



NORGES BANK  
INVESTMENT MANAGEMENT



# Government Pension Fund Global

Annual report

2018



The background of the image is a soft-focus landscape. It features a wide expanse of water in the middle ground, with a range of low hills or mountains in the distance under a pale, overcast sky. The foreground shows a blurred, golden-brown field, possibly a meadow or tundra. The overall color palette is muted and naturalistic, with various shades of blue, green, and brown.

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



# 2018 in figures

# -6.1%

**-485 billion kroner**

The Government Pension Fund Global returned **-6.1** percent, or **-485** billion kroner, in 2018.



**Equity  
investments**

**-9.5%**



**Unlisted real estate  
investments**

**7.5%**



**Fixed-income  
investments**

**0.6%**

The fund's equity investments returned **-9.5** percent. Investments in unlisted real estate returned **7.5** percent. The fixed-income investments returned **0.6** percent.

# 8,256

**billion kroner**

The fund's market value was **8,256** billion kroner at the end of 2018, down from **8,488** billion kroner a year earlier.

Equity investments had a market value of **5,477** billion kroner, unlisted real estate **246** billion kroner, and fixed-income investments **2,533** billion kroner.



**Equity  
investments**

**66.3%**



**Unlisted real estate  
investments**

**3.0%**



**Fixed-income  
investments**

**30.7%**

The fund's asset allocation was **66.3** percent equities, **3.0** percent unlisted real estate and **30.7** percent fixed income.

# Contents

---

## 1

---

### RESULTS

1.1	The Executive Board's assessment _____	9
1.2	CEO letter _____	13
1.3	Key figures _____	14

## 2

---

### THE FUND

2.1	Mission _____	25
2.2	Markets _____	27
2.3	Investments _____	28

## 3

---

### INVESTMENTS

3.1	Equities _____	36
3.2	Real estate _____	44
3.3	Fixed income _____	54

Translation from Norwegian. For information only

**PUBLISHED ON [WWW.NBIM.NO](http://WWW.NBIM.NO)** Holdings, voting records, composition of benchmark indices, GIPS report, monthly return figures, risk-adjusted return figures and external managers

# 4

---

## MANAGEMENT

- 4.1 Investment strategies \_\_\_\_\_ 62
- 4.2 Investment risk \_\_\_\_\_ 68
- 4.3 Investing responsibly \_\_\_\_\_ 73

# 5

---

## ORGANISATION

- 5.1 Management organisation\_\_ 82
- 5.2 Operational risk management \_\_\_\_\_ 85
- 5.3 Management costs \_\_\_\_\_ 86

# 6

---

## FINANCIAL STATEMENTS

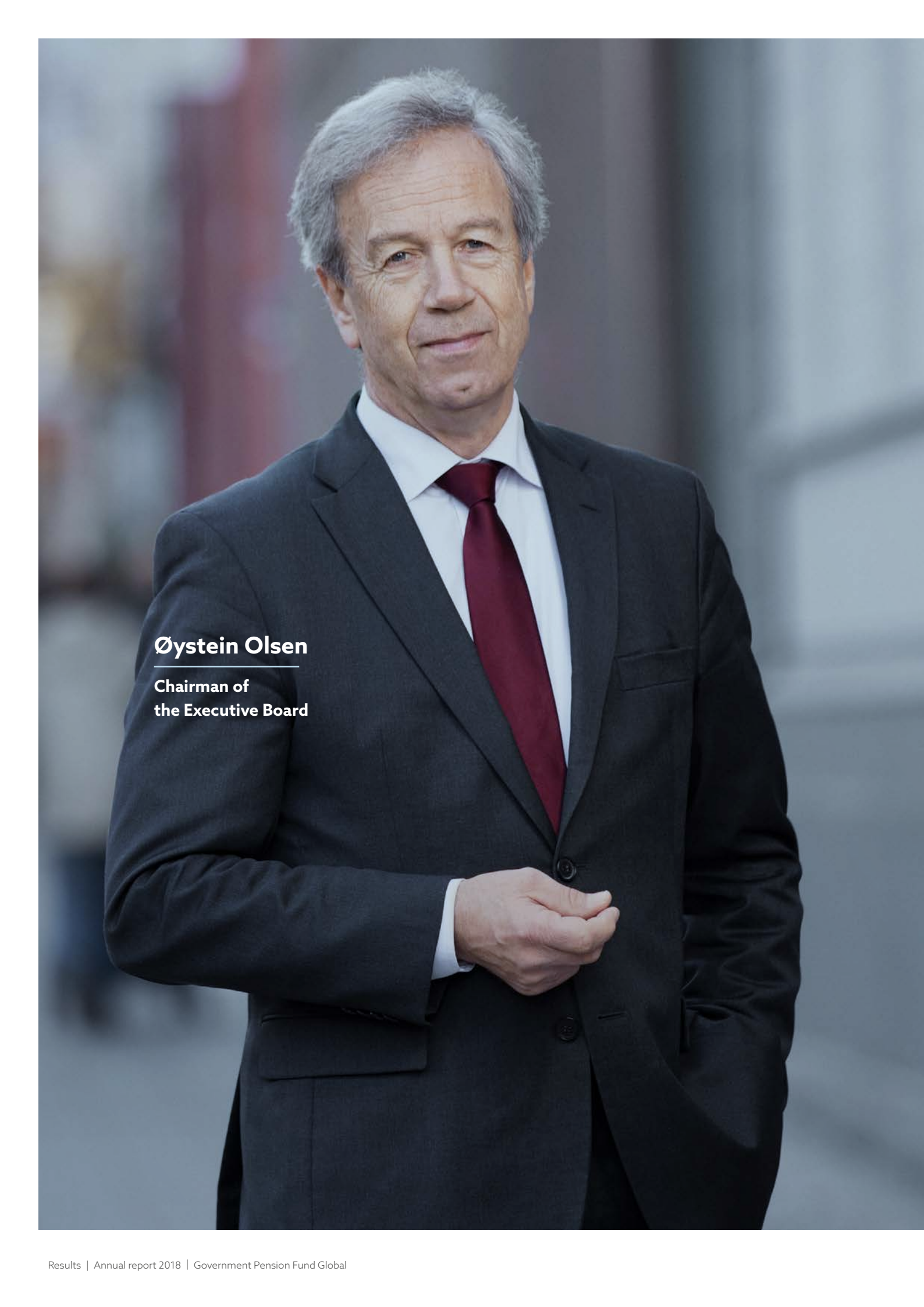
- 6.1 Financial reporting \_\_\_\_\_ 92
- 6.2 Notes to the financial reporting \_\_\_\_\_ 98
- 6.3 Independent auditor's report \_\_\_\_\_ 155





1

# Results

A professional portrait of Øystein Olsen, a middle-aged man with grey hair, wearing a dark grey suit, white shirt, and a dark red tie. He is standing outdoors with a blurred background of a building. The text is overlaid on the left side of the image.

**Øystein Olsen**

**Chairman of  
the Executive Board**

# The Executive Board's assessment of the results

---

**The investments in the Government Pension Fund Global returned -6.1 percent in 2018, which is 0.3 percentage point less than the return on the benchmark index the fund is measured against. Although performance was weak in 2018, the long-term return has been good and higher than the return on the benchmark index.**

The Government Pension Fund Global had a market value of 8,256 billion kroner at the end of 2018. The fund's return before management costs was -6.1 percent measured in the fund's currency basket. Equities returned -9.5 percent, bonds 0.6 percent and unlisted real estate 7.5 percent. Management costs amounted to 0.05 percent of the fund's value.

The fund's return in 2018 was the second-lowest since 1998. The fund's equity allocation has increased over time and the return on equities is therefore now more important for the fund's overall performance than in previous years. The return on equity investments in 2018 was the fourth-lowest since 1998, after returns of -40.7 percent in 2008, -24.4 percent in 2002 and -14.6 percent in 2001. Investments in the Government Pension Fund Global are long-term. The Executive Board is prepared for substantial fluctuations in the return of the fund from one year to the next, and emphasises that performance must be assessed over time.

Measured over the period 1998-2018 as a whole, the annual return on the GPFG was 5.5 percent. The annual net real return, after deductions for inflation and management costs, was 3.6 percent in this period.

Norges Bank manages the fund with a view to achieving the highest possible long-term return within the constraints laid down by the Ministry of Finance in the management mandate. The Bank pursues a variety of investment strategies. For the period 2013-2018, these strategies can be grouped into three main categories: fund allocation,

security selection and asset management. The different strategies pursued by the Bank in the management of the fund are complementary. The aim is that they combined and over time will yield a higher return than the benchmark index.

In 2018, the fund's return before management costs was 0.3 percentage point lower than that on the benchmark index. The contributions from the various investment strategies show that fund allocation, security selection and asset management all contributed to a lower return than the return on the benchmark index. The contributions from equity, fixed income and real estate management show that it was equity management that contributed to the GPF's negative relative return in 2018.

Real estate investments are funded by selling equities and bonds, and the results are reported as a sub-strategy of fund allocation. In 2018, the return on unlisted real estate investments was higher than that on the equities and bonds sold to fund them.

The Executive Board emphasises the importance of assessing performance over time. Viewed over the six-year period 2013-2018, the different strategies produced an annual excess return before management costs of 0.18 percentage point. Fund allocation made a negative contribution to the excess return, while both security selection and asset management made positive contributions. The experience from the different investment strategies will provide an important part of the basis for the Executive Board's work on the next strategy plan, which will run from 2020.



10

Over the full period 1998-2018, the fund's return before management costs has been 0.25 percentage point higher than that on the benchmark index from the Ministry of Finance. The size of the fund may make it more challenging to deliver excess returns at these percentage levels in the future.

The objective of the highest possible return 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 the aim that expected relative volatility (tracking error) does not exceed 1.25 percentage points. In 2018, it was below 0.4 percentage point.

