure[1] | - | 13 375 | - | - | 1 118 | - | - | -207 | 14 287 |
| **Total** | **273 136** | **21 339** | **-16** | **-** | **30 492** | **242** | **-72** | **656** | **325 777** |

| Amounts in NOK million | 01.01.2020 | Pur-chases | Sales | Settle-ments | Net gain/loss | Transferred into Level 3 | Transferred out of Level 3 | Foreign exchange gain/loss | 31.12.2020 |
|---|---|---|---|---|---|---|---|---|---|
| Equities | 816 | 16 | -18 | -8 | -195 | 75 | -70 | -18 | 597 |
| Bonds | 16 | - | -1 | 14 | -2 | - | - | - | 28 |
| Financial derivatives (assets) | 3 | - | -3 | - | 4 | - | - | - | 4 |
| Unlisted real estate[1] | 264 538 | 15 997 | - | - | -9 392 | - | - | 1 363 | 272 507 |
| **Total** | **265 373** | **16 013** | **-22** | **6** | **-9 585** | **75** | **-70** | **1 345** | **273 136** |

[1] Purchases represent the net cash flow to investments in unlisted real estate and unlisted infrastructure, as presented in the statement of cash flows.

The share of the portfolio classified as Level 3 was 2.6 percent at the end of 2021, an increase from 2.5 percent at year-end 2020. The GPFG's aggregate holdings in Level 3 amounted to NOK 325 777 million at year-end 2021, an increase of NOK 52 641 million compared to year-end 2020. The increase is mainly due to investments in unlisted real estate which are all classified as Level 3, as well as the first investment in unlisted infrastructure.

Investments in unlisted real estate amounted to NOK 310 134 million at year-end 2021, an increase of NOK 37 627 million compared to year-end 2020. The increase is mainly due to unrealised gains and new investments.

## 4. Valuation techniques

Norges Bank Investment Management has defined hierarchies for which price sources are to be used in the valuation. Holdings that are included in the benchmark indices are normally valued in accordance with prices from the index providers, while the remaining holdings of equities and bonds are valued almost exclusively using prices from other reputable external price providers. For equities and derivatives traded in active markets (Level 1), the close price is used. For bonds traded in active markets, the bid price is generally used. Market activity and volumes are monitored using several price sources that provide access to market prices, quotes and transactions at the measurement date.

The next section sets out the valuation techniques used for instruments classified as Level 2 and Level 3 in the fair value hierarchy. Furthermore, the most significant observable and unobservable inputs used in the valuation models are described.

### Unlisted real estate (Level 3)

The fair value of unlisted real estate is determined as the sum of the underlying assets and liabilities as presented in note 6 Unlisted real estate. Assets and liabilities consist mainly of properties and external debt. Properties are valued at each reporting date by external certified and independent valuation specialists using valuation models. Valuation of properties is inherently predisposed to significant forward-looking judgements. These include key assumptions and estimates with respect to each individual property type, location, future revenue streams and relevant yields. These assumptions represent primarily unobservable inputs and Unlisted real estate is therefore classified as Level 3 in the fair value hierarchy. Estimates used reflect recent comparable market transactions of properties with a similar location, condition and quality.

Valuation of commercial real estate is based on variations of discounted cash flow models.

Yields and assumptions regarding expected future cash flows are the most important inputs in the valuation models. Expected future cash flows are affected by changes in assumptions related to, but not limited to:

- Market rental values and market rental value growth
- Expected inflation (market, consumer price index, costs, etc.)
- Renewal probabilities, void periods, operating costs and capital costs
- Tenant default probability

Future cash flows are valued with a combination of capitalisation and discount rates. These take into account a range of factors reflecting the specific investment, including specific asset level characteristics, comparable market transactions, the local and global economic environment and forecasts for the future.

### Unlisted renewable energy infrastructure (Level 3)

The fair value of unlisted infrastructure is determined as the sum of the underlying assets and liabilities as presented in note 7 Unlisted renewable energy infrastructure, which mainly consist of wind farm assets. At year-end, the fund had only one investment in this asset class, with no collateralised debt. This investment is valued by an external, independent valuation specialist using a bespoke valuation model. Valuation of unlisted infrastructure is inherently predisposed to significant forward-looking judgements. These include key assumptions and estimates with respect to each individual asset type, location, future revenue streams and relevant discount rates. These assumptions represent primarily unobservable inputs and Unlisted infrastructure is therefore classified as Level 3 in the fair value hierarchy.

Discount rates and assumptions regarding expected future revenue streams (power prices) are the most important inputs in the valuation models. Power prices are forecasted by independent, energy market forecasters.

Forecasted future cash flows are discounted by the external valuer using a financial model. The model takes into account estimates of risk premiums both for the market in general and for the specific infrastructure assets. In addition, the external valuer also compares this value with value estimates calculated using market multiples (trading factors from similar companies) and transaction multiples (metrics from recent comparable transactions), before determining the final estimate of fair value.

### Equities (Level 2 and Level 3)

Equities that are valued based on models with observable inputs provided by vendors, are classified as Level 2 in the fair value hierarchy. These holdings are not traded in active markets and include listed shares in companies where trading has been suspended. The valuation models take into account various observable market inputs such as comparable equity quotes, last traded price and volume.

Holdings in Level 3 consist of equities that are not listed or have been suspended from trading, where the valuation models use unobservable inputs to a significant extent. For equities that are suspended from trading, the value is adjusted down compared to last-traded price, based on an assessment of company-specific factors. For equities that are not listed, an adjustment for liquidity risk is applied.

Valuation models for these holdings take into account unobservable inputs such as historical volatility, company performance and analysis of comparable companies.

### Bonds (Level 2 and Level 3)

Bonds classified as Level 2 are valued using observable inputs from comparable issues, as well as direct indicative or executable quotes. These holdings usually consist of less liquid bonds than those classified as Level 1, i.e. where there is no trading volume of binding offers and a low volume of indicative quotes at the measurement date.

Bonds classified as Level 3 are valued based on models using unobservable inputs such as probability for future cash flows and spreads to reference curves. These holdings include defaulted and highly illiquid bonds.

### Financial derivatives (Level 2 and Level 3)

Foreign exchange derivatives consist mainly of foreign exchange forward contracts, and are valued using industry standard models which predominantly use observable market data inputs such as forward rates.

Interest rate derivatives, which mainly consist of interest rate swaps, are valued using industry standard models with predominantly observable market data inputs such as interest from traded interest rate swaps.

Equity derivatives and credit derivatives, are mainly valued based on prices provided by vendors according to the price hierarchy. In some cases where an equity derivative is not traded, inputs such as conversion factors, subscription price and strike price are utilised to value the instruments.

## 5. Sensitivity analysis for Level 3 holdings

The valuation of holdings in Level 3 involves the use of judgement when determining the assumptions that market participants would use when observable market data is not available. In the sensitivity analysis for Level 3 holdings, the effect of using reasonable alternative assumptions is shown.

**Table 8.3** Additional specification Level 3 and sensitivities

| Amounts in NOK million | Key assumption | Change in key assumption | Specification of Level 3 holdings per 31.12.2021 | Sensitivities 31.12.2021 | | Specification of Level 3 holdings per 31.12.2020 | Sensitivities 31.12.2020 | |
|---|---|---|---|---|---|---|---|---|
| | | | | Unfavorable changes | Favorable changes | | Unfavorable changes | Favorable changes |
| **Equities** | Suspension adjustment | 20.0 percent | **1 349** | **-270** | **270** | **597** | **-119** | **119** |
| **Total bonds** | Probability of future cash flows[1] | 10.0 percent | **7** | **-1** | **1** | **28** | **-3** | **3** |
| **Financial derivatives (assets)** | Other | | **-** | **-** | **-** | **4** | **-4** | **-** |
| **Unlisted real estate** | Yield | 0.2 percentage point | | -15 219 | 17 050 | | -12 708 | 14 864 |
| | Market rent | 2.0 percent | | -5 253 | 5 253 | | -4 401 | 4 383 |
| | | | **310 134** | **-20 472** | **22 302** | **272 507** | **-17 109** | **19 247** |
| **Unlisted infrastructure** | Discount rate | 0.25 percentage point | | -385 | 404 | | - | - |
| | Power price forecast | 5.0 percent | | -435 | 438 | | - | - |
| | | | **14 287** | **-820** | **843** | **-** | **-** | **-** |
| **Total** | | | **325 777** | **-21 563** | **23 416** | **273 136** | **-17 235** | **19 369** |

[1] Holdings consist mainly of defaulted bonds.

Unlisted real estate investments constitute the vast majority of holdings classified as Level 3. Changes in key assumptions can have a material effect on the valuation of unlisted real estate investments. A number of key assumptions are used, of which yields and growth forecasts for future market rents are the assumptions that have the largest impact when estimating property values. This is illustrated in the sensitivity analysis by using other reasonable alternative assumptions for yield and market rents. The sensitivity analysis is based on a statistically relevant sample that is representative for the unlisted real estate portfolio, and reflects both favourable and unfavourable changes.

In an unfavourable outcome, an increase in the yield of 0.2 percentage point, and a reduction in market rents of 2 percent would result in a decrease in value of the unlisted real estate portfolio of approximately NOK 20 472 million or 6.6 percent (6.3 percent at year-end 2020). In a favourable outcome, a reduction in the yield of 0.2 percentage point and an increase in market rents of 2 percent would result in an increase in value of the unlisted real estate portfolio of approximately NOK 22 302 million or 7.2 percent (7.1 percent at year-end 2020). The isolated effects of changes in yields and future market rents are presented in table 8.3.

The sensitivity analysis for unlisted infrastructure investments will be adapted to each individual investment. A number of key assumptions are used, of which discount rates and future power prices are the assumptions that have the largest impact when estimating values. This is illustrated in the sensitivity analysis by using other reasonable alternative assumptions for discount rates and future power prices.

In an unfavourable outcome, an increase in the discount rate of 0.25 percentage point, and a reduction in power prices of 5 percent would result in a decrease in value of unlisted infrastructure of approximately NOK 820 million or 5.7 percent. In a favourable outcome, a reduction in the discount rate of 0.25 percentage point and an increase in power prices of 5 percent would result in an increase in value of unlisted infrastructure of approximately NOK 843 million or 5.9 percent. The isolated effects of changes in discount rates and power prices are presented in table 8.3.

## 6. Control environment

The control environment for fair value measurement of financial instruments and investments in unlisted real estate and unlisted infrastructure is organised around a formalised and documented valuation policy and guidelines, supported by work and control procedures.

The valuation environment has been adapted in accordance with market standards and established valuation practices. This is implemented in practice through daily valuation of all holdings, except for investments in unlisted real estate and unlisted infrastructure, where valuations are performed quarterly. For unlisted real estate, the quarterly valuations are performed by external valuers. For unlisted infrastructure, external valuers perform the valuations at the end of the second and fourth quarters, while the internal valuation department performs the valuations at the end of the first and third quarters. These processes are scalable to market changes and are based on internal and external data solutions.

All holdings and investments are generally valued by external, independent price providers. These have been selected based on analyses performed by the departments responsible for valuation.

Price providers are monitored on an ongoing basis through regular discussions, controls and price challenges for individual securities. For a large portion of holdings, prices from independent price providers are based on quoted market prices. For holdings that are not sufficiently liquid for valuation to be based on quoted prices, widely recognised models are used. Observable inputs are used where possible, but unobservable inputs are used in some cases, due to illiquid markets.

The valuation process is subject to numerous daily controls by the valuation departments. These controls are based on defined thresholds and sensitivities, which are monitored and adjusted in accordance with prevailing market conditions. At the end of each month for financial instruments and at the end of each quarter for investments in unlisted real estate and unlisted infrastructure, more extensive controls are performed to ensure the valuations represent fair value in accordance with IFRS. Particular attention is paid to illiquid financial instruments and unlisted investments, i.e. investments deemed to pose valuation challenges. Illiquid instruments are identified using sector and currency classifications, credit rating indicators, bid/ask spreads, and market activity.