Norges Bank reports a number of analyses of the relationship between return and risk in its management of the fund. The mandate from the Ministry of Finance sets out an objective of the highest possible return on the one hand, and various risk limits on the other, one of the most important being relative volatility. The relationship between these two quantities is therefore a natural starting point for a comparison of excess return and risk in the management of the fund. The Executive Board is satisfied with a ratio of relative return to relative risk (information ratio) of 0.39 for the full period 1998-2018.

The Executive Board attaches importance to cost-effective management to support the objective of the highest possible return. In the period 2013-2018, annual management costs averaged 0.06 percent of the fund's value. In 2018, management costs amounted to 4.5 billion kroner, down from 4.7 billion kroner in 2017. Management costs are low measured as a percent of the fund's value and compared to other managers.

The Executive Board has issued principles for responsible management of the fund. This work supports the objective of the highest possible return. The Executive Board decides on the exclusion and observation of companies based on guidelines from the Ministry of Finance. In 2018, Norges Bank announced the exclusion of 13 companies, while four were placed under observation, and in one case it was decided to use active ownership following a recommendation on observation from the Council on Ethics. The Executive Board also revoked two exclusions.

An important part of Norges Bank's role as manager is to advise on the further development of the fund's management. In 2018, the Executive Board provided advice and input on the rule for rebalancing the equity share, the guidelines for exclusion and observation, the environment-related mandates, and unlisted investments in renewable energy infrastructure.

The Executive Board  
Oslo, 27 February 2019



Øystein Olsen  
Chairman of  
the Executive board



Jon Nicolaisen  
First Deputy Chair



Egil Matsen  
Second Deputy Chair



Kristine Ryssdal  
Board member



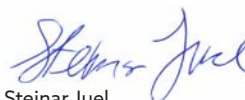
Kjetil Storesletten  
Board member



Karen Helene Ulltveit-Moe  
Board member



Kathryn Moore Baker  
Board member



Steinar Juel  
Board member





# Turbulent markets

**The fund returned -6.1 percent in a year of turbulent markets and weak equities. Returns varied widely across asset classes and main markets.**

Oslo, 27 February 2019



**Yngve Slyngstad**  
CEO, Norges Bank  
Investment Management

2018 was a year of contrasting growth expectations and apprehensions about effects of increased trade barriers. Concern about economic growth mounted in the fourth quarter, inciting a further decline in equity prices, including in the US. Long yields fell, and credit premiums increased.

The fund's equity investments returned -9.5 percent, unlisted real estate investments 7.5 percent, and fixed-income investments 0.6 percent. The fund underperformed its benchmark by 0.30 percentage point. The relative return was affected by weak returns in China and challenges in some emerging markets.

The fund's market value was 8,256 billion kroner at the end of the year, down 233 billion kroner on a year earlier. There were substantial fluctuations in the fund's value during the year, with a low of 7,952 billion kroner on 23 March and a high of 8,740 billion kroner on 29 August. The return for the year was a negative 485 billion kroner. In June, the fund received its first transfer from the government since 2015, and there was a total inflow of 33.8 billion kroner over the year as a whole.

The strategic allocation to equities in the benchmark index was raised to 70 percent in 2017. During the fourth quarter we invested 185 billion kroner in equities. This was our first net investment in equities since the plan to increase the allocation to equities in the strategic benchmark index was produced. The fund's equity share was 66.3 percent at the end of the year.

Long-term and responsible management of the fund shall ensure that future generations also benefit from Norway's oil wealth. Our ability to invest for the long term depends on confidence in the way we manage the fund. A high degree of openness about our management will help achieve this.

We hope that this report provides a broad and clear picture of the fund's performance in 2018.

# Large fluctuations in fund value

**The Government Pension Fund Global recorded positive results in the second and third quarters, but negative results in the first and fourth. After a volatile year, the fund ended up with a negative return of -6.1 percent.**

Equity investments returned -9.5 percent, unlisted real estate investments 7.5 percent, and fixed-income investments 0.6 percent.

## **New inflow in 2018**

June 2018 saw the first inflow into the fund since 2015. The Norwegian government first transferred capital to the fund in May 1996 and has transferred a total of 3,371 billion kroner to date. Norges Bank Investment Management was formed on 1 January 1998 to manage the fund on behalf of the Ministry of Finance. Since then, the fund has generated a return of 3,666 billion kroner, equivalent to an annual return of 5.5 percent. After management costs and inflation, the annual return has been 3.6 percent.

## **Returns in international currency**

The fund is invested in international securities. Returns are generally measured in international currency – a weighted combination of the currencies in the fund's benchmark indices for equities and bonds. The fund's currency basket consisted of 35 currencies at the end of 2018. Unless otherwise stated in the text, results are measured in this currency basket.

## **Market value reduced by 233 billion kroner**

The fund's market value fell 233 billion kroner to 8,256 billion kroner in 2018. The market value is affected by investment returns, capital inflows and withdrawals, and exchange rate movements. The fund delivered a negative return of 485 billion kroner in 2018, while there was an inflow from the government of 33.8 billion kroner. It was the first year with a net inflow since 2015. The krone weakened against many of the currencies the fund is invested in, which in isolation increased its market value by 224 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 66.3 percent equities, 3.0 percent unlisted real estate and 30.7 percent fixed income.

**Table 1** Return figures. Percent

	2018	2017	2016	2015	2014
<b>Returns measured in the fund's currency basket</b>					
Equity investments	-9.49	19.44	8.72	3.83	7.90
Unlisted real estate investments <sup>1</sup>	7.53	7.52	0.78	9.99	10.42
Fixed-income investments	0.56	3.31	4.32	0.33	6.88
Return on fund	-6.12	13.66	6.92	2.74	7.58
Relative return on fund (percentage points) <sup>2</sup>	-0.30	0.70	0.15	0.45	-0.77
Management costs	0.05	0.06	0.05	0.06	0.06
Return on fund after management costs	-6.17	13.60	6.87	2.68	7.52
<b>Returns in kroner</b>					
Equity investments	-6.56	19.74	3.67	16.77	24.61
Unlisted real estate investments <sup>1</sup>	11.02	7.80	-3.91	23.71	27.51
Fixed-income investments	3.82	3.57	-0.53	12.83	23.43
Return on fund	-3.07	13.95	1.95	15.54	24.23

<sup>1</sup> Includes listed real estate investments from 01.11.2014 to the end of 2016.

<sup>2</sup> Includes unlisted real estate investments from 01.01.2017. Relative return prior to 2017 is calculated on the aggregated equity and fixed-income investments.

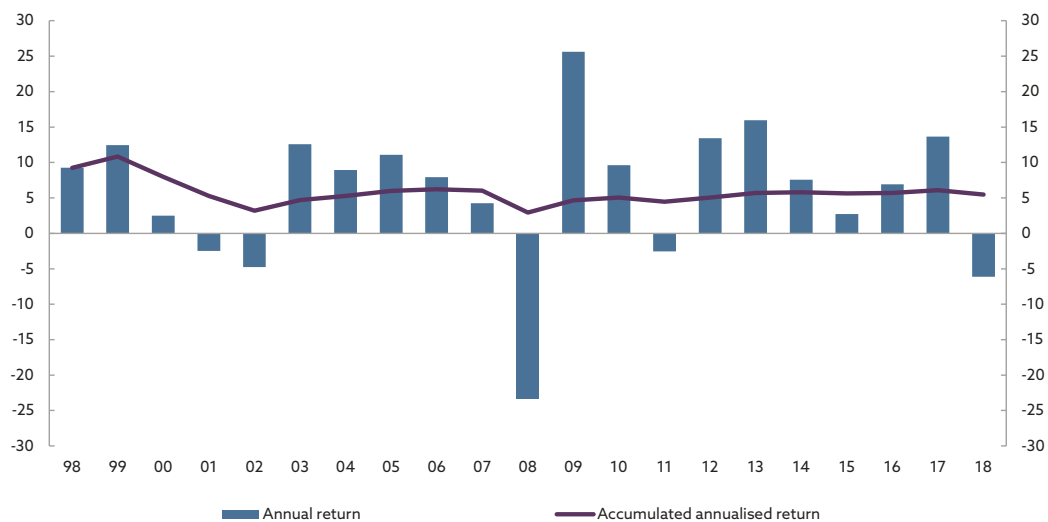
**Table 2** Historical key figures as at 31 December 2018. Annualised data, measured in the fund's currency basket

	Since 01.01.1998	Last 15 years	Last 10 years	Last 5 years	Last 12 months
<b>Fund return (percent)</b>	<b>5.47</b>	<b>5.78</b>	<b>8.33</b>	<b>4.75</b>	<b>-6.12</b>
Annual price inflation (percent)	1.77	1.88	1.69	1.37	1.70
Annual management costs (percent)	0.08	0.08	0.07	0.06	0.05
Net real return on fund (percent)	3.56	3.74	6.46	3.27	-7.74
The fund's actual standard deviation (percent)	7.37	7.87	7.84	6.39	7.87
Relative return on fund (percentage points) <sup>1</sup>	0.25	0.17	0.58	0.03	-0.30
The fund's tracking error (percentage points) <sup>1</sup>	0.68	0.76	0.56	0.36	0.30
The fund's information ratio (IR) <sup>1,2</sup>	0.39	0.26	1.00	0.11	-1.06

<sup>1</sup> Based on aggregated equity and fixed-income investments until end of 2016.

<sup>2</sup> 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 1** The fund's annual return and accumulated annualised return. Percent

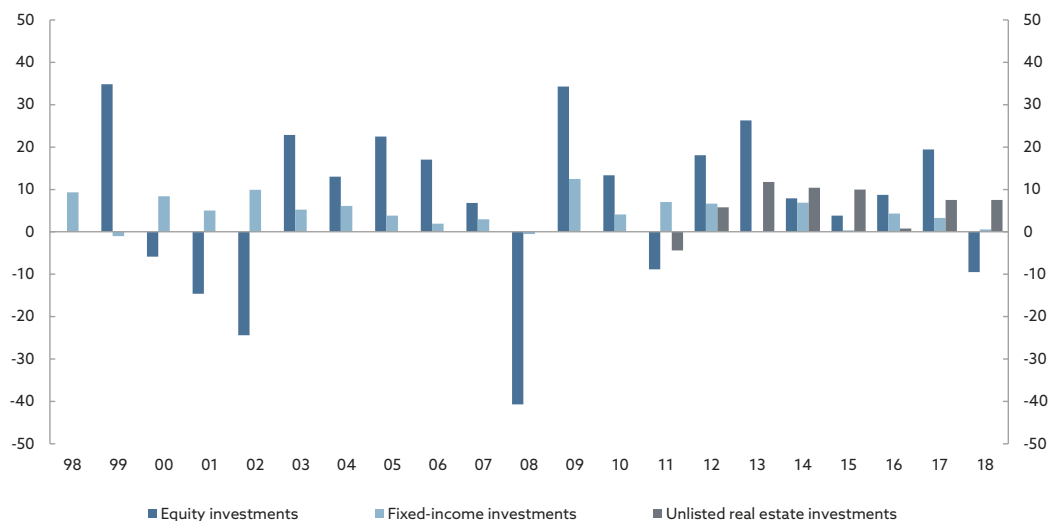


**Table 3** Return on the fund as at 31 December 2018, measured in various currencies. Percent

	Since 01.01.1998 Annualised figures	2018	2017	2016	2015	2014
US dollar	5.69	-8.44	19.92	4.83	-2.13	0.52
Euro <sup>1</sup>	5.49	-3.83	5.33	7.97	9.02	14.47
British pound	7.02	-2.75	9.54	25.05	3.54	6.78
Norwegian krone	6.54	-3.07	13.95	1.95	15.54	24.23
Currency basket	5.47	-6.12	13.66	6.92	2.74	7.58

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



**Chart 2** 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 <sup>1</sup>
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 <sup>2</sup>	-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	-

<sup>1</sup> Includes listed real estate investments from 01.11.2014 to the end of 2016.<sup>2</sup> Unlisted real estate investments from 01.04.2011.







**Table 5** Key figures. Billions of kroner

	2018	2017	2016	2015	2014
<b>Market value</b>					
Equity investments	5,477	5,653	4,692	4,572	3,940
Unlisted real estate investments <sup>1</sup>	246	219	242	235	141
Fixed-income investments	2,533	2,616	2,577	2,668	2,350
<b>Market value of fund<sup>2</sup></b>	<b>8,256</b>	<b>8,488</b>	<b>7,510</b>	<b>7,475</b>	<b>6,431</b>
Accrued, not paid, management fees <sup>2</sup>	-5	-5	-4	-4	-3
Owner's capital <sup>2</sup>	8,251	8,484	7,507	7,471	6,428
Inflow/withdrawal of capital <sup>3</sup>	34	-61	-101	46	150
Paid management fees <sup>3</sup>	-5	-4	-4	-3	-3
Return on fund	-485	1,028	447	334	544
Changes due to fluctuations in krone	224	15	-306	668	702
<b>Total change in market value</b>	<b>-233</b>	<b>978</b>	<b>35</b>	<b>1,044</b>	<b>1,393</b>
<b>Changes in value since first capital inflow in 1996</b>					
Total inflow of capital <sup>4</sup>	3,371	3,337	3,397	3,499	3,452
Return on equity investments	2,545	3,062	2,129	1,786	1,567
Return on unlisted real estate investments <sup>1</sup>	69	53	38	31	14
Return on fixed-income investments	1,052	1,037	955	859	761
Management fees <sup>5</sup>	-44	-39	-35	-31	-27
Changes due to fluctuations in krone	1,263	1,040	1,025	1,331	663
<b>Market value of fund</b>	<b>8,256</b>	<b>8,488</b>	<b>7,510</b>	<b>7,475</b>	<b>6,431</b>
<b>Return on fund</b>	<b>3,666</b>	<b>4,151</b>	<b>3,123</b>	<b>2,676</b>	<b>2,343</b>
<b>Return after management costs</b>	<b>3,622</b>	<b>4,111</b>	<b>3,088</b>	<b>2,645</b>	<b>2,316</b>

<sup>1</sup> Includes listed real estate investments from 01.11.2014 to the end of 2016.

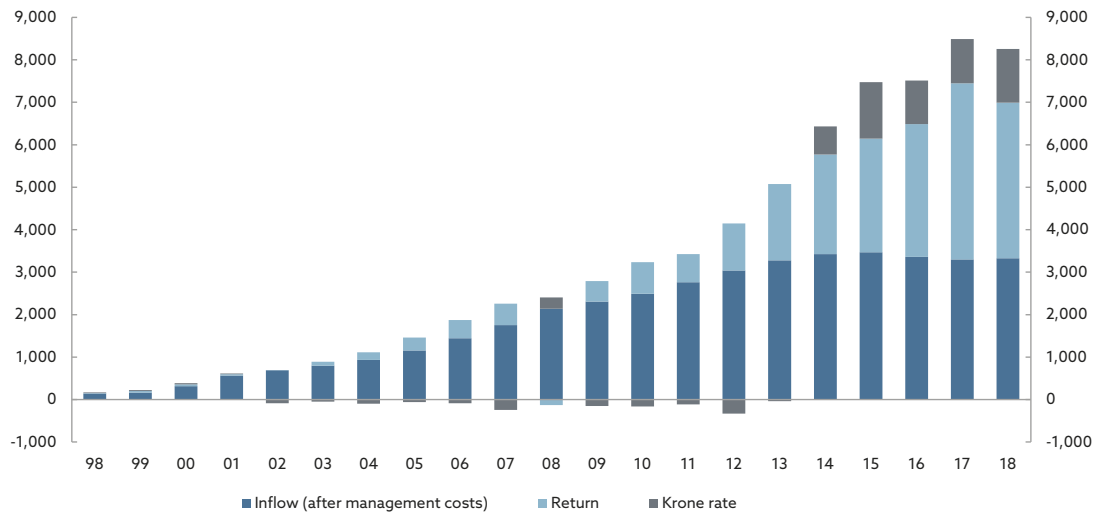
<sup>2</sup> The fund's market value shown in this table does not take into account the management fee. Owner's capital in the financial statements equals the fund's market value less accrued, not paid, management fees.

<sup>3</sup> Paid management fees are specified separately, and not included in Inflow/withdrawal of capital.

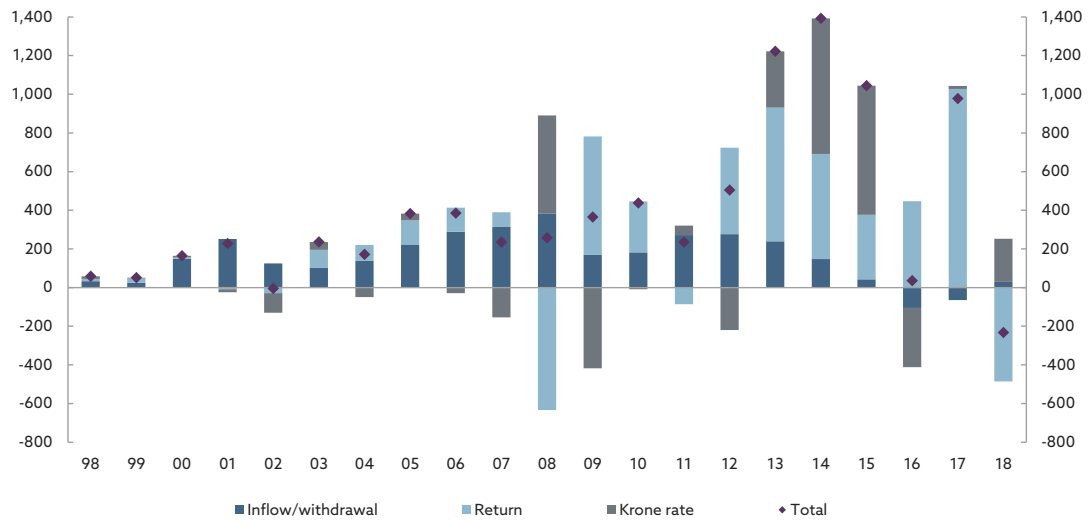
<sup>4</sup> Total inflow of capital shown in this table is adjusted for accrued, not paid, management fees.

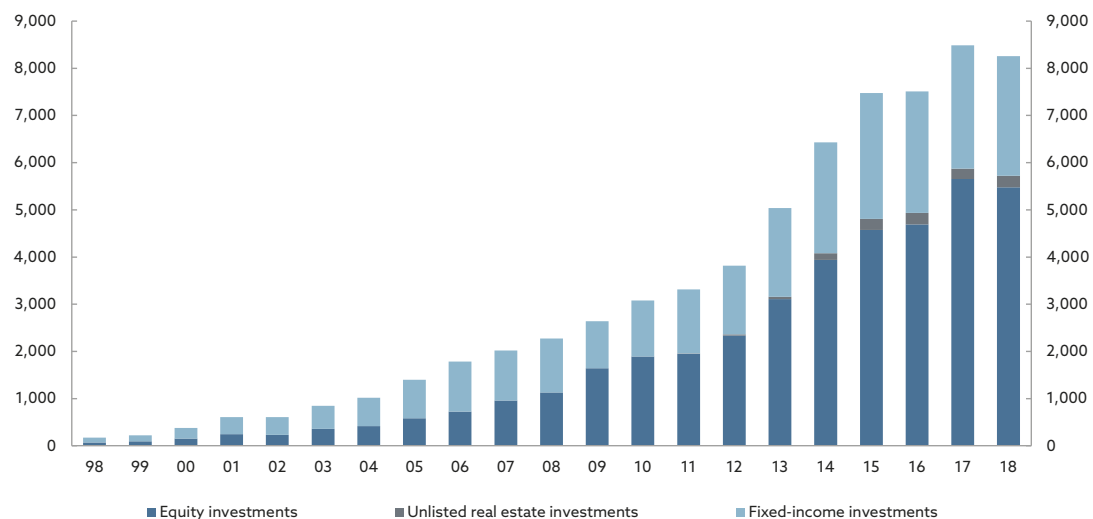
<sup>5</sup> Management costs in subsidiaries, see Table 11.2 in the financial reporting section, are not included in the management fees. Management costs in subsidiaries have been deducted from the fund's return before management fees.