Valuation memos and reports are prepared each quarter-end, documenting the results of the controls performed and the most important sources of uncertainty in the valuations.

Prior to the publication of the financial reporting, the valuation documentation is reviewed, significant pricing issues are discussed, and the valuation is approved in the NBIM Leader Group Investment meeting.

# Note 9 Investment risk

## Management mandate for the GPFG

The GPFG is managed by Norges Bank on behalf of the Ministry of Finance, in accordance with section 3, second paragraph of the Government Pension Fund Act and the management mandate for the GPFG issued by the Ministry of Finance.

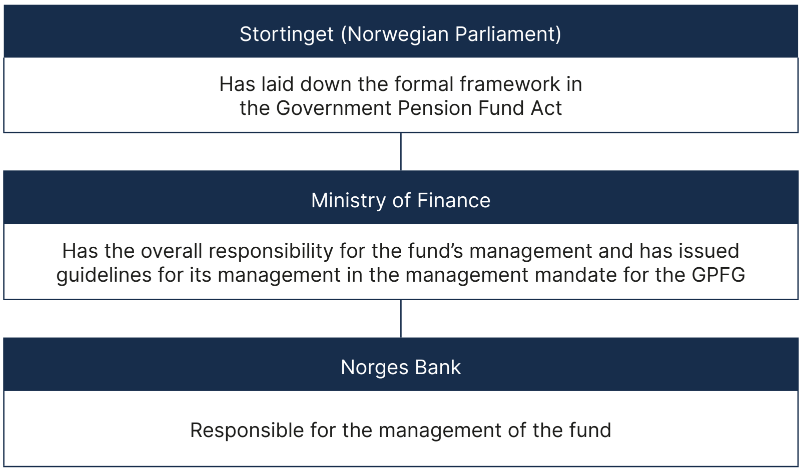
The GPFG shall seek to obtain the highest possible return after costs measured in the currency basket of the actual benchmark index, within the set management limits. The strategic benchmark index set by the Ministry of Finance is divided into two asset classes, equities and bonds, with an allocation of 70 percent to equities and 30 percent to bonds.

The benchmark index for equities is constructed based on the market capitalisation for equities in the countries included in the benchmark. The benchmark index for bonds specifies a defined allocation between government bonds and corporate bonds, with a weight of 70 percent to government bonds and 30 percent to corporate bonds. The currency distribution is a result of these weighting principles.

Investments in unlisted real estate and unlisted renewable energy infrastructure are not defined by the fund's benchmark index. The management mandate sets a maximum allocation to unlisted real estate of 7 percent of the investment portfolio. Investments in unlisted infrastructure can amount to up to 2 percent of the investment portfolio. The fund's allocation to unlisted real estate and unlisted infrastructure is further regulated in the investment mandate issued by the Executive Board of Norges Bank. It is up to Norges Bank to determine the allocation to unlisted real estate and unlisted infrastructure within the limits set in the management mandate, and how it shall be financed.

The fund may not invest in securities issued by Norwegian entities, securities issued in Norwegian kroner, or real estate and infrastructure located in Norway. The fund can also not invest in companies which are excluded following the guidelines for observation and exclusion from the GPFG.

**Chart 9.1 Management mandate for the GPFG**




## Norges Bank's governance structure

The Executive Board of Norges Bank has delegated the responsibility for the management of the GPFG to the Chief Executive Officer (CEO) of Norges Bank Investment Management.

The CEO of Norges Bank Investment Management is authorised through a job description and an investment mandate. The Executive Board has issued principles for, among other things, risk management, responsible investment and compensation to employees in Norges Bank Investment Management. Internationally recognised standards are applied in the areas of valuation and performance measurement as well as management, measurement and control of risk.

Reporting to the Executive Board is carried out monthly, and more extensively on a quarterly basis. The Governor of Norges Bank and the Executive Board are notified immediately in the event of special events or significant matters.

Investment responsibilities within Norges Bank Investment Management are further delegated through investment mandates. Responsibility for processes and personnel is delegated through job descriptions, while process requirements are described in policies and guidelines. The composition of the leader group and the delegation of authority shall ensure segregation of duties between the investment areas, trading, operations, risk management and compliance and control.

**Chart 9.2 Norges Bank's governance structure**


The NBIM Leader Group Investment Meeting complements the delegation of responsibility by advising on investment risk management and the portfolio's investment universe.

Internal risk reporting requirements are set by the CEO of Norges Bank Investment Management through job descriptions in the risk area. Reporting to the CEO is carried out on a daily, weekly and monthly basis. The CEO shall be notified immediately of any special events or serious breaches of the investment mandate.

## Framework for investment risk

In the management mandate for the GPFG, there are a number of limits and restrictions within the combined equity and bond asset class, as well as within the individual asset classes. Investments in unlisted real estate and unlisted renewable energy infrastructure are regulated by a separate management framework in the investment mandate. The framework underpins how a diversified exposure to unlisted real estate and unlisted infrastructure shall be established and managed.

Clear roles and responsibilities are a cornerstone of process design at Norges Bank Investment Management. Changes to investment mandates, the portfolio hierarchy and new counterparties are monitored and require approval by the Chief Risk Officer (CRO), or a person authorised by the CRO.

The Executive Board's principles for risk management are further described through policies and guidelines. Responsibility for effective processes related to risk management is delegated to the CRO and the Chief Corporate Governance & Compliance Officer.

Risk management is defined as management of market risk, credit risk, counterparty risk, operational risk and risk related to environmental, social and governance factors. The first three items listed are defined as investment risk. The investment area in Norges Bank Investment Management is responsible for managing risk in the portfolio and in individual mandates, while the risk management areas independently measure, manage and report investment risk across the portfolio, at asset class level and other levels within the portfolio that reflect the investment process. Separate risk assessments are required in advance of investments in unlisted real estate and unlisted infrastructure.

**Table 9.1** Investment risk

| Type | Market risk | Credit risk | Counterparty risk |
|---|---|---|---|
| Definition | Risk of loss or a change in the market value of the portfolio, or parts of the portfolio, due to changes in financial market variables, real estate and infrastructure values | Risk of loss due to a bond issuer not meeting its payment obligations | Risk of loss due to counterparty bankruptcy or other events leading to counterparties defaulting |
| Main dimensions | Measured both absolute and relative to the benchmark<br>- Concentration risk<br>- Volatility and correlation risk<br>- Systematic factor risk<br>- Liquidity risk | Measured at single issuer and portfolio levels<br>- Probability of default<br>- Loss given default<br>- Expected Loss | Measured risk exposure by type of position<br>- Securities lending<br>- Unsecured bank deposits and securities<br>- Derivatives including FX contracts<br>- Repurchase and reverse repurchase agreements<br>- Settlement risk towards brokers and long settlement transactions |

### Investment risk - market risk

Norges Bank Investment Management defines market risk as the risk of loss or a change in the market value of the portfolio, or parts of the portfolio, due to changes in financial market variables, as well as real estate and infrastructure values. Market risk for the investment portfolio, both absolute and relative to the benchmark, is measured along the dimensions concentration risk, volatility and correlation risk, systematic factor risk and liquidity risk. For unlisted real estate, this involves measurement of the share of real estate under construction, vacancy, tenant concentration and geographic concentration. For unlisted infrastructure, this involves measurement of exposure towards different sectors, share of income from government subsidies, development exposure, and geographic concentration. Market risk is actively taken to generate investment returns in line with the objectives of the investment mandates.

### Investment risk – credit risk

Norges Bank Investment Management defines credit risk as the risk of loss resulting from a bond issuer defaulting on their payment obligations. Credit risk is measured both in relation to single issuers, where the probability of default and loss given default are taken into account, and at portfolio level, where the correlation of credit losses between instruments and issuers is taken into account. Credit risk is actively taken to generate investment returns in line with the objectives of the investment mandates.

### Investment risk – counterparty risk

Norges Bank Investment Management defines counterparty risk as the risk of loss due to counterparty bankruptcy or other events leading to counterparties defaulting. Counterparties are necessary to ensure effective liquidity management and effective trading and management of market and credit risk. Counterparty risk also arises in connection with securities lending and with the management of the equity and bond portfolios, as well as the real estate and infrastructure portfolios. Counterparty risk is controlled and limited to the greatest extent possible, given the investment strategy.

### Risk management process

Norges Bank Investment Management employs several measurement methodologies, processes and systems to control investment risk. Robust and widely recognised risk management systems and processes are complemented by internally developed measurement methodologies and processes.

## Market risk

Norges Bank Investment Management measures market risk in both absolute terms for the actual portfolio, and the relative market risk for holdings in the GPFG.

Continuous monitoring, measurement and assessment of market risk is performed along multiple risk dimensions, employing a number of methodologies and approaches. Combining different and complementary risk measures provides a better insight into the risk profile of the holdings in the GPFG.

### Concentration risk

Concentration analysis complements statistical risk estimation by describing the concentration of a single exposure or a group of exposures. More concentrated portfolios tend to contribute to less diversification. Concentration is measured across different dimensions depending on the asset class, including country, currency, sector, issuer and company exposure.

The portfolio is invested across several asset classes, countries and currencies as shown in table 9.2.

Table 9.2 Allocation by asset class, country and currency

| | Market value in percent by country and currency[1] | | | | Market value in percent by asset class | | Assets minus liabilities excluding management fee[2] | |
|---|---|---|---|---|---|---|---|---|
| Asset class | Market | 31.12.2021 | Market | 31.12.2020 | 31.12.2021 | 31.12.2020 | 31.12.2021 | 31.12.2020 |
| Equities | **Developed** | **89.5** | **Developed** | **88.0** | | | | |
| | US | 44.9 | US | 41.7 | | | | |
| | Japan | 7.0 | Japan | 8.2 | | | | |
| | UK | 7.0 | UK | 7.3 | | | | |
| | France | 4.9 | France | 4.8 | | | | |
| | Switzerland | 4.7 | Switzerland | 4.6 | | | | |
| | Total other | 20.9 | Total other | 21.4 | | | | |
| | **Emerging** | **10.5** | **Emerging** | **12.0** | | | | |
| | China | 3.8 | China | 5.3 | | | | |
| | Taiwan | 2.3 | Taiwan | 2.1 | | | | |
| | India | 1.6 | India | 1.3 | | | | |
| | Brazil | 0.5 | Brazil | 0.6 | | | | |
| | South Africa | 0.4 | South Africa | 0.5 | | | | |
| | Total other | 2.0 | Total other | 2.2 | | | | |
| **Total equities** | | | | | **71.95** | **72.80** | **8 878 464** | **7 945 475** |
| Fixed income | **Developed** | **99.6** | **Developed** | **97.2** | | | | |
| | US dollar | 50.3 | US dollar | 47.7 | | | | |
| | Euro | 27.6 | Euro | 28.1 | | | | |
| | Japanese yen | 7.9 | Japanese yen | 7.6 | | | | |
| | British pound | 4.9 | British pound | 4.9 | | | | |
| | Canadian dollar | 3.8 | Canadian dollar | 3.6 | | | | |
| | Total other | 5.0 | Total other | 5.2 | | | | |
| | **Emerging** | **0.4** | **Emerging** | **2.8** | | | | |
| | Brazilian real | 0.1 | South Korean won | 0.8 | | | | |
| | Chilean peso | 0.1 | Mexican peso | 0.7 | | | | |
| | Colombian peso | 0.0 | Russian ruble | 0.3 | | | | |
| | Polish zloty | 0.0 | Indonesian rupiah | 0.2 | | | | |
| | South Korean won | 0.0 | Columbian peso | 0.2 | | | | |
| | Total other | 0.1 | Total other | 0.7 | | | | |
| **Total fixed income** | | | | | **25.41** | **24.70** | **3 135 259** | **2 695 184** |
| Unlisted real estate | US | 50.1 | US | 46.8 | | | | |
| | UK | 17.8 | France | 19.3 | | | | |
| | France | 17.1 | UK | 18.1 | | | | |
| | Germany | 3.9 | Germany | 4.0 | | | | |
| | Switzerland | 3.6 | Switzerland | 3.9 | | | | |
| | Total other | 7.4 | Total other | 7.9 | | | | |
| **Total unlisted real estate** | | | | | **2.52** | **2.50** | **311 538** | **273 109** |
| **Total unlisted infrastructure** | | | | | **0.12** | **-** | **14 288** | **-** |

[1] Market value in percent per country and currency includes derivatives and cash.
[2] At year-end 2020, a net liability of NOK 6 million related to future investments in unlisted infrastructure was not allocated to the asset classes specified in the table.

At the end of 2021, the equity portfolio's share of the fund was 72.0 percent, down from 72.8 percent at year-end 2020. The fixed-income portfolio's share of the fund was 25.4 percent, up from 24.7 percent at year-end 2020. The share of the fixed-income portfolio invested in emerging market currencies fell from 2.8 percent at the end of 2020 to 0.4 percent at year-end 2021. Unlisted real estate amounted to 2.5 percent of the fund at year-end, compared to 2.5 percent at year-end 2020. Unlisted infrastructure made up 0.1 percent of the fund at year-end.

For equity investments, concentration in the portfolio is further measured by sector. Table 9.3 shows the composition of the equity asset class by sector.

**Table 9.3** Allocation of equity investments by sector[1], percent

| Sector | 31.12.2021 | 31.12.2020[2] |
|---|---|---|
| Technology | 20.5 | 19.0 |
| Consumer discretionary | 14.6 | 15.8 |
| Financials | 14.4 | 14.2 |
| Industrials | 13.4 | 13.7 |
| Health care | 11.4 | 11.9 |
| Real estate | 6.3 | 5.3 |
| Consumer staples | 6.0 | 6.5 |
| Basic materials | 4.4 | 4.4 |
| Energy | 3.7 | 3.0 |
| Telecommunications | 3.2 | 3.7 |
| Utilities | 2.4 | 2.9 |

1 Does not sum up to 100 percent because cash and derivatives are not included.
2 In 2021, FTSE changed its ICB sector classification. Comparative amounts have been restated to conform with current period presentation.

The GPFG has substantial investments in government-issued bonds. Table 9.4 shows the largest holdings in bonds issued by governments. These include government bonds issued in local and foreign currency and inflation-linked bonds issued in local currency.

**Table 9.4** Largest holdings within the segment government bonds

| Amounts in NOK million | Market value 31.12.2021 |
|---|---|
| US | 877 936 |
| Japan | 370 519 |
| Singapore | 145 217 |
| Germany | 121 399 |
| UK | 93 596 |
| France | 74 825 |
| Italy | 63 741 |
| Canada | 55 754 |
| Australia | 45 988 |
| Spain | 45 547 |

| Amounts in NOK million | Market value 31.12.2020 |
|---|---|
| US | 717 935 |
| Japan | 294 195 |
| Germany | 138 176 |
| UK | 87 746 |
| France | 72 442 |
| Spain | 51 345 |
| Australia | 41 065 |
| South Korea | 36 045 |
| Italy | 31 261 |
| Canada | 31 242 |

The portfolio is also invested in companies which issue both equities and bonds. Table 9.5 shows the portfolio's largest holdings of non-government issuers, including both bond and equity holdings. Covered bonds issued by financial institutions and debt issued by other underlying companies are included in the bonds column.

**Table 9.5** Largest holdings excluding sovereigns, both bonds and equities

| Amounts in NOK million, 31.12.2021 | Sector | Equities | Bonds | Total |
|---|---|---|---|---|
| Apple Inc | Technology | 216 952 | 7 094 | 224 046 |
| Microsoft Corp | Technology | 210 468 | 1 368 | 211 836 |
| Alphabet Inc | Technology | 144 417 | 1 809 | 146 226 |
| Amazon.com Inc | Consumer discretionary | 121 160 | 6 639 | 127 799 |
| Nestlé SA | Consumer staples | 89 082 | 1 775 | 90 857 |
| Meta Platforms Inc | Technology | 83 016 | - | 83 016 |
| Taiwan Semiconductor Manufacturing Co Ltd | Technology | 72 171 | 1 176 | 73 347 |
| Tesla Inc | Consumer discretionary | 68 097 | - | 68 097 |
| Roche Holding AG | Health care | 65 283 | 1 453 | 66 736 |
| ASML Holding NV | Technology | 64 496 | 252 | 64 748 |

| Amounts in NOK million, 31.12.2020 | Sector[1] | Equities | Bonds | Total |
|---|---|---|---|---|
| Apple Inc | Technology | 185 339 | 8 382 | 193 721 |
| Microsoft Corp | Technology | 147 893 | 1 722 | 149 616 |
| Amazon.com Inc | Consumer discretionary | 124 334 | 5 970 | 130 304 |
| Alphabet Inc | Technology | 97 343 | 2 614 | 99 957 |
| Nestlé SA | Consumer staples | 77 028 | 2 503 | 79 531 |
| Taiwan Semiconductor Manufacturing Co Ltd | Technology | 66 089 | 1 784 | 67 872 |
| Facebook Inc | Technology | 67 424 | - | 67 424 |
| Roche Holding AG | Health care | 59 125 | 424 | 59 549 |
| Samsung Electronics Co Ltd | Technology | 56 598 | - | 56 598 |
| Alibaba Group Holding Ltd | Consumer discretionary | 55 559 | 439 | 55 998 |

[1] In 2021, FTSE changed its ICB sector classification. Sector classifications have been restated to conform with current period presentation.

Table 9.6 shows the composition of the unlisted real estate asset class by sector.

**Table 9.6** Distribution of unlisted real estate investments by sector, percent

| Sector | 31.12.2021 | 31.12.2020 |
|---|---|---|
| Office | 54.6 | 57.2 |
| Retail | 12.3 | 16.4 |
| Logistics | 32.4 | 26.0 |
| Other | 0.7 | 0.5 |
| **Total** | **100.0** | **100.0** |

### Volatility and correlation risk

Norges Bank Investment Management uses models to quantify the risk of fluctuations in value for all or parts of the portfolio. Volatility is a standard risk measure based on the statistical concept of standard deviation, which takes into account the correlation between different investments in the portfolio. This risk measure gives an estimate of how much one can expect the portfolio's value to change or fluctuate during the course of a year, based on market conditions over the past three years. In two of three years, the portfolio return is expected to be within the negative and positive value of the estimated volatility. Expected volatility can be expressed in terms of the portfolio's absolute or relative risk. Norges Bank Investment Management uses the same model both for portfolio risk and for relative volatility.

All the fund's investments are included in the calculation of expected relative volatility and are measured against the fund's benchmark index consisting of global equity and bond indices.

The modelling of unlisted investments is challenging due to few or no historical prices. For investments in unlisted real estate, the exposure to a group of relevant risk factors is mapped to the model framework in MSCI's Barra Private Real Estate 2 (PRE2) model. These are decided by key attributes such as location and property type. The model uses time series of valuations and actual transactions as a starting point, but also includes listed real estate share prices to establish representative, daily time series. For investments in unlisted infrastructure, the starting point is a combination of time series available in the existing framework for listed markets. The exposure to generic, listed risk factors is mapped for each project based on attributes such as share of contractually agreed prices, project lifetime, project phase, sector, country, and the quality of counterparties.

The risk model from MSCI then uses these factors for unlisted investments in the same way as ordinary equity and fixed-income risk factors, to calculate expected absolute and relative volatility, as well as expected shortfall for the fund's investments.

### Calculation of expected volatility

Expected volatility for the portfolio, and volatility relative to the benchmark index, is estimated by using a parametric calculation method based on current investments. The model weights weekly return data equally over a sampling period of three years.

Tables 9.7 and 9.8 present risk both in terms of the portfolio's absolute risk and the relative risk.

**Table 9.7** Portfolio risk, expected volatility, percent

| | Expected volatility, actual portfolio | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 31.12.2021 | Min 2021 | Max 2021 | Average 2021 | 31.12.2020 | Min 2020 | Max 2020 | Average 2020 |
| Portfolio | 10.3 | 10.1 | 10.7 | 10.5 | 10.4 | 7.7 | 10.5 | 9.4 |
| Equities | 14.1 | 14.0 | 14.7 | 14.4 | 14.3 | 9.9 | 14.4 | 12.9 |
| Fixed income | 10.1 | 9.7 | 10.1 | 9.8 | 9.7 | 6.9 | 9.7 | 8.7 |
| Unlisted real estate | 11.7 | 10.5 | 11.7 | 10.8 | 10.5 | 8.7 | 10.7 | 10.1 |
| Unlisted infrastructure | 13.1 | 9.7 | 13.1 | 11.2 | - | - | - | - |

**Table 9.8** Relative risk measured against the fund's reference index, expected relative volatility, basis points

| | Expected relative volatility | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 31.12.2021 | Min 2021 | Max 2021 | Average 2021 | 31.12.2020 | Min 2020 | Max 2020 | Average 2020 |
| Portfolio | 50 | 42 | 56 | 47 | 56 | 32 | 58 | 49 |

Risk measured as expected volatility indicates an expected annual value fluctuation in the fund of 10.3 percent, or approximately NOK 1 270 billion at the end of 2021, compared to 10.4 percent at year-end 2020. Expected volatility for the equity portfolio was 14.1 percent at year-end, down from 14.3 percent at year-end 2020, while expected volatility for the fixed-income portfolio was 10.1 percent, up from 9.7 percent at year-end 2020.

The management mandate for the GPFG specifies that expected relative volatility for the fund shall not exceed 1.25 percentage points. The measurement of risk and follow-up of the limit is performed based on the risk model described above. The fund's expected relative volatility was 50 basis points at the end of the year, down from 56 basis points at year-end 2020. The decrease in the fund's expected relative volatility in 2021 is mainly due to changes in exposures.

In addition to the above-mentioned model, other risk models are employed that capture the market dynamics of recent periods to a greater extent, as well as models that measure tail risk.

Expected shortfall is a tail risk measure that quantifies the expected loss of a portfolio in extreme market situations. Expected shortfall measured on relative returns provides an estimate of the annual expected relative underperformance versus the benchmark index for a given confidence level. Using historical simulations, relative returns of the current portfolio compared to the benchmark index are calculated on a weekly basis over a sampling period from January 2007 until the end of the last accounting period. The expected shortfall at a 97.5 percent confidence level is then given by the annualised average relative return, measured in the currency basket for the 2.5 percent worst weeks.

The Executive Board has determined that the fund shall be managed in such a way that the annual expected shortfall measured against the benchmark index does not exceed 3.75 percentage points. Expected shortfall is measured and monitored based on the risk model described above. At the end of the year, expected shortfall was 1.52 percentage points, compared to 1.80 percentage points at year-end 2020.

## Calculation of expected shortfall

Expected shortfall for the portfolio, measured against its benchmark index, is estimated using historical simulations based on current investments. The model weights weekly returns equally over a sampling period from January 2007 until the end of the last accounting period, so that the measure can capture extreme market movements. A confidence level of 97.5 percent is used for the calculations.

### Strengths and weaknesses

The strength of these types of risk models is that one can estimate the risk associated with a portfolio across different asset classes, markets, currencies, securities and derivatives, and express this risk as a single numerical value, which takes into account the correlation between different asset classes, securities and risk factors, as well as capturing deviations from a normal distribution.