**Chart 3** The fund's market value. Billions of kroner



**Chart 4** Changes in the fund's market value. Billions of kroner



**Chart 5** The fund's market value. Billions of kroner**Table 6** Changes in the fund's market value. Billions of kroner

Year	Total	Return	Inflow/ withdrawal <sup>1</sup>	Krone rate
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

<sup>1</sup> After paid management fees**Table 7** The fund's market value by asset class. Billions of kroner

Year	Total	Equity	Fixed income	Unlisted real estate <sup>1</sup>
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	-

<sup>1</sup> Includes listed real estate investments from 01.11.2014 to the end of 2016.





2

# The fund



**Stortinget** (Norwegian parliament)  
Government Pension Fund Act



**Ministry of Finance**  
Management mandate for the Government Pension Fund Global  
Guidelines for observation and exclusion



**Norges Bank**  
Executive Board principles  
Investment mandate  
Job description for CEO of Norges Bank Investment Management



**Norges Bank Investment Management**  
Policies  
The CEO delegates investment mandates and job descriptions

## 2.1 MISSION

# Our mission

---

**The fund invests widely to ensure a good diversification of risk and the highest possible return. The fund is invested exclusively outside Norway in order to protect the mainland economy.**

The formal framework for the fund has been laid down by the Storting – the Norwegian parliament – in the Government Pension Fund Act. The Ministry of Finance has overall responsibility for the fund and has issued guidelines for its management in the Management Mandate for the Government Pension Fund Global. Norges Bank has been tasked with the management of the fund, and its Executive Board has delegated the operational management of the fund to the CEO of Norges Bank Investment Management.

Our role is to manage the wealth in the fund for future generations safely, efficiently, responsibly and transparently. Our objective is the highest possible long-term return within the constraints imposed by the management mandate. We seek to safeguard the fund's international purchasing power by generating a real return over time that exceeds growth in the global economy. The fund is invested in most markets, countries and currencies to achieve broad exposure to global economic growth. We spread our investments across markets, asset classes and companies to reduce risk.

The Management mandate from the Ministry of Finance permits Norges Bank to invest in listed equities, bonds and unlisted real estate. The ministry has produced a plan to increase the allocation to equities in the fund's strategic benchmark index to 70 percent. The fund's equity and bond investments closely mirror the benchmark indices defined by the ministry. It is up to Norges Bank to decide how much to invest

in real estate and what types of property to invest in. Purchases are funded through the sale of equities and bonds, which means that the proportions of the fund invested in equities and bonds will differ from the benchmark index. Unlisted and listed real estate investments are managed under a combined strategy for real estate.

Responsible investment is an integral part of our management task. We are an active owner, and our investment decisions take account of how we view companies' long-term financial, environmental and social risks. We place emphasis on upholding high standards of quality in the fund's management and ensuring cost effectiveness. Extensive reporting, an informative website and high media availability ensure the greatest possible transparency about the management of the fund.







## 2.2 MARKETS

# Greater uncertainty in global financial markets

**2018 brought contrasting growth rates and increased uncertainty. The dollar strengthened, especially against emerging market currencies, while escalation of the trade conflict between the US and China led to greater uncertainty about future economic growth.**

Broad-based acceleration in the global economy in 2017 was followed by weaker growth and greater variation between markets in 2018. Growth was particularly strong in the US, but more subdued in most other markets. Equity prices fell across much of the world, and there was also a steep drop in US equity prices towards the end of the year.

In the US, economic data were strong, and growth expectations increased. Fiscal stimuli in the form of both tax cuts and spending increases boosted activity and corporate earnings. Favourable credit conditions also made a positive contribution to growth, despite the Federal Reserve raising its policy rate four times while continuing to reduce its balance sheet. Interest rate expectations decreased.

In China, tighter economic policy led to a gradual reduction in growth. Escalation of the trade conflict with the US also brought increased uncertainty about the growth outlook and sharp falls in Chinese equity prices. The renminbi weakened during the year, especially against the dollar.

European economic data also deteriorated, driven by a combination of specific events and weaker external demand. Political uncertainty and plans to increase Italy's budget deficit had a negative impact on financial markets in 2018. The ECB kept its rates unchanged in 2018 and signalled that they will stay at current levels at least through the summer of 2019. The bank continued to scale back its asset purchases during the year and finally brought quantitative easing to an end in December 2018.

The Bank of England raised its benchmark rate by 25 basis points in 2018 despite the persistent strong economic and political uncertainty surrounding the country's departure from the EU. A proposed deal with the EU went before parliament at the end of the year but was rejected, sparking further political turmoil and considerable uncertainty about the UK's future trading relationships.

The interest rate differential between the US and the rest of the world increased as a result of the tightening of US monetary policy. This caused the dollar to strengthen, especially against many emerging market currencies. The combination of a stronger dollar and higher US interest rates led to concern about debt levels in a number of emerging markets. Increased protectionism, weaker demand from China and higher oil prices for much of the year also had a negative impact on emerging markets. In some countries, including Turkey and Brazil, economic developments were further undermined by country-specific factors.

## 2.3 INVESTMENTS

# Invested widely outside Norway

**The fund was invested in 9,158 companies at the end of 2018. Its average holding in the world's listed companies was 1.4 percent.**

At the end of 2018, the fund's investments spanned 73 countries and 50 currencies.

34.1 percent of the fund was invested in Europe, down from 36.0 percent a year earlier, 43.0 percent in North America, up from 41.0 percent, and 19.3 percent in Asia and Oceania, down from 19.6 percent. Emerging markets accounted for 10.3 percent of the fund's investments, up from 10.1 percent.

### **Holdings in more than 9,000 companies**

The fund was invested in 9,158 companies at the end of 2018, up from 9,146 a year earlier. It had holdings of more than 2 percent in 1,406 companies, and more than 5 percent in 34 companies.

The fund's average holding in the world's listed companies, measured as its share of the FTSE Global All Cap stock index, was 1.4 percent. Ownership was highest in Europe at 2.5 percent, up from 2.4 percent. Holdings in developed markets averaged 1.4 percent, while those in emerging markets (including frontier markets) averaged 1.5 percent.

The fund's fixed-income investments consisted of 4,811 securities from 1,254 issuers, up from 4,736 securities from 1,262 issuers. These investments were spread across 26 currencies, against 32 a year earlier.

8.2 percent of fixed-income investments were in emerging markets, down from 9.5 percent. Bonds denominated in dollars, euros, pounds and yen climbed from 82.0 percent to 82.6 percent of fixed-income investments.

**Broad geographical exposure**

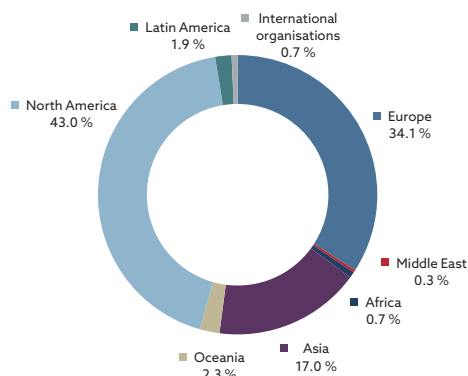
Investment opportunities evolve over time. New markets become available for investment, new opportunities emerge, and the risk picture changes. The fund's overall exposure to different markets and sources of risk and return needs to be constantly adjusted. The fund is invested in most markets, countries and currencies to achieve broad exposure to global economic growth.

The starting point for the fund's equity investments is the FTSE Global All Cap stock index. We have then chosen to add further countries in our internal reference portfolio. In this reference portfolio, we select securities, instruments and markets from a broader universe than used for the strategic benchmark index. We do this to capture a larger share of the global market and so a larger share of global growth. The number of countries approved as marketplaces for trading in equities decreased from 69 to 68 during the year.

**Table 8** The fund's largest holdings by country as at 31 December 2018. Percent

Country	Total	Equity	Fixed income	Unlisted real estate
US	38.8	25.4	12.0	1.4
Japan	9.1	5.8	3.3	0.0
UK	8.5	6.1	1.7	0.7
Germany	6.0	3.2	2.7	0.1
France	5.1	3.3	1.3	0.5
Switzerland	3.6	2.9	0.6	0.1
Canada	2.9	1.4	1.5	-
China	2.5	2.4	0.1	-
Australia	2.2	1.4	0.8	-
Spain	1.8	1.1	0.7	0.0

**Chart 6** The fund's investments as at 31 December 2018. Equities distributed by country and bonds by currency. Percent





## US

The fund had **3,249** billion kroner invested in the US at the end of 2018.

These investments were spread across **1,930** companies, **530** bond issuers and **341** properties.



## UK

The fund had **709** billion kroner invested in the UK at the end of 2018.

These investments were spread across **394** companies, **100** bond issuers and **196** properties.



## France

The fund had **429** billion kroner invested in France at the end of 2018.

These investments were spread across **220** companies, **85** bond issuers and **56** properties.

### Investments in emerging markets

At the end of 2018, we had 813 billion kroner invested in equities and fixed-income securities in emerging markets, down from 876 billion a year earlier. Investments in equities in frontier markets amounted to 21.8 billion kroner, against 20.7 billion kroner at the end of 2017.

Which new markets we enter depends on which markets are available for investment, what market opportunities there are, and market standards. We will generally add new markets to the portfolio as soon as they meet our requirements for market standards. We recognise that investments in frontier markets pose a risk to the fund, and we therefore place great importance on having sound risk management systems in place. We make our own assessment of which countries we believe should be defined as emerging markets and frontier markets. This assessment takes account of the classifications used by index suppliers, but we do not necessarily apply their definitions.

The fund has investments in 21 countries normally classified as frontier markets and so not included in the benchmark index from the Ministry of Finance: Bahrain, Bangladesh, Croatia, Cyprus, Estonia, Ghana, Jordan, Kenya, Latvia, Lithuania, Malta, Mauritius, Morocco, Nigeria, Oman, Romania, Slovakia, Slovenia, Sri Lanka, Tunisia and Vietnam. It also has investments in five countries classified as frontier markets but not included in the FTSE index: Iceland, Moldova, Saudi Arabia, Tanzania and Ukraine. Some of these investments are in equities listed on exchanges in other countries.

**Table 9** Investments in frontier markets. Classification according to FTSE. Millions of kroner

Country	2018
Slovenia <sup>1,2</sup>	5,377
Vietnam	3,992
Slovakia	3,915
Lithuania <sup>1,2</sup>	2,580
Bangladesh	1,757
Latvia	1,510
Romania <sup>1,2</sup>	1,160
Kenya	919
Morocco	859
Sri Lanka	851
Nigeria	755
Croatia	502
Cyprus	486
Bahrain <sup>2</sup>	484
Oman	376
Malta	158
Tunisia <sup>2</sup>	128
Estonia	91
Mauritius	70
Ghana	9
Jordan	6
<b>Total</b>	<b>25,984</b>

#### Countries not included in the FTSE index

Saudi Arabia	9,001
Iceland <sup>1,2</sup>	989
Ukraine <sup>2</sup>	547
Moldova <sup>2</sup>	7
Tanzania <sup>2</sup>	5
<b>Total</b>	<b>10,549</b>

<sup>1</sup> Including bonds denominated in a currency other than the local currency.

<sup>2</sup> Including investments in stocks listed on stock exchanges in other countries.



# Global investments

## North America

2,141 companies  
2,085 bonds from  
582 issuers  
341 properties

## Latin America

258 companies  
107 bonds from  
30 issuers

## International organisations

141 bonds from  
15 issuers

## Europe

1,903 companies  
1,725 bonds from  
500 issuers  
391 properties

## Asia

4,117 companies  
567 bonds from  
82 issuers  
5 properties

## Middle East

164 companies  
8 bonds from  
4 issuers

## Africa

213 companies  
12 bonds from  
2 issuers

## Oceania

362 companies  
166 bonds from  
39 issuers





# 3

# Investments

# Weak year for equities

The fund's equity investments generated a negative return of -9.5 percent in a year of turbulence and contrasting market developments.

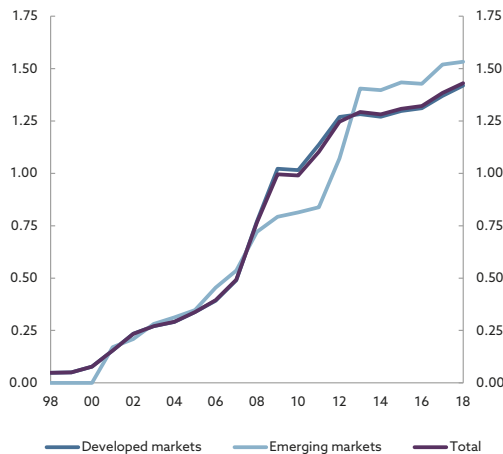
2018 brought considerable volatility in equity markets and ended weakly. The fund's investments in developed markets returned -9.1 percent, while those in emerging markets returned -12.8 percent.

Investments in North America made up 41.0 percent of the fund's equity portfolio and returned -3.7 percent. US stocks returned -5.4 percent in local currency and accounted for 38.8 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 -3.0 percent, due to the dollar strengthening against the currency basket.

European stocks returned -13.5 percent and amounted to 34.0 percent of the fund's equity investments. The UK was the fund's second-largest single market with 9.4 percent of its equity investments and returned -8.9 percent in local currency. Measured in the fund's currency basket, the return was -12.0 percent, due to the pound weakening against the currency basket.

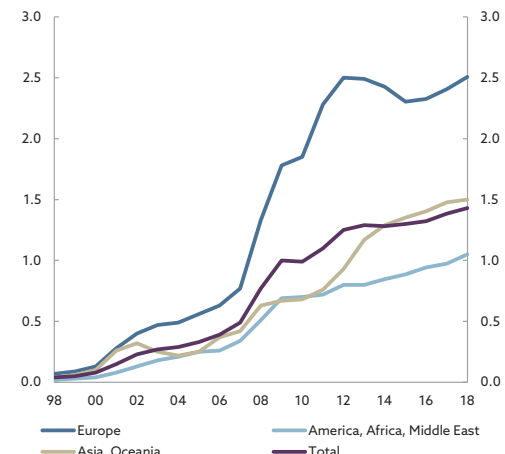
Investments in Asia and Oceania made up 22.2 percent of the fund's equity portfolio and returned -13.4 percent. Excluding Japan, the fund's third-largest single market, the region returned -13.8 percent. Japanese stocks made up 8.9 percent of the fund's equity holdings and

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



Source: FTSE, 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, Norges Bank Investment Management

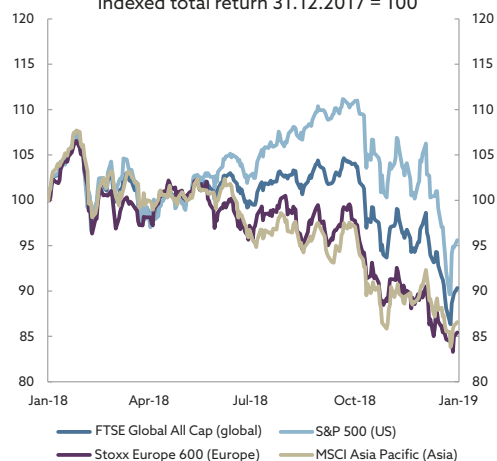


returned -17.1 percent in local currency. Measured in the fund's currency basket, the return was -12.7 percent, due to the yen strengthening against the currency basket.

Emerging markets (including frontier markets) accounted for 10.8 percent of the fund's equity investments. Chinese equities returned -16.9 percent in local currency, or -19.1 percent in the fund's currency basket. China accounted for 3.6 percent of the fund's equity investments and was its single largest emerging market, followed by Taiwan at 1.6 percent and India at 1.2 percent.

The fund's investments in these last two countries returned -6.2 and -4.9 percent respectively in local currency, or -6.8 and -10.8 percent measured in the fund's currency basket.

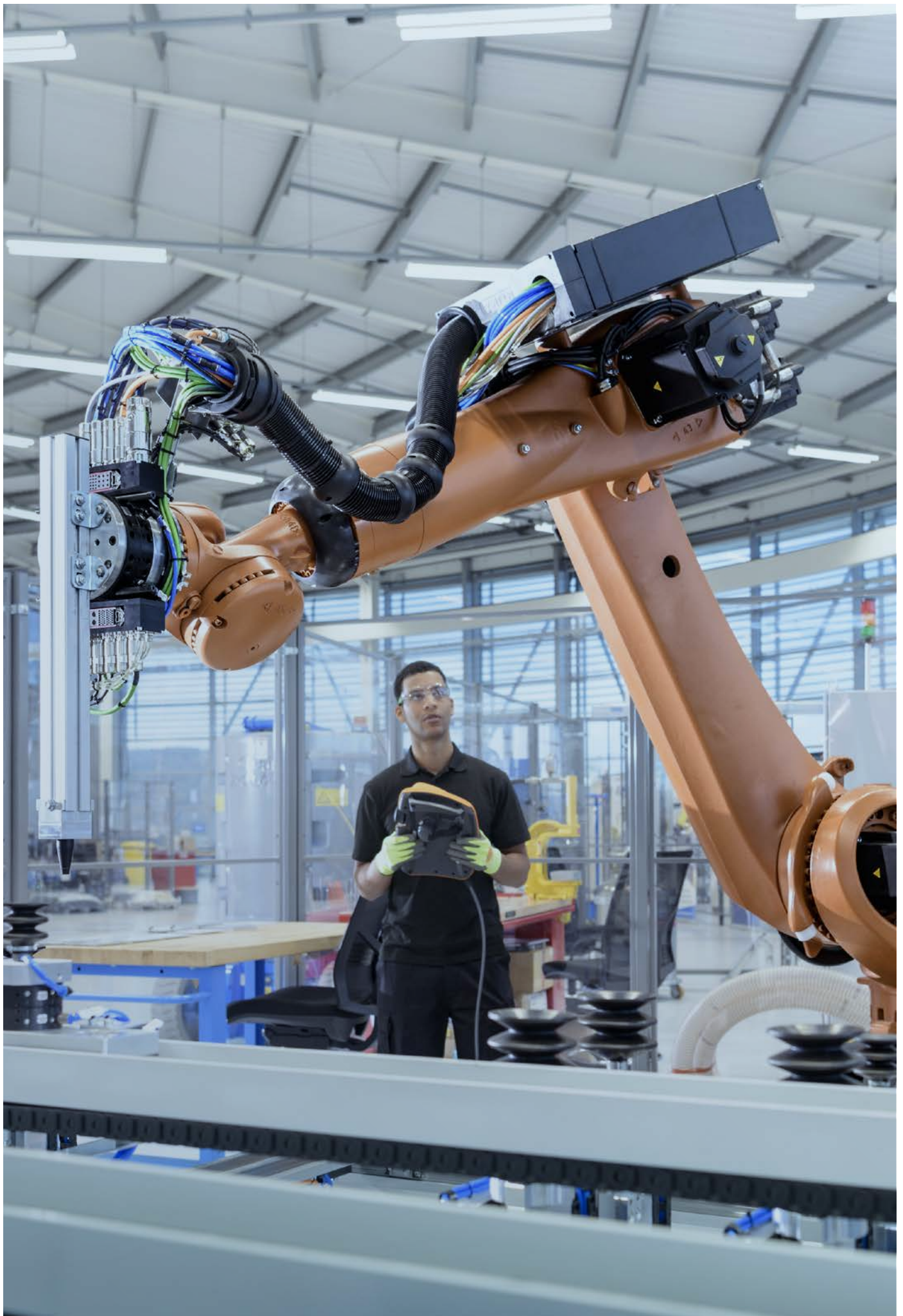
**Chart 9** Price developments in regional equity markets. Measured in US dollars, except for the Stoxx Europe 600, which is measured in euros. Indexed total return 31.12.2017 = 100



Source: Bloomberg

**Table 10** Return on the fund's largest equity investments in 2018 by country. Percent

Country	Return in international currency	Return in local currency	Share of equity investments
US	-3.0	-5.4	38.8
UK	-12.0	-8.9	9.4
Japan	-12.7	-17.1	8.9
France	-13.7	-11.6	5.1
Germany	-18.3	-16.3	4.9
Switzerland	-8.1	-9.4	4.5
China	-19.1	-16.9	3.6
Canada	-14.5	-9.1	2.2
Australia	-12.9	-5.6	2.1
South Korea	-18.4	-17.1	1.8



### Industrials and basic materials had weakest returns

Basic materials and industrials were the weakest-performing sectors in 2018, returning -15.5 and -15.4 percent respectively.