The model-based risk estimates are based on historical relationships in the markets and are expected to provide reliable forecasts in markets without significant changes in volatility and correlation. Estimates will be less reliable in periods marked by significant changes in volatility and correlation. Calculated volatility gives a point estimate of risk and provides little information on the total risk profile and any tail risk. Annualisation means that it is assumed that volatility and the composition of the portfolio are constant over time. To compensate for these shortcomings, complementary models and methods are employed, such as stress tests and analyses of concentration risk and realised returns.

### Verification of models

Risk models used in estimating and controlling investment risk are continuously evaluated and verified for their ability to estimate risk. The special nature of the investment portfolio and the investment universe, as well as the GPFG's long-term investment horizon, are taken into account when evaluating the models.

## Credit risk

Credit risk is the risk of losses resulting from issuers of bonds defaulting on their payment obligations. Fixed-income instruments in the portfolio's benchmark index are all rated investment grade by one of the major credit rating agencies. Investments in bonds are made based on internal assessments with regards to expected return and risk profile.

**Table 9.9** Bond portfolio specified by credit rating

| Amounts in NOK million, 31.12.2021 | AAA | AA | A | BBB | Lower rating | Total |
|---|---|---|---|---|---|---|
| Government bonds | 1 186 701 | 183 432 | 443 812 | 78 790 | 22 113 | 1 914 848 |
| Government-related bonds | 163 648 | 131 307 | 57 669 | 13 485 | 1 731 | 367 840 |
| Inflation-linked bonds | 132 701 | 45 525 | 6 321 | 11 027 | 305 | 195 879 |
| Corporate bonds | 6 433 | 52 623 | 303 970 | 372 433 | 12 930 | 748 389 |
| Securitised bonds | 162 060 | 27 641 | 1 585 | 661 | - | 191 948 |
| **Total bonds** | **1 651 543** | **440 528** | **813 357** | **476 397** | **37 078** | **3 418 903** |

| Amounts in NOK million, 31.12.2020 | AAA | AA | A | BBB | Lower rating | Total |
|---|---|---|---|---|---|---|
| Government bonds | 854 305 | 187 976 | 366 824 | 90 714 | 24 167 | 1 523 986 |
| Government-related bonds | 126 113 | 132 126 | 42 844 | 10 558 | 1 123 | 312 765 |
| Inflation-linked bonds | 115 868 | 34 692 | 8 332 | 10 749 | 324 | 169 965 |
| Corporate bonds | 6 138 | 49 562 | 287 493 | 349 805 | 9 218 | 702 216 |
| Securitised bonds | 131 871 | 21 800 | 1 202 | 81 | 455 | 155 409 |
| **Total bonds** | **1 234 296** | **426 156** | **706 697** | **461 905** | **35 288** | **2 864 341** |

The market value of the bond portfolio increased to NOK 3 419 billion at year-end 2021, from NOK 2 864 billion at year-end 2020. The share of holdings in corporate bonds was reduced by 2.6 percentage points during the year, to 21.9 percent of the bond portfolio at year-end 2021. The largest decrease was for corporate bonds within the category BBB and A. Government bonds, including inflation-linked bonds, comprised 61.7 percent of the bond portfolio at year-end, an increase of 2.6 percentage points compared to year-end 2020.

The share of bonds with credit rating AAA increased by 5.2 percentage points during the year to 48.3 percent of the total bond portfolio at year-end. This increase was mainly due to an increase in the holdings in government bonds in the category AAA. The share of bonds with credit rating BBB decreased by 2.2 percentage points compared to year-end 2020, to 13.9 percent of the total bond portfolio at year-end 2021. This was mainly due to an increase in the value of the overall bond portfolio, since the value of bonds with credit rating BBB remained relatively stable during the year. The share of bonds with credit rating AA decreased by 2.0 percentage points compared to year-end 2020, to 12.9 percent at year-end 2021. The decrease is due to a reduction in government and government-related bond holdings.

The share of bonds in the Lower rating category was reduced to 1.1 percent of the bond portfolio at year-end 2021, from 1.2 percent at year-end 2020. This is mainly due to reduced holdings of government bonds within this category. Defaulted bonds had a market value of NOK 38 million at year-end 2021, compared to NOK 51 million at year-end 2020. Defaulted bonds are grouped under Lower rating.

**Table 9.10** Bond portfolio by credit rating and currency, percent

| 31.12.2021 | AAA | AA | A | BBB | Lower rating | Total |
|---|---|---|---|---|---|---|
| US dollar | 26.8 | 2.0 | 6.5 | 7.4 | 0.3 | 43.0 |
| Euro | 10.0 | 6.0 | 4.3 | 4.9 | 0.2 | 25.3 |
| Japanese yen | - | - | 11.7 | - | - | 11.7 |
| British pound | 0.3 | 2.9 | 0.5 | 0.7 | - | 4.3 |
| Singapore dollar | 4.3 | - | - | - | - | 4.3 |
| Other currencies | 7.0 | 1.9 | 0.8 | 1.0 | 0.6 | 11.4 |
| **Total** | **48.3** | **12.9** | **23.8** | **13.9** | **1.1** | **100.0** |

| 31.12.2020 | AAA | AA | A | BBB | Lower rating | Total |
|---|---|---|---|---|---|---|
| US dollar | 26.1 | 2.2 | 7.4 | 8.3 | 0.2 | 44.2 |
| Euro | 10.3 | 6.1 | 5.2 | 4.8 | 0.2 | 26.5 |
| Japanese yen | - | - | 11.0 | - | - | 11.0 |
| British pound | 0.1 | 3.2 | 0.5 | 0.7 | - | 4.6 |
| Canadian dollar | 2.6 | 0.9 | 0.2 | - | - | 3.6 |
| Other currencies | 4.0 | 2.5 | 0.5 | 2.4 | 0.9 | 10.2 |
| **Total** | **43.1** | **14.9** | **24.7** | **16.1** | **1.2** | **100.0** |

At year-end 2021, investments had been made in purchased credit default swaps with a nominal value of NOK 29.1 billion and sold credit default swaps with a nominal value of NOK 0.4 billion, mainly in the category where the underlying issuers have a high credit rating. There were no credit default swaps in the portfolio at year-end 2020. See table 5.3 in note 5 Holdings of equities, bonds and financial derivatives for further information. When investing in purchased credit default swaps, the credit risk in the bond portfolio is reduced when the portfolio has investments in the same underlying bonds as in the credit default swaps. At year-end 2021, the credit risk exposure was reduced by NOK 15.7 billion as a result of purchased credit default swaps.

The overall credit quality of the bond portfolio improved slightly during the year.

In addition to credit ratings from credit rating agencies, measurement of credit risk is complemented by two credit risk models, of which one is based on credit ratings and the other is based on observable credit premiums. Both of these methods also take into account the correlation and expected value of bonds in a bankruptcy situation. The models also take into account credit default swaps, and these reduce or increase the credit risk depending on whether credit risk is bought or sold. The models are used for risk measurement and monitoring of credit risk in the fixed-income portfolio.

## Counterparty risk

Counterparties are necessary to trade in the markets and to ensure effective management of liquidity, market and credit risk. Exposure to counterparty risk is related to trading in derivatives and foreign exchange contracts, securities lending, and repurchase and reverse repurchase agreements. Counterparty risk also arises from unsecured bank deposits and in connection with the daily liquidity management of the fund, as well as purchases and sales of unlisted real estate and unlisted infrastructure. Furthermore, there is exposure to counterparty risk related to counterparties in the international settlement and custody systems where transactions settle. This can occur both for currency trades and for the purchase and sale of securities. Settlement risk and exposure from trades with a long settlement period are also defined as counterparty risk.

Various counterparties are used to reduce concentration and there are strict requirements for counterparty credit rating. Credit rating requirements are generally higher for counterparties to unsecured deposits in banks than in cases where collateral is received. Changes in counterparty credit ratings are monitored continuously.

Netting agreements are in place for trades in OTC derivatives, currency contracts, as well as repurchase and reverse repurchase agreements, in order to reduce counterparty risk. Many derivatives are also cleared, meaning that the counterparty risk is mainly towards the clearing house instead of banks. Further reduction of counterparty risk is achieved through requirements for collateral for counterparty net positions with a positive market value. For instruments where collateral is used, minimum requirements have been set relating to the credit quality, time to maturity and concentration of the collateral. Netting and collateral agreements are entered into for all approved counterparties for these types of trades.

There are also requirements governing the way real estate and infrastructure transactions are conducted in order to ensure acceptable counterparty risk. Counterparty risk that arises during the acquisition process is analysed in advance of the transaction and requires approval by the CRO. In 2021, 22 real estate transactions were analysed and approved by the CRO through this process, compared to 7 transactions in 2020. For investments in unlisted infrastructure, 1 transaction was analysed and approved through this process. No such approval was given in 2020.

Counterparty risk is also limited by setting exposure limits for individual counterparties. In most instances, the exposure limit is determined by the credit rating of the counterparty, where counterparties with strong credit ratings have a higher limit than counterparties with weaker credit rating. Exposure per counterparty is measured daily against limits set by the Executive Board and the CEO of Norges Bank Investment Management.

The methodologies used to calculate counterparty risk are in accordance with internationally recognised standards. As a rule, the Basel regulations for banks are used for measuring counterparty risk, with certain adjustments based on internal analyses. The risk model calculates the expected counterparty exposure in the event of a counterparty default. The Standardised Approach in the Basel regulations (SA-CCR) is used for derivatives and foreign exchange contracts. The Standardised Approach takes into account collateral received and netting arrangements when calculating counterparty risk.

For repurchase agreements, securities lending transactions executed through an external agent and securities posted as collateral in derivative trades, a method is used that adds a premium to the market value to reflect the position's volatility. When determining counterparty risk exposure for these positions, an adjustment is also made for netting and actual collateral received and posted.

Exposure to counterparty risk is related to counterparties in the settlement and custody systems, both for currency trades and for the purchase and sale of securities. Settlement risk is reduced using the currency settlement system CLS (Continuous Linked Settlement), or by trading directly with the settlement bank. For some currencies, Norges Bank is exposed to settlement risk when the sold currency is delivered to the counterparty before the receipt of currency is confirmed. This type of exposure is included on the line Settlement risk towards brokers and long settlement transactions in table 9.11.

In table 9.11, exposure is broken down by type of activity/instrument associated with counterparty risk.

Total counterparty risk increased to NOK 155.3 billion at year-end 2021, from NOK 117.5 billion at year-end 2020, an increase of 32 percent. The largest increase in counterparty risk exposure came from derivatives, including foreign exchange contracts, due to an increase in activity in these instruments. This increase amounted to NOK 27.4 billion in 2021, and was largest for foreign exchange contracts. Furthermore, there was an increase in counterparty risk for interest rate swaps and credit default swaps. These instruments are cleared, so the counterparty risk is mainly towards the clearing counterpart. There was also an increase in risk exposure from securities lending and repurchase and reverse repurchase agreements at year-end 2021 compared to year-end 2020. This is mainly due to an increase in equities lent and repurchase and reverse repurchase agreements.

Both equities and bonds are lent through the securities lending programme. The risk exposure for the programme increased to NOK 68.5 billion at year-end 2021, from NOK 55.9 billion at year-end 2020. Counterparty risk exposure from securities lending amounted to 44 percent of the fund's total counterparty risk exposure at year-end 2021, compared to 48 percent at year-end 2020.