Basic materials stocks were hit by lower prices for metals and chemicals due to increased output and a cyclical downturn in demand exacerbated by fears about world trade.

Although demand for industrial goods largely held up well during the year, returns on industrial stocks were undermined by weaker expectations for future demand on the back of global trade turmoil and lower global growth.

Consumer goods companies were the third-weakest sector with a return of -12.9 percent. Carmakers and auto parts performed particularly poorly, returning -24.8 percent. The weaker business climate and global trade turmoil also played a role here. For example, car sales in China fell for the first time in 20 years. Companies in the sector also faced challenges from technological developments, emissions reductions and new European rules on measuring fuel consumption and emissions.

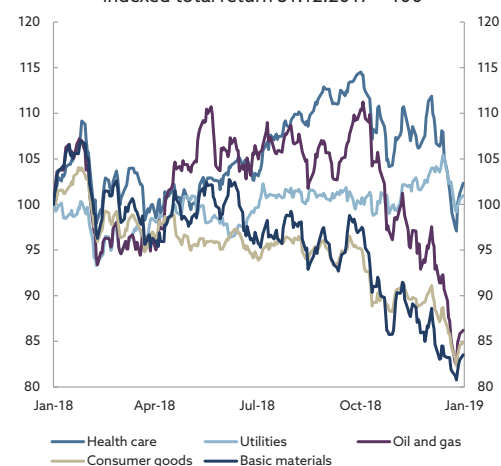
Only two sectors delivered a positive return in 2018. Health care companies performed best with a return of 1.8 percent, thanks to reduced fears about changes to the US health care system and good underlying earnings.

**Table 11** Return on the fund's equity investments in 2018 by sector. International currency. Percent

Sector	Return	Share of equity investments <sup>1</sup>
Financials	-12.7	23.7
Industrials	-15.4	12.9
Technology	-5.3	12.6
Consumer goods	-12.9	11.9
Health care	1.8	11.4
Consumer services	-5.6	10.8
Oil and gas	-9.5	5.9
Basic materials	-15.5	5.0
Telecommunications	-8.5	3.0
Utilities	1.7	2.8

<sup>1</sup> 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 31.12.2017 = 100



Source: FTSE

Utilities returned 1.7 percent. Companies in this sector are less sensitive to cyclical variations and global trade fears than those in other sectors, and therefore performed relatively well towards the end of the year when global stock markets tumbled.

### Largest investments

The investments in the technology company Microsoft Corp and consumer goods company Amazon.com Inc contributed the most to the fund's return in 2018, followed by the health care company Merck & Co Inc. The worst-performing investments were in the health care company Bayer AG, the technology company Facebook Inc and the consumer company Anheuser-Busch InBev SA/NV.

The largest investment in any one company was in Microsoft Corp. This investment accounted for 1.2 percent of the fund's equity portfolio and had a market value of 64.7 billion kroner at the end of the year. Otherwise the fund's top ten equity holdings consisted of three technology

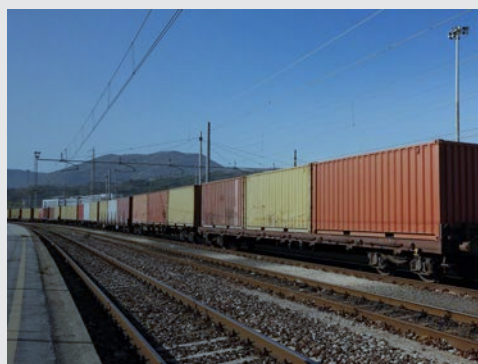
companies, three pharmaceutical companies, a consumer goods company, an oil and gas company and a financial services company.

Excluding listed real estate companies, the largest percentage holding in any one company was in consumer goods company Lear Corp. The fund's 8.2 percent stake was worth just over 5.6 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 180 initial public offerings during the year. The largest of these were at telecom company Softbank Corp, technology company China Tower Corp Ltd and consumer services company Meituan Dianping. The offerings in which the fund invested most were at Softbank Corp, financial services company AXA Equitable Holdings Inc and China Tower Corp Ltd.

### Berkshire Hathaway

Berkshire Hathaway is a US holding company with investments in a variety of insurance and reinsurance companies as well as railways, chemicals, consumer goods distribution, real estate and batteries. The company has its headquarters in Omaha, Nebraska, and has more than 377,000 employees.





**Table 12** The fund's largest equity holdings as at 31 December 2018. Millions of kroner

Company	Country	Holding
Microsoft Corp	US	64,715
Apple Inc	US	62,740
Alphabet Inc	US	57,634
Amazon.com Inc	US	54,771
Nestlé SA	Switzerland	53,914
Royal Dutch Shell Plc	UK	51,274
Roche Holding AG	Switzerland	39,573
Novartis AG	Switzerland	39,494
Berkshire Hathaway Inc	US	33,423
Johnson & Johnson	US	29,184
Facebook Inc	US	27,059
HSBC Holdings Plc	UK	27,020
Tencent Holdings Ltd	China	26,340
BP Plc	UK	25,368
JPMorgan Chase & Co	US	24,913
TOTAL SA	France	24,780
Taiwan Semiconductor Manufacturing Co Ltd	Taiwan	23,746
Samsung Electronics Co Ltd	South Korea	23,551
Exxon Mobil Corp	US	23,377
Linde Plc	US	22,467

**Table 13** The fund's largest ownership shares in the equity markets as at 31 December 2018. Percent

Company <sup>1</sup>	Country	Ownership
Lear Corp	US	8.2
Valeo SA	France	8.0
Smurfit Kappa Group Plc	UK	7.0
Akzo Nobel NV	Netherlands	6.9
Deutz AG	Germany	5.6
Spire Healthcare Group Plc	UK	5.5
ATM Grupa SA	Poland	5.4
Mersen SA	France	5.4
DS Smith Plc	UK	5.4
MHP SE	Ukraine	5.3
Viscofan SA	Spain	5.3
Heidelberger Druckmaschinen AG	Germany	5.1
Sato Holdings Corp	Japan	5.1
GrainCorp Ltd	Australia	5.1
Northgate Plc	UK	5.1
HT&E Ltd	Australia	5.0
Tim SA/Siechnice	Poland	5.0
Workpoint Entertainment PCL	Thailand	5.0
LANXESS AG	Germany	5.0
City Lodge Hotels Ltd	South Africa	5.0

<sup>1</sup> Excluding listed real estate investments.

### Novartis

Novartis AG is a Swiss producer of pharmaceutical and health-related products. The Novartis Institutes for BioMedical Research have more than 6,000 scientists and physicians working on finding new medicines. The company has its headquarters in Basel and has more than 122,000 employees worldwide.





**Table 14** Regional composition of the fund's equity holdings

Region	Millions of kroner <sup>1</sup>	Percent
North America	2,243,147	41.0
US	2,124,610	38.8
Canada	118,537	2.2
Europe	1,864,921	34.0
UK	512,347	9.4
France	278,329	5.1
Germany	267,986	4.9
Switzerland	245,059	4.5
Spain	95,470	1.7
Netherlands	94,037	1.7
Sweden	90,114	1.6
Italy	78,247	1.4
Denmark	51,409	0.9
Finland	41,459	0.8
Belgium	34,987	0.6
Asia	1,094,288	20.0
Japan	486,598	8.9
China	197,742	3.6
South Korea	96,298	1.8
Taiwan	90,340	1.6
Hong Kong	69,236	1.3
India	64,050	1.2
Oceania	123,695	2.3
Australia	116,938	2.1
Latin America	84,431	1.5
Brazil	53,451	1.0
Africa	43,234	0.8
South Africa	36,781	0.7
Middle East	25,043	0.5

<sup>1</sup> Does not sum up to total market value because cash and derivatives are not included.

**Table 15** Sector composition of the fund's equity holdings

Sector	Millions of kroner <sup>1</sup>	Percent
<b>Financials</b>	<b>1,299,103</b>	<b>23.7</b>
Banks	524,912	9.6
Real estate	288,280	5.3
Insurance	266,309	4.9
Financial services	219,601	4.0
<b>Industrials</b>	<b>708,762</b>	<b>12.9</b>
Industrial goods and services	592,560	10.8
Construction and materials	116,202	2.1
<b>Technology</b>	<b>689,838</b>	<b>12.6</b>
Technology	689,838	12.6
<b>Consumer goods</b>	<b>653,764</b>	<b>11.9</b>
Personal and household goods	267,455	4.9
Food and beverage	241,557	4.4
Automobiles and parts	144,751	2.6
<b>Health care</b>	<b>626,847</b>	<b>11.4</b>
Health care	626,847	11.4
<b>Consumer services</b>	<b>589,709</b>	<b>10.8</b>
Retail	312,757	5.7
Travel and leisure	154,347	2.8
Media	122,605	2.2
<b>Oil and gas</b>	<b>320,756</b>	<b>5.9</b>
Oil and gas	320,756	5.9
<b>Basic materials</b>	<b>271,304</b>	<b>5.0</b>
Chemicals	150,430	2.7
Basic resources	120,874	2.2
<b>Telecommunications</b>	<b>163,344</b>	<b>3.0</b>
Telecommunications	163,344	3.0
<b>Utilities</b>	<b>155,333</b>	<b>2.8</b>
Utilities	155,333	2.8

<sup>1</sup> Does not sum up to total market value because cash and derivatives are not included.