**Table 9.11** Counterparty risk by type of position

| | Risk exposure | |
|---|---|---|
| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
| Securities lending | 68 494 | 55 928 |
| Derivatives including foreign exchange contracts | 61 144 | 33 784 |
| Unsecured bank deposits[1] and securities | 18 072 | 22 863 |
| Repurchase and reverse repurchase agreements | 7 459 | 4 286 |
| Settlement risk towards brokers and long settlement transactions | 93 | 625 |
| **Total** | **155 262** | **117 487** |

[1] Includes bank deposits in non-consolidated subsidiaries.

Norges Bank's counterparties have a credit rating from independent credit rating agencies or a documented internal credit rating. Credit ratings for counterparties are monitored and complemented by alternative credit risk indicators.

Table 9.12 shows approved counterparties classified by credit rating category. The table also includes brokers that are used when purchasing and selling securities.

**Table 9.12** Counterparties by credit rating[1]

| | Norges Bank's counterparties (excluding brokers) | | Brokers | |
|---|---|---|---|---|
| | 31.12.2021 | 31.12.2020 | 31.12.2021 | 31.12.2020 |
| AAA | 3 | 3 | 1 | 1 |
| AA | 33 | 32 | 33 | 33 |
| A | 61 | 63 | 86 | 83 |
| BBB | 9 | 10 | 33 | 35 |
| BB | 2 | 2 | 21 | 15 |
| B | 0 | 1 | 4 | 7 |
| **Total** | **108** | **111** | **178** | **174** |

[1] The table shows the number of legal entities. The same legal entity can be included as both broker and counterparty.

The number of counterparties and brokers have remained relatively stable during the year. There were 108 counterparties at year-end 2021, compared to 111 at year-end 2020. The number of brokers increased to 178 at year-end 2021, from 174 at year-end 2020. The overall credit quality of brokers and counterparties remained unchanged from year-end 2020.

## Leverage

Leverage may be used to ensure effective management of the investments within the equity and bond portfolios, but not with the aim of increasing the economic exposure to risky assets. The use of leverage is regulated in both the management mandate and the investment mandate. Leverage is the difference between total net exposure and market value of the portfolio. Net exposure is determined by including securities at market value, cash at face value and positions in derivatives by converting them to the underlying exposure. When the exposure is greater than market value, the portfolio is leveraged.

The GPFG's leverage was 1.6 percent for the aggregated equity and bond portfolio at the end of 2021, compared to 1.5 percent at the end of 2020. For investments in unlisted real estate, requirements are set in the investment mandate, limiting the maximum leverage of the portfolio to 35 percent. The unlisted real estate investments had a debt ratio of 6.6 percent at the end of 2021, compared to 6.4 percent at the end of 2020. At year-end 2021, the unlisted infrastructure investments did not have external debt.

## Sale of securities Norges Bank does not own

Sale of securities not owned by Norges Bank (short sales) can only be carried out if there are established borrowing agreements to cover a negative position. Such transactions are rarely undertaken, and no securities had been sold in this manner at year-end 2021.

# Note 10 Tax

## Accounting policy

Norges Bank is exempt from income tax on its operations in Norway, but is subject to taxes in a number of foreign jurisdictions. Tax expense in the income statement represents income taxes that are not reimbursed through local tax laws or treaties, and consists of taxes on dividends, interest income and capital gains related to investments in equities and bonds, tax on fee income from secured lending and taxes in consolidated subsidiaries. The majority of these taxes are collected at source.

Withholding taxes, net of deductions for refundable amounts, are recognised at the same time as the related dividend or interest income. See the accounting policy in note 4 Income/expense from equities, bonds and financial derivatives.

Other income tax, which is not collected at source, is recognised in the income statement in the same period as the related income or gain and presented in the balance sheet as a liability within Other liabilities, until it has been settled. Deferred tax in the balance sheet mainly consists of capital gains tax. Capital gains tax is recognised as a liability based on the expected future payment when the GPFG is in a gain position in the applicable market. No deferred tax asset is presented in the balance sheet when the GPFG is in a loss position, since the recognition criteria are not considered to be met.

Tax incurred in subsidiaries presented in the balance sheet lines Unlisted real estate and Unlisted infrastructure is recognised in the income statement as Income/expense from unlisted real estate and Income/expense from unlisted infrastructure, respectively. Only the tax expense in consolidated subsidiaries is included in the income statement line Tax expense. This is specified in table 10.1 in the line Other.

All uncertain tax positions, such as disputed withholding tax refunds, are assessed each reporting period. The best estimate of the probable reimbursement or payment is recognised in the balance sheet.

Table 10.1 shows tax expense by type of investment and type of tax.

**Table 10.1** Specification tax expense

| Amounts in NOK million, 2021 | Gross income before taxes | Income tax on dividends, interest and fees | Capital gains tax | Other | Tax expense | Net income after taxes |
|---|---|---|---|---|---|---|
| Income/expense from: | | | | | | |
| Equities | 1 593 618 | -5 221 | -3 474 | - | -8 695 | 1 584 923 |
| Bonds | -40 905 | -10 | 13 | - | 3 | -40 902 |
| Secured lending | 3 842 | -186 | - | - | -186 | 3 656 |
| Other | - | - | - | -10 | -10 | - |
| **Tax expense** | | **-5 417** | **-3 460** | **-10** | **-8 887** | |

| Amounts in NOK million, 2020 | Gross income before taxes | Income tax on dividends, interest and fees | Capital gains tax | Other | Tax expense | Net income after taxes |
|---|---|---|---|---|---|---|
| Income/expense from: | | | | | | |
| Equities | 883 788 | -5 409 | -1 847 | - | -7 256 | 876 532 |
| Bonds | 198 080 | -136 | -37 | - | -172 | 197 908 |
| Secured lending | 4 028 | -80 | - | - | -80 | 3 949 |
| Other | - | - | - | -5 | -5 | - |
| **Tax expense** | | **-5 624** | **-1 884** | **-5** | **-7 513** | |

Table 10.2 shows receivables and liabilities recognised in the balance sheet related to tax.

**Table 10.2** Specification balance sheet items related to tax

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| Withholding tax receivable | 3 427 | 2 234 |
| Tax payable[1] | 18 | 12 |
| Deferred tax | 5 180 | 2 308 |

[1] Included within the balance sheet line item Other liabilities.

Table 10.3 specifies the line Net payment of taxes in the statement of cash flows.

**Table 10.3** Specification net payment of taxes

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Receipt of refunded withholding tax | 8 252 | 6 748 |
| Payment of taxes | -15 453 | -12 472 |
| **Net payment of taxes** | **-7 202** | **-5 724** |

# Note 11 Foreign exchange gains and losses

In accordance with the management mandate, the fund is not invested in securities issued by Norwegian companies, securities denominated in Norwegian kroner nor real estate or infrastructure located in Norway. The fund's returns are measured primarily in the fund's currency basket, which is a weighted combination of the currencies in the fund's benchmark index for equities and bonds. The fund's market value in Norwegian kroner is affected by changes in exchange rates, but this has no bearing on the fund's international purchasing power.

## Accounting judgement

The management of Norges Bank has concluded that the Norwegian krone is the bank's functional currency, since this currency is dominant for the bank's underlying activities. Owner's equity, in the form of the GPFG krone account, is denominated in Norwegian kroner and a share of the costs related to management of the GPFG is incurred in Norwegian kroner. The financial reporting for the GPFG is part of Norges Bank's financial statements and the functional currency of the GPFG is therefore considered to be the Norwegian krone. Returns on the investment portfolio are reported both internally and to the owner in Norwegian kroner, while the percentage return is measured both in Norwegian kroner and in the currency basket defined by the Ministry of Finance. Furthermore, there is no single investment currency that stands out as dominant within the investment management.

## Accounting policy

Foreign currency transactions are recognised in the financial statements using the exchange rate prevailing on the transaction date. Assets and liabilities in foreign currencies are translated into Norwegian kroner using the exchange rate at the balance sheet date. The foreign exchange element linked to realised and unrealised gains and losses on assets and liabilities is disaggregated in the income statement and presented on a separate line, Foreign exchange gain/loss.

## Accounting judgement

Gains and losses on financial instruments are due to changes in the price of the instrument (before foreign exchange gain/loss) and changes in foreign exchange rates (foreign exchange gain/loss). These are presented separately in the income statement. The method used to allocate the total gain/loss in Norwegian kroner to a security element and a foreign exchange element is described below. Different methods may result in different allocations.

**Foreign exchange element**
Unrealised gain/loss due to changes in foreign exchange rates is calculated based on the cost of the holding in foreign currency and the change in the exchange rate from the time of purchase until the balance sheet date. If the holding has been purchased in a prior period, previously recognised gain/loss is deducted to arrive at the gain/loss in the current period. Upon realisation, the exchange rate on the date of sale is used when calculating the realised gain/loss, and previously recognised unrealised gain/loss is reversed in the current period.

**Security element**
Unrealised gain/loss due to changes in the security price is calculated based on the change in the security price from the purchase date to the balance sheet date, and the exchange rate at the balance sheet date. If the holding has been purchased in a prior period, previously recognised gain/loss is deducted to arrive at the gain/loss for the security element in the current period. Upon realisation, the selling price is used when calculating the realised gain/loss due to changes in security prices, and previously recognised unrealised gain/loss for the holding is reversed in the current period.

The change in the fund's market value due to changes in foreign exchange rates is presented in table 11.1.

**Table 11.1** Specification foreign exchange gain/loss

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Foreign exchange gain/loss - EUR/NOK | -77 636 | 106 910 |
| Foreign exchange gain/loss - JPY/NOK | -55 115 | 18 103 |
| Foreign exchange gain/loss - CHF/NOK | -643 | 15 723 |
| Foreign exchange gain/loss - GBP/NOK | 13 272 | 4 854 |
| Foreign exchange gain/loss - USD/NOK | 104 202 | -79 242 |
| Foreign exchange gain/loss - other | -8 668 | -8 399 |
| **Foreign exchange gain/loss** | **-24 589** | **57 948** |

Table 11.2 gives an overview of the distribution of the market value of the investment portfolio for the main currencies the GPFG is exposed to. This supplements the overview of the allocation by asset class, country and currency shown in table 9.2 in note 9 Investment risk.

**Table 11.2** Specification of the investment portfolio by currency

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| US dollar | 5 506 906 | 4 644 534 |
| Euro | 2 225 143 | 1 995 892 |
| British pound | 925 209 | 800 602 |
| Japanese yen | 855 724 | 845 642 |
| Swiss franc | 532 796 | 451 465 |
| Other currencies | 2 293 771 | 2 175 627 |
| **Market value investment portfolio** | **12 339 549** | **10 913 762** |

Table 11.3 gives an overview of exchange rates at the balance sheet date for the main currencies the GPFG is exposed to.

**Table 11.3** Exchange rates

| | 31.12.2021 | 31.12.2020 | Percent change |
|---|---|---|---|
| US dollar | 8.82 | 8.56 | 3.0 |
| Euro | 10.03 | 10.48 | -4.3 |
| British pound | 11.94 | 11.70 | 2.1 |
| Japanese yen | 0.08 | 0.08 | -7.7 |
| Swiss franc | 9.68 | 9.69 | -0.1 |

# Note 12 Management costs

## Accounting policy

Management fee is recognised in the GPFG's income statement as an expense when incurred.

Performance-based fees to external managers are based on achieved excess returns relative to the applicable benchmark index over time. The provision for performance-based fees is based on the best estimate of the incurred fee to be paid. The effect of changes in estimates is recognised in profit or loss in the current period.

Management costs comprise all costs relating to the management of the fund. These are mainly incurred in Norges Bank, but management costs are also incurred in subsidiaries of Norges Bank that are exclusively established as part of the management of the GPFG's investments in unlisted real estate and unlisted renewable energy infrastructure.