# Good return on real estate

**The fund's investments in unlisted real estate returned 7.5 percent in 2018 and made up 3.0 percent of the fund at the end of the year. Investments in listed real estate returned -10.3 percent.**

The management mandate from the Ministry of Finance sets an upper limit for unlisted real estate investments of 7 percent of the fund's value. 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 general limits in the mandate.

The fund's overall strategy for real estate management covers both unlisted and listed real estate investments. Together these amounted to 327 billion kroner at the end of the year.

## Unlisted real estate investments

We invested a total of 12.7 billion kroner in unlisted real estate in 2018, compared with 14.8 billion kroner in 2017. Our unlisted real estate investments had a market value of 246 billion kroner at the end of the year, equivalent to 3.0 percent of the fund and 75.1 percent of real estate management.

The return on 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, rental income net of operating costs contributed 3.6 percentage points to the return in 2018. 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 4.1 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 liabilities, and variable management fees.

**Table 16** Value of real estate investments as at 31 December 2018. Millions of kroner

	Value <sup>1</sup>
Unlisted real estate investments	246,013
Listed real estate investments	81,358
Aggregated real estate investments	327,371

<sup>1</sup> Including bank deposits and other receivables.

Transaction costs made a negative contribution of 0.2 percentage point. Exchange rate movements made a negative contribution of 0.1 percentage point as a result of different currency composition in the unlisted real estate portfolio and the fund's currency basket.

Investments in Europe returned 7.5 percent in local currency and accounted for 50.7 percent of the fund's unlisted real estate investments at the end of the year. Office rents rose in France and Germany but were more stable in the UK. The retail market faced a number of challenges, but exclusive shopping streets were again the best segment due to low vacancy and stable rents.

Investments in the US returned 7.8 percent in local currency and made up 47.8 percent of the fund's unlisted real estate investments at the end of the year. Prime office rents continued to climb in 2018, but more slowly than in previous years. The fund's four strategic cities performed

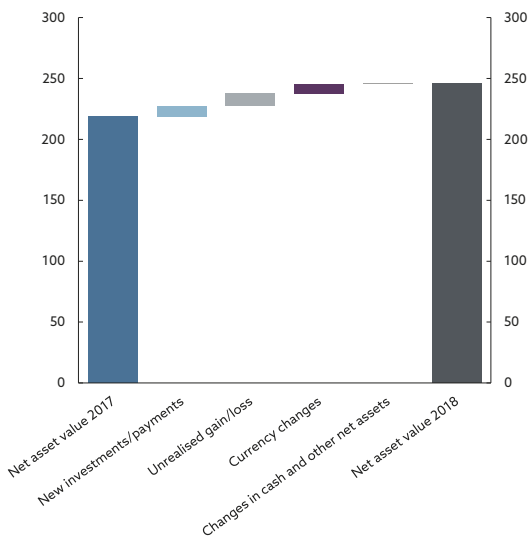
relatively well, with San Francisco the best. Transaction volumes in the US office market increased slightly overall, but varied from city to city.

Investments in Asia returned 3.4 percent in local currency and accounted for 1.5 percent of the fund's unlisted real estate investments at the end of the year. The market for prime retail in Tokyo saw stable rents and slightly higher vacancy. The office market featured record-low vacancy and rising rents.

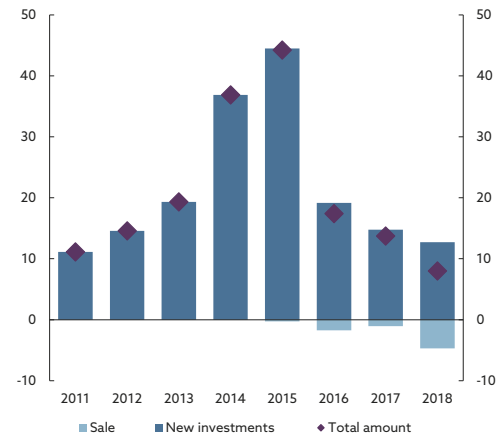
**Table 17** Return on the fund's unlisted real estate investments

	Since 01.04.2011	2018	2017	2016	2015	2014
Rental income (percentage points)	3.9	3.6	3.7	3.7	4.1	4.4
Change in value (percentage points)	3.6	4.1	3.8	0.7	6.7	7.1
Transaction costs (percentage points)	-1.2	-0.2	-0.2	-0.2	-0.2	-0.8
Currency effect (percentage points)	0.0	-0.1	0.1	-2.5	0.1	-1.0
<b>Total (percent)</b>	<b>6.4</b>	<b>7.5</b>	<b>7.5</b>	<b>1.7</b>	<b>10.8</b>	<b>9.6</b>

**Chart 11** Changes in the fund's market value by unlisted real estate investments in 2018. Billions of kroner



**Chart 12** Annual investments in unlisted real estate. Billions of kroner



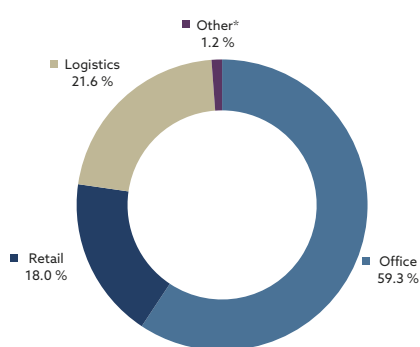
**Table 18** The fund's largest unlisted real estate investments. Office and retail by city as at 31 December 2018

City	Percent
London	23.0
New York	20.3
Paris	19.3
Boston	10.4
Washington, D.C.	6.3
San Francisco	6.0
Zurich	4.7
Sheffield	3.0
Tokyo	1.9
Berlin	1.6

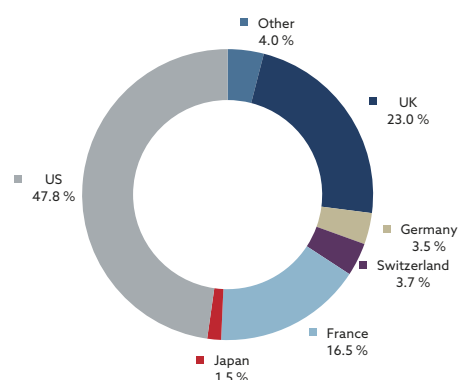
**Table 19** The fund's largest unlisted real estate investments. Logistics by country as at 31 December 2018

Country	Percent
US	61.5
UK	12.1
France	6.4
Spain	3.9
Netherlands	3.7
Czech Republic	2.8
Poland	2.7
Italy	2.5
Germany	1.7
Hungary	1.4



**Chart 13** The fund's unlisted real estate investments by sector as at 31 December 2018. Percent

\*Other sectors, bank deposits and other claims

**Chart 14** The fund's unlisted real estate investments by country as at 31 December 2018. Percent**Table 20** New investments in 2018

Address	City	Partner	Sector	Ownership Percent	Currency	Price Millions
Logistics property in California	San Francisco	Prologis	Logistics	45	USD	29.1
30 Warwick Street	London	The Crown Estate	Office	25	GBP	28.8
Logistics property in California	Orange County	Prologis	Logistics	45	USD	25.4
501 Boylston Street	Boston	TH Real Estate	Office and retail	49.9	USD	290.9
60 Holborn Viaduct	London	-	Office and retail	100	GBP	321.3
Logistics property and adjacent land plot in Pennsylvania	Carlisle	Prologis	Logistics	45	USD	39.7
Logistics property in Washington	Seattle	Prologis	Logistics	45	USD	29.3
121 Seaport Boulevard	Boston	American Realty Advisors	Office	45	USD	204.8
54-56 rue la Boétie	Paris	-	Office	100	EUR	415.5
79 avenue des Champs-Élysées <sup>1</sup>	Paris	-	Office	100	EUR	613.0

<sup>1</sup> This is a forward purchase where we have signed a purchase agreement. The full amount will be paid upon completion, expected in Q4 2019.



121 Seaport Boulevard, Boston



79 Champs Elysées, Paris



60 Holborn Viaduct, London



54-56 rue La Boétie, Paris



**Further information on unlisted real estate investments**

An extended report on the fund's unlisted real estate investments in 2018 will be available on our website [www.nbim.no](http://www.nbim.no) as soon as it is published.

### Listed real estate

Investments in listed real estate returned -10.3 percent in 2018 and had a market value of 81 billion kroner at the end of the year, equivalent to 1.0 percent of the fund and 24.9 percent of real estate management.

The fund's investments in listed real estate companies have exposure to properties of high quality in attractive cities and sectors globally that could be a natural part of the unlisted real estate portfolio. The listed portfolio consists mainly of companies with underlying exposure

to the same cities and sectors as the unlisted portfolio. Office properties account for about half of the listed portfolio.

The fund's top ten listed real estate investments consisted of seven companies from the US, six from the UK, two from Germany, one from France and one from Sweden. The fund's ownership share in Shaftesbury Plc was 24.6 percent at the end of 2018, and is the only listed company in the portfolio where the fund owns more than 10 percent.