### Management costs in Norges Bank

The Ministry of Finance reimburses Norges Bank for costs incurred in connection with the management of the GPFG, in the form of a management fee. The management fee is equivalent to the actual costs incurred by Norges Bank, including performance-based fees to external managers, and is expensed in the income statement line Management fee. Costs included in the management fee are specified in table 12.1.

**Table 12.1** Management fee

| | 2021 | | 2020 | |
|---|---|---|---|---|
| Amounts in NOK million | | Basis points | | Basis points |
| Salary, social security and other personnel-related costs[1] | 1 102 | | 1 408 | |
| Custody costs | 468 | | 474 | |
| IT services, systems, data and information | 591 | | 650 | |
| Research, consulting and legal fees | 210 | | 214 | |
| Other costs | 232 | | 269 | |
| Allocated costs Norges Bank | 301 | | 281 | |
| Base fees to external managers | 896 | | 728 | |
| **Management fee excluding performance-based fees** | **3 801** | **3.3** | **4 023** | **3.9** |
| Performance-based fees to external managers | 840 | | 1 282 | |
| **Management fee** | **4 640** | **4.0** | **5 305** | **5.1** |

[1] 2021 costs are reduced by NOK 265 million, due to a one-off accounting adjustment following a change in the method for accruing performance-based pay.

### Management costs in subsidiaries

Management costs incurred in wholly-owned subsidiaries consist of costs related to the management of the investments in unlisted real estate and unlisted renewable energy infrastructure. These costs are expensed directly in the portfolio result and are not part of the management fee.

Management costs incurred in non-consolidated subsidiaries are presented in the income statement lines Income/expense from unlisted real estate and Income/expense from unlisted infrastructure. Management costs incurred in consolidated subsidiaries are presented in the income statement line Other income/expense. These costs are specified in table 12.2.

**Table 12.2** Management costs subsidiaries

| Amounts in NOK million | 2021 | Basis points | 2020 | Basis points |
|---|---|---|---|---|
| Salary, social security and other personnel-related costs | 29 | | 26 | |
| IT services, systems, data and information | 5 | | 21 | |
| Research, consulting and legal fees | 38 | | 31 | |
| Other costs | 41 | | 25 | |
| **Total management costs, subsidiaries[1]** | **113** | **0.1** | **103** | **0.1** |
| Of which management costs non-consolidated subsidiaries | 69 | | 64 | |
| Of which management costs consolidated subsidiaries | 43 | | 40 | |

[1] For 2021, the amount consists of NOK 106 million related to investments in unlisted real estate and NOK 7 million related to investments in unlisted renewable energy infrastructure. For 2020, the entire amount related to investments in unlisted real estate.

## Upper limit for reimbursement of management costs

Every year the Ministry of Finance establishes an upper limit for the reimbursement of management costs. Norges Bank is only reimbursed for costs incurred within this limit. Norges Bank is also reimbursed for performance-based fees to external managers. These fees are not measured against the upper limit.

For 2021, total management costs incurred in Norges Bank and its subsidiaries, excluding performance-based fees to external managers, were limited to NOK 5 400 million. In 2020, the limit was NOK 4 900 million.

Total management costs measured against the upper limit amounted to NOK 3 914 million in 2021. This consisted of management costs in Norges Bank, excluding performance-based fees to external managers, of NOK 3 801 million and management costs in subsidiaries of NOK 113 million. Total management costs including performance-based fees to external managers amounted to NOK 4 753 million in 2021.

## Costs measured as a share of assets under management

Costs are also measured in basis points, as a share of average assets under management. Average assets under management are calculated based on the market value of the portfolio in Norwegian kroner at the start of each month in the calendar year.

In 2021, management costs incurred in Norges Bank and its subsidiaries, excluding performance-based fees to external managers, corresponded to 3.4 basis points of assets under management. Management costs including performance-based fees to external managers corresponded to 4.1 basis points of assets under management.

## Other operating costs in subsidiaries

In addition to the management costs presented in table 12.2, other operating costs are also incurred in subsidiaries related to the ongoing maintenance, operation and development of the investments. These are not costs related to investing in real estate or renewable energy infrastructure but are costs of operating the underlying investments once they are acquired. Therefore, they are not defined as management costs. Other operating costs are expensed directly in the portfolio result and are not part of the management fee. They are also not included in the costs measured against the upper limit.

Other operating costs incurred in non-consolidated subsidiaries are presented in the income statement lines Income/expense from unlisted real estate and Income/expense from unlisted infrastructure. For further information, see table 6.4 in note 6 Unlisted real estate and table 7.4 in note 7 Unlisted renewable energy infrastructure. Other operating costs incurred in consolidated subsidiaries are presented in the income statement line Other income/expense.

# Note 13 Secured lending and borrowing

Secured lending and borrowing consists of collateralised (secured) transactions, where the GPFG posts or receives securities or cash to or from a counterparty, with collateral in the form of other securities or cash. These transactions take place under various agreements such as securities lending agreements, repurchase and reverse repurchase agreements and equity swaps in combination with purchases or sales of equities.

The objective of secured lending and borrowing is to provide an incremental return on the GPFG's holdings of securities and cash. These transactions are also used in connection with liquidity management.

## Accounting policy

**Income and expense from secured lending and borrowing**
Income and expense mainly consist of interest and net fees. These are recognised on a straight-line basis over the term of the agreement and presented in the income statement as Income/expense from secured lending and Income/expense from secured borrowing.

**Table 13.1** Income/expense from secured lending and borrowing

| Amounts in NOK million | 2021 | 2020 |
|---|---|---|
| Income/expense from secured lending | 3 842 | 4 028 |
| Income/expense from secured borrowing | 21 | -751 |
| **Net income/expense from secured lending and borrowing** | **3 863** | **3 277** |

## Accounting policy

**Transferred financial assets**
Securities transferred to counterparties in connection with secured lending and borrowing transactions are not derecognised when the agreement is entered into, as the derecognition criteria are not met. Since the counterparty has the right to sell or pledge the security, the security is considered to be transferred. Transferred securities are therefore presented separately in the balance sheet lines Equities lent and Bonds lent. During the lending period, the underlying securities are accounted for in accordance with accounting policies for the relevant securities.

When an equity is sold in combination with the purchase of an equivalent equity swap, the sold equity is presented in the balance sheet as Equities lent, since the GPFG's exposure to the equity is virtually unchanged. The equity swap (derivative) is not recognised in the balance sheet, since this would lead to recognition of the same rights twice. When an equity is purchased in combination with the sale of an equivalent equity swap, the GPFG has virtually no exposure to the equity or the derivative and neither the equity nor the derivative are recognised in the balance sheet.

**Secured lending**
Cash collateral posted to counterparties in secured lending transactions is derecognised, and a corresponding receivable reflecting the cash amount that will be returned is recognised as a financial asset, Secured lending. This asset is measured at fair value.

**Secured borrowing**
Cash collateral received in connection with secured borrowing transactions is recognised as Deposits in banks together with a corresponding financial liability, Secured borrowing. This liability is measured at fair value.

**Collateral received in the form of securities**
Collateral received through secured lending and borrowing transactions in the form of securities, where the GPFG has the right to sell or pledge the security, is not recognised in the balance sheet unless reinvested.

Table 13.2 shows the amount presented as Secured lending, and the associated collateral received in the form of securities.

**Table 13.2** Secured lending

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| Secured lending | 297 405 | 192 526 |
| **Total secured lending** | **297 405** | **192 526** |
| | | |
| **Associated collateral in the form of securities (off balance sheet)** | | |
| Equities received as collateral | 118 669 | 62 514 |
| Bonds received as collateral | 185 951 | 134 307 |
| **Total collateral received in the form of securities related to secured lending** | **304 620** | **196 821** |

Table 13.3 shows transferred securities with the associated liability presented as Secured borrowing, and collateral received in the form of securities or guarantees.

**Table 13.3** Transferred financial assets and secured borrowing

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| **Transferred financial assets** | | |
| Equities lent | 505 117 | 438 353 |
| Bonds lent | 623 367 | 520 978 |
| **Total transferred financial assets** | **1 128 484** | **959 332** |
| | | |
| **Associated cash collateral, recognised as liability** | | |
| Secured borrowing | 591 960 | 390 380 |
| **Total secured borrowing** | **591 960** | **390 380** |
| | | |
| **Associated collateral in the form of securities or guarantees (off balance sheet)** | | |
| Equities received as collateral | 267 575 | 345 111 |
| Bonds received as collateral | 304 538 | 278 691 |
| Guarantees | 12 519 | 959 |
| **Total collateral received in the form of securities or guarantees related to transferred financial assets** | **584 632** | **624 761** |

# Note 14 Collateral and offsetting

## Accounting policy

**Cash collateral derivative transactions**
Cash collateral posted in connection with derivative transactions is derecognised and a corresponding receivable, reflecting the cash amount that will be returned, is recognised in the balance sheet as Cash collateral posted. Cash collateral received in connection with derivative transactions is recognised in the balance sheet as Deposits in banks, with a corresponding liability Cash collateral received. Both Cash collateral posted and Cash collateral received are measured at fair value.

**Offsetting**
Financial assets and liabilities are not offset and presented net in the balance sheet because the criteria in IAS 32 Financial instruments: Presentation are not met. Table 14.1 does not therefore include a column for amounts offset/netted in the balance sheet.

## Collateral

For various counterparties and transaction types, cash collateral will both be posted to and received from the same counterparty. Therefore, received cash collateral can be netted against posted cash collateral and vice-versa as shown in table 14.1. Cash collateral posted and Cash collateral received in the balance sheet are related exclusively to derivative transactions. Collateral in the form of cash or securities is also posted and received in connection with secured lending and borrowing transactions. See note 13 Secured lending and borrowing for further information.

## Offsetting

Table 14.1 provides an overview of financial assets and liabilities, the effects of legally enforceable netting agreements and related collateral to reduce credit risk. The column Assets/Liabilities in the balance sheet subject to netting shows the carrying amounts of financial assets and liabilities that are subject to legally enforceable netting agreements. These amounts are adjusted for the effect of potential netting of financial assets and liabilities recognised in the balance sheet with the same counterparty, together with posted or received cash collateral. This results in a net exposure, which is shown in the column Assets/liabilities after netting and collateral.

Some netting agreements could potentially not be legally enforceable. Transactions under the relevant contracts are shown in the column Assets/liabilities not subject to enforceable netting agreements.

In the event of counterparty default, a collective settlement between Norges Bank and the bankruptcy estate could be agreed for certain groups of instruments, irrespective of whether the instruments belong to the GPFG or Norges Bank's foreign exchange reserves. Such a settlement will be allocated proportionately between these portfolios and is therefore not adjusted for in the table.

**Table 14.1** Assets and liabilities subject to netting agreements

| Amounts in NOK million, 31.12.2021 | | | Amounts subject to enforceable master netting agreements | | | | |
|---|---|---|---|---|---|---|---|
| Description | Gross financial assets recognised in the balance sheet | Assets not subject to enforceable netting agreements[1] | Assets in the balance sheet subject to netting | Financial liabilities related to same counterparty | Cash collateral received (recognised as liability) | Security collateral received (not recognised) | Assets after netting and collateral |
| **Assets** | | | | | | | |
| Secured lending | 297 405 | 82 735 | 214 669 | - | 124 868 | 89 801 | - |
| Cash collateral posted | 3 725 | - | 3 725 | 3 652 | - | - | 73 |
| Financial derivatives | 7 879 | 465 | 7 413 | 6 093 | 1 174 | - | 146 |
| **Total** | **309 009** | **83 200** | **225 807** | **9 745** | **126 042** | **89 801** | **219** |

| Amounts in NOK million, 31.12.2021 | | | Amounts subject to enforceable master netting agreements | | | | |
|---|---|---|---|---|---|---|---|
| Description | Gross financial liabilities recognised in the balance sheet | Liabilities not subject to enforceable netting agreements[2] | Liabilities in the balance sheet subject to netting | Financial assets related to same counterparty | Cash collateral posted (recognised as asset) | Security collateral posted (not derecognised) | Liabilities after netting and collateral |
| **Liabilities** | | | | | | | |
| Secured borrowing | 591 960 | 77 216 | 514 743 | - | 124 868 | 388 193 | 1 682 |
| Cash collateral received | 11 848 | - | 11 848 | 3 635 | - | - | 8 212 |
| Financial derivatives | 9 055 | 5 | 9 050 | 6 093 | 2 149 | - | 808 |
| **Total** | **612 863** | **77 221** | **535 641** | **9 728** | **127 017** | **388 193** | **10 702** |

| Amounts in NOK million, 31.12.2020 | | | Amounts subject to enforceable master netting agreements | | | | |
|---|---|---|---|---|---|---|---|
| Description | Gross financial assets recognised in the balance sheet | Assets not subject to enforceable netting agreements[1] | Assets in the balance sheet subject to netting | Financial liabilities related to same counterparty | Cash collateral received (recognised as liability) | Security collateral received (not recognised) | Assets after netting and collateral |
| **Assets** | | | | | | | |
| Secured lending | 192 526 | 57 470 | 135 056 | - | 74 398 | 60 658 | - |
| Cash collateral posted | 5 715 | - | 5 715 | 5 715 | - | - | - |
| Financial derivatives | 2 551 | 206 | 2 345 | 2 345 | - | - | - |
| **Total** | **200 791** | **57 676** | **143 116** | **8 060** | **74 398** | **60 658** | **-** |

| Amounts in NOK million, 31.12.2020 | | | Amounts subject to enforceable master netting agreements | | | | |
|---|---|---|---|---|---|---|---|
| Description | Gross financial liabilities recognised in the balance sheet | Liabilities not subject to enforceable netting agreements[2] | Liabilities in the balance sheet subject to netting | Financial assets related to same counterparty | Cash collateral posted (recognised as asset) | Security collateral posted (not derecognised) | Liabilities after netting and collateral |
| **Liabilities** | | | | | | | |
| Secured borrowing | 390 380 | 55 976 | 334 404 | - | 74 398 | 259 135 | 871 |
| Cash collateral received | 6 004 | - | 6 004 | 1 452 | - | - | 4 552 |
| Financial derivatives | 7 619 | - | 7 619 | 2 345 | 4 439 | - | 835 |
| **Total** | **404 003** | **55 976** | **348 027** | **3 797** | **78 837** | **259 135** | **6 257** |

[1] Secured lending includes amounts related to shares purchased in combination with equity swaps. In 2021, this amounted to NOK 80 billion (NOK 56 billion in 2020). See note 13 Secured lending and borrowing for further information.

[2] Secured borrowing includes amounts related to shares sold in combination with equity swaps. In 2021, this amounted to NOK 64 billion (NOK 54 billion in 2020). See note 13 Secured lending and borrowing for further information.

# Note 15 Related parties

## Accounting policy

Norges Bank is owned by the Norwegian government and is, in line with IAS 24.25, exempt from the disclosure requirements pertaining to related party transactions and outstanding balances, including commitments, with the Norwegian government. This includes transactions with other entities that are related parties because the Norwegian government has control of, joint control of, or significant influence over both Norges Bank and the other entities.

Norges Bank, including the GPFG, is a separate legal entity that is wholly state-owned through the Ministry of Finance. See note 1 General information for information regarding the relationship between the Ministry of Finance, Norges Bank and the GPFG. The GPFG conducts all transactions at market terms.

### Transactions with the government

The Ministry of Finance has placed funds for investment in the GPFG in the form of a Norwegian krone deposit with Norges Bank (the krone account). The krone deposit is subsequently placed with Norges Bank Investment Management for investment management. In accordance with the management mandate, transfers are made to and from the krone account. See additional information regarding the inflow/withdrawal for the period in the statement of changes in owner's capital.

### Transactions with Norges Bank

Norges Bank is not exposed to any economic risk from the management of the GPFG. The Ministry of Finance reimburses Norges Bank for costs incurred in connection with the management of the GPFG in the form of a management fee, see note 12 Management costs. In 2021, NOK 10.5 billion was deducted from the krone account to pay the accrued management fee to Norges Bank, of which NOK 5.3 billion was settlement of the management fee for 2020, and NOK 5.2 billion was settlement of the management fee for 2021. The management fee for 2021 was settled prior to year-end, based on a forecast. This was higher than the final management fee for the year and the difference will be settled in March 2022. In 2020, NOK 4.3 billion was deducted from the krone account to pay the accrued management fee. This related in its entirety to management fee for 2019.

Internal trades in the form of money market lending or borrowing between the GPFG and Norges Bank's foreign exchange reserves are presented as a net balance between the two portfolios in the balance sheet lines Other assets and Other liabilities. At the end of 2021, the net balance between the portfolios represented a receivable for the GPFG of NOK 130 million, compared to a receivable of NOK 806 million at the end of 2020. Associated income and expense items are presented net in the income statement as Interest income/expense.

### Transactions with subsidiaries

Subsidiaries of Norges Bank are established as part of the management of the GPFG's investments in unlisted real estate and unlisted renewable energy infrastructure. For an overview of the companies that own and manage the investments, as well as consolidated subsidiaries, see note 16 Interests in other entities. For further information regarding transactions with subsidiaries, see note 6 Unlisted real estate and note 7 Unlisted renewable energy infrastructure.

# Note 16 Interests in other entities

Investments in unlisted real estate and unlisted renewable energy infrastructure are made through subsidiaries of Norges Bank, exclusively established as part of the management of the GPFG. These subsidiaries invest, through holding companies, in entities that invest in properties and renewable energy infrastructure. These entities may be subsidiaries or joint ventures.

The overall objective of the ownership structures used for investments in unlisted real estate and unlisted infrastructure is to safeguard the financial wealth under management and to ensure the highest possible net return after costs, in accordance with the management mandate issued by the Ministry of Finance. Key criteria when deciding the ownership structure are legal protection, governance and operational efficiency. Taxes may represent a significant cost for the unlisted investments. Expected tax expense for the fund is therefore one of the factors considered when determining the ownership structure.

Table 16.1 shows the companies that own and manage the properties and infrastructure assets, as well as consolidated subsidiaries.

**Table 16.1** Real estate and infrastructure companies

| Company | Business address | Property address[2] | Ownership share and voting right in percent | Effective ownership share of underlying properties in percent | Recognised from |
|---|---|---|---|---|---|
| **Non-consolidated companies** | | | | | |
| **United Kingdom** | | | | | |
| NBIM George Partners LP[1] | London | London | 100.00 | 25.00 | 2011 |
| MSC Property Intermediate Holdings Limited | London | Sheffield | 50.00 | 50.00 | 2012 |
| NBIM Charlotte Partners LP | London | London | 100.00 | 57.75 | 2014 |
| NBIM Edward Partners LP | London | London | 100.00 | 100.00 | 2014 |
| NBIM Caroline Partners LP | London | London | 100.00 | 100.00 | 2015 |
| NBIM Henry Partners LP | London | London | 100.00 | 100.00 | 2016 |
| NBIM Elizabeth Partners LP | London | London | 100.00 | 100.00 | 2016 |
| NBIM Eleanor Partners LP | London | London | 100.00 | 100.00 | 2018 |
| WOSC Partners LP | London | London | 75.00 | 75.00 | 2019 |
| | | | | | |
| **Luxembourg** | | | | | |
| NBIM S.à r.l. | Luxembourg | N/A | 100.00 | N/A | 2011 |
| | | | | | |
| **France** | | | | | |
| NBIM Louis SAS | Paris | Paris | 100.00 | 50.00 | 2011 |
| SCI 16 Matignon | Paris | Paris | 50.00 | 50.00 | 2011 |
| Champs Elysées Rond-Point SCI | Paris | Paris | 50.00 | 50.00 | 2011 |
| SCI PB 12 | Paris | Paris | 50.00 | 50.00 | 2011 |
| SCI Malesherbes | Paris | Paris | 50.00 | 50.00 | 2012 |
| SCI 15 Scribe | Paris | Paris | 50.00 | 50.00 | 2012 |
| SAS 100 CE | Paris | Paris | 50.00 | 50.00 | 2012 |
| SCI Daumesnil | Paris | Paris | 50.00 | 50.00 | 2012 |
| SCI 9 Messine | Paris | Paris | 50.00 | 50.00 | 2012 |
| SCI Pasquier | Paris | Paris | 50.00 | 50.00 | 2013 |

| Company | Business address | Property address[2] | Ownership share and voting right in percent | Effective ownership share of underlying properties in percent | Recognised from |
|---|---|---|---|---|---|
| NBIM Marcel SCI | Paris | Paris | 100.00 | 100.00 | 2014 |
| NBIM Victor SCI | Paris | Paris | 100.00 | 100.00 | 2016 |
| NBIM Eugene SCI | Paris | Paris | 100.00 | 100.00 | 2017 |
| NBIM Beatrice SCI | Paris | Paris | 100.00 | 100.00 | 2018 |
| NBIM Jeanne SCI | Paris | Paris | 100.00 | 100.00 | 2019 |
| | | | | | |
| **Germany** | | | | | |
| NKE Neues Kranzler Eck Berlin Immobilien GmbH & Co. KG | Frankfurt | Berlin | 50.00 | 50.00 | 2012 |
| NBIM Helmut 2 GmbH & Co KG | Berlin | Berlin | 100.00 | 100.00 | 2020 |
| | | | | | |
| **Switzerland** | | | | | |
| NBIM Antoine CHF S.à r.l. | Luxembourg | Zürich | 100.00 | 100.00 | 2012 |
| | | | | | |
| **Europe** | | | | | |
| Prologis European Logistics Partners S.à r.l. | Luxembourg | Multiple European cities | 50.00 | 50.00 | 2013 |
| | | | | | |
| **United States** | | | | | |
| T-C 1101 Pennsylvania Venture LLC | Wilmington, DE | Washington | 49.90 | 49.90 | 2013 |
| T-C Franklin Square Venture LLC | Wilmington, DE | Washington | 49.90 | 49.90 | 2013 |
| T-C 33 Arch Street Venture LLC | Wilmington, DE | Boston | 49.90 | 49.90 | 2013 |
| T-C 475 Fifth Avenue Venture LLC | Wilmington, DE | New York | 49.90 | 49.90 | 2013 |
| No. 1 Times Square Development LLC | Wilmington, DE | New York | 45.00 | 45.00 | 2013 |
| OFC Boston LLC | Wilmington, DE | Boston | 47.50 | 47.50 | 2013 |
| 425 MKT LLC | Wilmington, DE | San Francisco | 47.50 | 47.50 | 2013 |
| 555 12th LLC | Wilmington, DE | Washington | 47.50 | 47.50 | 2013 |
| Prologis U.S. Logistics Venture LLC | Wilmington, DE | Multiple American cities | 46.30 | 44.96 | 2014 |
| OBS Boston LLC | Wilmington, DE | Boston | 47.50 | 47.50 | 2014 |
| 100 Federal JV LLC | Wilmington, DE | Boston | 45.00 | 45.00 | 2014 |
| Atlantic Wharf JV LLC | Wilmington, DE | Boston | 45.00 | 45.00 | 2014 |
| BP/CGCenter MM LLC | Wilmington, DE | New York | 45.00 | 45.00 | 2014 |
| T-C 2 Herald Square Venture LLC | Wilmington, DE | New York | 49.90 | 49.90 | 2014 |
| T-C 800 17th Street Venture NW LLC | Wilmington, DE | Washington | 49.90 | 49.90 | 2014 |
| T-C Foundry Sq II Venture LLC | Wilmington, DE | San Francisco | 49.90 | 49.90 | 2014 |
| T-C Hall of States Venture LLC | Wilmington, DE | Washington | 49.90 | 49.90 | 2014 |
| SJP TS JV LLC | Wilmington, DE | New York | 45.00 | 45.00 | 2015 |
| T-C Republic Square Venture LLC | Wilmington, DE | Washington | 49.90 | 49.90 | 2015 |
| T-C 888 Brannan Venture LLC | Wilmington, DE | San Francisco | 49.90 | 49.90 | 2015 |
| Hudson Square Properties, LLC | Wilmington, DE | New York | 48.00 | 48.00 | 2015 |
| ConSquare LLC | Wilmington, DE | Washington | 47.50 | 47.50 | 2016 |
| 100 First Street Member LLC | Wilmington, DE | San Francisco | 44.00 | 44.00 | 2016 |

| Company | Business address | Property address[2] | Ownership share and voting right in percent | Effective ownership share of underlying properties in percent | Recognised from |
|---|---|---|---|---|---|
| 303 Second Street Member LLC | Wilmington, DE | San Francisco | 44.00 | 44.00 | 2016 |
| 900 16th Street Economic Joint Venture (DE) LP | Wilmington, DE | Washington | 49.00 | 49.00 | 2017 |
| 1101 NYA Economic Joint Venture (DE) LP | Wilmington, DE | Washington | 49.00 | 49.00 | 2017 |
| 375 HSP LLC | Wilmington, DE | New York | 48.00 | 48.00 | 2017 |
| T-C 501 Boylston Venture LLC | Wilmington, DE | Boston | 49.90 | 49.90 | 2018 |
| SVF Seaport JV LLC | Wilmington, DE | Boston | 45.00 | 45.00 | 2018 |
| OMD Venture LLC | Wilmington, DE | Boston | 47.50 | 47.50 | 2021 |
| ARE-MA Region No. 102 JV LLC | Wilmington, DE | Boston | 41.00 | 41.00 | 2021 |
| | | | | | |
| **Japan** | | | | | |
| TMK Tokyo TN1 | Tokyo | Tokyo | 70.00 | 70.00 | 2017 |
| Tokyo MN1 TMK | Tokyo | Tokyo | 100.00 | 39.90 | 2020 |
| | | | | | |
| **Netherlands** | | | | | |
| Borssele Wind Farm C.V. | The Hague | Borssele 1&2 | 50.00 | 50.00 | 2021 |
| | | | | | |
| **Consolidated subsidiaries** | | | | | |
| **Japan** | | | | | |
| NBRE Management Japan Advisors K.K. | Tokyo | N/A | 100.00 | N/A | 2015 |
| | | | | | |
| **United Kingdom** | | | | | |
| NBRE Management Europe Limited | London | N/A | 100.00 | N/A | 2016 |

[1] One property in this company, 20 Air Street, has an ownership share of 50 percent from 1 September 2017.

[2] For investments in unlisted real estate, the property address is shown. For investments in unlisted infrastructure, the project name is shown.

Activity in the consolidated subsidiaries consists of providing investment-related services to the GPFG. This activity is presented in the income statement line Other costs and included in the balance sheet lines Other assets and Other liabilities.

In addition to the companies shown in table 16.1, Norges Bank has wholly-owned holding companies established in connection with investments in unlisted real estate and unlisted renewable energy infrastructure. These holding companies do not engage in any operations and do not own any properties or infrastructure assets directly. The holding companies have their business address either in the same country as the investments, in connection with NBIM S.à r.l. in Luxembourg, or in Norway for the holding companies established for investments in Japan, France, Germany and the Netherlands.

# Note 17 Other assets and other liabilities

**Table 17.1** Other assets

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| Net balance Norges Bank's foreign exchange reserves | 130 | 806 |
| Unsettled inflow krone deposit | 1 381 | 227 |
| Accrued income from secured lending | 311 | 299 |
| Other | 38 | 9 |
| **Other assets** | **1 860** | **1 340** |

**Table 17.2** Other liabilities

| Amounts in NOK million | 31.12.2021 | 31.12.2020 |
|---|---|---|
| Tax payable | 18 | 12 |
| Other | 38 | 30 |
| **Other liabilities** | **56** | **42** |

# Independent Auditor's Report

## To the Supervisory Council of Norges Bank

### Report on the Audit of the Financial Reporting

**Opinion**

We have audited the financial reporting for the investment portfolio of the Government Pension Fund Global, which is included in Norges Bank's annual financial statements. Subsidiaries of Norges Bank that exclusively constitute investments as part of the management of the investment portfolio are included in the financial reporting. The financial reporting comprises the balance sheet as at 31 December 2021, the income statement, statement of changes in owner's capital and statement of cash flows for the year then ended, and notes to the financial reporting, including a summary of significant accounting policies.

In our opinion

- the financial reporting complies with applicable statutory requirements, and
- the financial reporting gives a true and fair view of the financial position for the investment portfolio of the Government Pension Fund Global as at 31 December 2021, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by EU.

**Basis for Opinion**

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Reporting* section of our report. We are independent of Norges Bank as required by laws and regulations and the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

**Key Audit Matters**

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial reporting of the current period. These matters were addressed in the context of our audit of the financial reporting as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

### Management of the equity and fixed-income portfolio

| Key audit matter | How the matter was addressed in our audit |
|---|---|
| Processes and control activities in the equity and fixed-income management related to amongst others trading, secured lending and borrowing, interest income and dividends, valuation, calculation of gains and losses, foreign currency translation and performance- and risk measurement are largely automated.<br><br>Deviations in the automated investment management processes are analysed and followed up.<br><br>Norges Bank's IT systems are mainly standard systems adapted to Norges Bank's needs. The IT solutions are operated in cooperation with various third parties.<br><br>The IT systems used in the investment management are absolutely central for accounting and reporting. Effective internal controls in the automated investment management processes as well as in handling deviations are of significant importance to form the basis for ensuring accurate, complete and reliable financial reporting and this is therefore a key audit matter. | Norges Bank has established overall governance models and control activities for evaluation of the equity and fixed-income management.<br><br>We assessed those elements of the overall governance models that are relevant to financial reporting.<br><br>We assessed and tested the design of selected control activities related to IT operations, change management and information security. We tested that a sample of these control activities had operated effectively in the reporting period.<br><br>We assessed whether selected valuation and calculation methods, including the method for currency conversion, were in accordance with IFRS.<br><br>We assessed and tested the design of selected automated control activities for the IT systems related to trading, secured lending and borrowing, recognition of interest income and dividends, valuation, calculation of gains and losses, foreign currency translation and performance- and risk measurement. We tested that a sample of these control activities had operated effectively in the reporting period.<br><br>We assessed and tested the design of selected manual control activities for the areas listed above related to analysis and the monitoring of deviations identified through the automated processes. We tested that a sample of these control activities had operated effectively in the reporting period.<br><br>We assessed third party confirmations (ISAE 3402 reports) received from some of the service providers that Norges Bank uses in portfolio management, to assess whether these service providers had adequate internal controls in areas that are important for Norges Bank's financial reporting.<br><br>We used our own IT specialists to understand the overall governance model for IT and in the assessment and testing of the control activities related to IT. |

**Valuation of investments using models with significant use of unobservable input (Level 3 assets)**

| Key audit matter | How the matter was addressed in the audit |
| --- | --- |
| Fair value of the majority of assets and liabilities in the Government Pension Fund Global is based on official closing prices and observable market prices.<br><br>Investments in unlisted real estate, unlisted renewable energy infrastructure, and some securities are, however, valued using models with significant use of unobservable inputs, and these types of assets are classified as Level 3 in the fair value hierarchy. A considerable degree of judgement is applied in determining the assumptions that market participants would use when pricing the asset or liability, when observable market data is not available. The valuation of Level 3 investments is therefore subject to considerable uncertainty.<br><br>The recognised value of assets classified as Level 3 is NOK 325.8 billion at 31 December 2021. Of this, investments in unlisted real estate amount to NOK 310.1 billion.<br><br>Unlisted real estate in the Government Pension Fund Global is valued by external valuers.<br><br>The valuation of unlisted real estate investments is complex and requires judgement. Valuation is based on information about each individual property type and location, as well as a number of assumptions and estimates.<br><br>The assumptions and estimates are essential for the valuation, and the valuation of unlisted real estate is therefore a key audit matter. | Norges Bank has established various control activities for monitoring the valuations conducted by external valuation specialists. We have assessed and tested the design of selected control activities related to key assumptions and estimates, including future cashflows and applicable discount rates. For a sample of properties, we tested that these control activities had operated effectively in the reporting period.<br><br>For a sample of properties, we received the external valuation reports from Norges Bank as of 31 December 2021, and assessed whether the applied valuation methods were in accordance with generally accepted valuation standards and practices. We assessed the reasonableness of selected unobservable inputs used in determining future market rent and discount rates against our understanding of the market. We assessed the valuer’s independence, qualifications and experience. We reconciled the fair value in the financial reporting with the valuation reports.<br><br>We used our own experts in the review of the valuation reports.<br><br>We assessed whether the disclosures in notes 6 and 8 regarding valuation of unlisted real estate were adequate. |

**Returns disclosures**

| Key audit matter | How the matter was addressed in the audit |
|---|---|
| Returns are measured in Norwegian kroner and in foreign currency based on a weighted composition of currencies in the benchmark indices for equity and fixed-income investments.<br><br>All of the fund's investments, including investments in unlisted real estate and unlisted renewable energy infrastructure, are measured against the fund's reference index consisting of global equity and bond indices.<br><br>Absolute and relative return information for the Government Pension Fund Global's equity and fixed-income investments is presented in note 3.<br><br>Measurement of absolute and relative returns is a complex area for the financial reporting and is therefore a key audit matter. | Norges Bank has established various control activities related to the calculation of returns.<br><br>We assessed and tested the design of selected control activities related to the application of calculation formulas used to calculate returns, the consistency between accounting and performance measurement, and that external sources of information were accurately applied in the calculations. We tested that a sample of these control activities had operated effectively in the reporting period.<br><br>In addition, we recalculated that the absolute returns for the year, and relative returns for selected days, were calculated in accordance with the methods described in note 3.<br><br>We assessed whether the returns disclosures in note 3 were adequate. |

**Other Information**

The Executive Board and management (management) are responsible for the other information accompanying the financial reporting. The other information comprises information in the annual report, but does not include the financial reporting and our auditor's report thereon. Our opinion on the financial reporting does not cover the information in the other information accompanying the financial reporting.

In connection with our audit of the financial reporting, our responsibility is to read the other information. The purpose is to consider if there is material inconsistency between the other information and the financial reporting or our knowledge obtained in the audit, or whether the other information appears to be materially misstated. We are required to report if there is a material misstatement in the other information. We have nothing to report in this regard.

**Responsibilities of Management for the Financial Reporting**

Management is responsible for the preparation of financial reporting that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU, and for such internal control as management determines is necessary to enable the preparation of financial reporting that are free from material misstatement, whether due to fraud or error.

**Auditor's Responsibilities for the Audit of the Financial Reporting**

Our objectives are to obtain reasonable assurance about whether the financial reporting as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial reporting.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the financial reporting, whether due to fraud or error. We design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Norges Bank's internal control.
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- evaluate the overall presentation, structure and content of the financial reporting, including the disclosures, and whether the financial reporting represents the underlying transactions and events in a manner that achieves a true and fair view.

We communicate with the Executive Board regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

From the matters communicated with the Executive Board, we determine those matters that were of most significance in the audit of the financial reporting of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Oslo, 9 February 2022
Deloitte AS

**Henrik Woxholt**
State Authorised Public Accountant

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