**Table 21** The fund's ownership shares and holdings for the listed real estate investments as at 31 December 2018.  
Ownership shares in percent and holdings in million kroner

Company	Country	Ownership	Holding
Shaftesbury Plc	UK	24.6	6,913
Great Portland Estates Plc	UK	9.6	1,946
Vornado Realty Trust	US	9.5	9,684
Gecina SA	France	9.3	7,955
Paramount Group Inc	US	8.3	2,134
Capital & Counties Properties Plc	UK	7.9	1,703
Vonovia SE	Germany	7.7	15,638
Land Securities Group Plc	UK	7.3	4,806
Deutsche Wohnen SE	Germany	7.2	10,195
Svenska Cellulosa AB SCA	Sweden	7.2	3,408
Boston Properties Inc	US	6.9	10,318
JBG SMITH Properties	US	6.1	2,211
Federal Realty Investment Trust	US	6.1	4,569
Kilroy Realty Corp	US	6.0	3,268
Derwent London Plc	UK	5.7	1,997
Equity Residential	US	5.1	10,755
British Land Co Plc/The	UK	5.0	2,828

# Real estate investments

Share of market value

US  
47.9%

Other countries  
3.6%







# Slightly positive bond returns

**The fund's fixed-income investments returned 0.6 percent in 2018. Fixed-income markets were more volatile than the previous year.**

Fixed-income investments accounted for 30.7 percent of the fund at the end of the year. These investments were mainly in bonds, with the remainder in short-term securities and bank deposits. Ten-year US Treasury yields climbed through to November but then fell amid increased market turmoil to levels little higher than at the beginning of the year. Short-term rates in the US rose further than long-term rates.

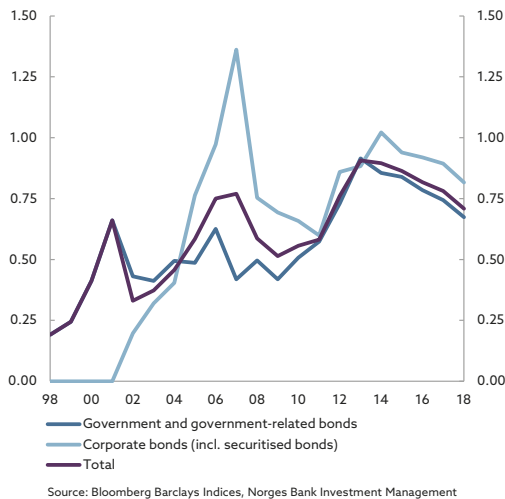
### Developed markets perform best

The fund's government bond holdings made up 56.6 percent of its fixed-income investments and returned 1.5 percent in 2018. Developed markets accounted for 47.7 percent of the fixed-income investments and returned 2.2 percent.

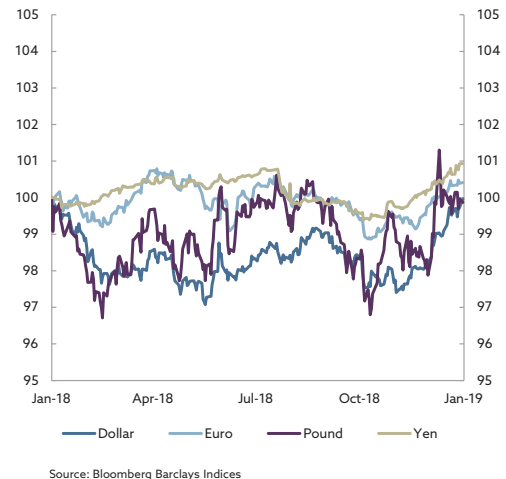
US Treasuries returned 0.8 percent in local currency and 3.4 percent measured in the fund's currency basket, and accounted for 21.4 percent of fixed-income investments, making them the fund's largest holding of government debt from a single issuer. A strong labour market combined with inflation around the 2 percent target led the Federal Reserve to increase its policy rate by 25 basis points four times during the year. It also continued to reduce its balance sheet.

Euro-denominated government bonds returned 1.7 percent in local currency and -0.7 percent in the fund's currency basket, and made up 11.0 percent of fixed-income investments. The healthy economic growth in the euro area in

**Chart 15** The fund's holdings in fixed-income markets. Percentage of market value of bonds in the benchmark index



**Chart 16** Price developments for bonds issued in dollars, euros, pounds and yen. Measured in local currencies. Indexed total return 31.12.2017 = 100



2017 was followed by weaker growth in 2018, but the ECB continued to taper its quantitative easing and discontinued the programme altogether in December. The risk premium on Italian government bonds increased considerably during the year and had a negative impact on the return.

UK gilts accounted for 2.6 percent of the fund's fixed-income investments and returned 0.4 percent in local currency and -3.0 percent in the fund's currency basket. The Bank of England raised its policy rate during the year for only the second time since the financial crisis.

Japanese government bonds accounted for 9.2 percent of fixed-income holdings and returned 0.6 percent in local currency and 5.9 percent in the fund's currency basket. The Bank of Japan continued to make substantial asset purchases during the year in a bid to keep ten-year yields stable around zero.

The strong dollar and increase in US interest rates contributed to turmoil in emerging markets. Government bonds in these markets, which made up 8.9 percent of the portfolio, returned -2.9 percent.

Inflation-linked bonds, all of which are issued by governments, returned -0.4 percent and amounted to 5.5 percent of fixed-income investments. Only minor changes to inflation expectations were priced into the market during the year.

**Table 22** Return on the fund's largest bond holdings by currency in 2018. Percent

Currency	Return in international currency	Return in local currency	Share of fixed-income investments
US dollar	2.3	-0.2	45.7
Euro	-1.6	0.8	26.3
Japanese yen	5.8	0.5	10.1
British pound	-3.8	-0.3	4.3
Canadian dollar	-4.3	1.8	3.7
Australian dollar	-3.5	4.5	2.5
South Korean won	3.2	4.9	1.7
Mexican peso	3.1	1.2	1.6
Swiss franc	1.9	0.5	1.1
Brazilian real	-4.0	9.4	0.9

The fund also held bonds from government-related institutions such as the Kreditanstalt für Wiederaufbau, Canada Mortgage & Housing Corp and the European Investment Bank. These returned -1.1 percent and accounted for 13.3 percent of the fund's fixed-income investments at the end of the year.

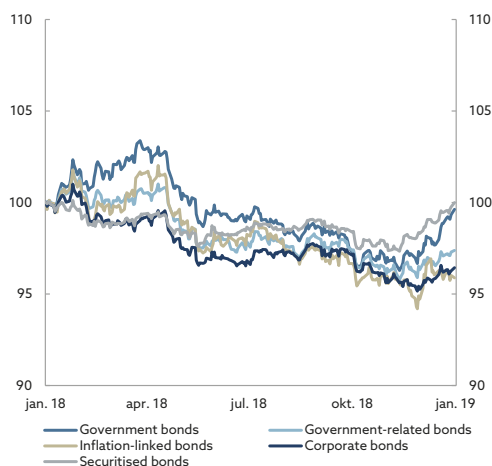
Corporate bonds returned -0.4 percent and represented 24.1 percent of fixed-income investments at the end of the year. A substantial increase in the credit premium during the year had a negative effect on the return.

Securitised bonds, consisting mainly of covered bonds denominated in euros, returned -0.9 percent and made up 5.6 percent of fixed-income holdings.

### Changes in fixed-income holdings

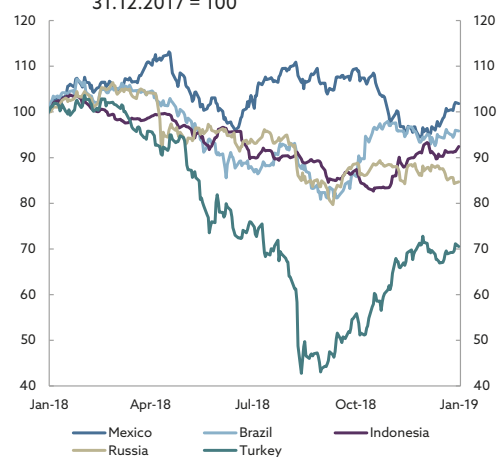
The largest increases in the market value of the fund's fixed-income investments were in government bonds from Japan, the US and South Africa, while the largest decreases were in government bonds from France, Germany and India. The largest holding of bonds from a single issuer was of US Treasuries, followed by Japanese and German government debt.

**Chart 17** Price developments in fixed-income sectors. Measured in US dollars. Indexed total return 31.12.2017 = 100



Source: Bloomberg Barclays Indices

**Chart 18** Price developments for government bonds issued in emerging market currencies. Measured in US dollars. Indexed total return 31.12.2017 = 100



Source: Bloomberg Barclays Indices

**Table 23** Return on the fund's fixed-income investments in 2018 by sector. International currency. Percent

Sector	Return	Share of fixed-income investments <sup>1</sup>
Government bonds <sup>2</sup>	1.5	56.6
Government-related bonds <sup>2</sup>	-1.1	13.3
Inflation-linked bonds <sup>2</sup>	-0.4	5.5
Corporate bonds	-0.4	24.1
Securitised bonds	-0.9	5.6

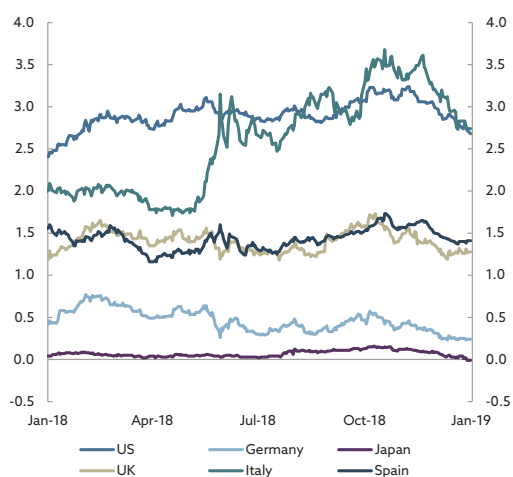
<sup>1</sup> Does not sum up to 100 percent because cash and derivatives are not included.

<sup>2</sup> 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 24** The fund's largest bond holdings as at 31 December 2018. Millions of kroner

Issuer	Country	Holding
United States of America	US	638,715
Japanese government	Japan	237,179
Federal Republic of Germany	Germany	106,116
UK government	UK	64,844
French Republic	France	47,998
South Korean government	South Korea	43,366
Mexican government	Mexico	42,594
Spanish government	Spain	41,388
Italian Republic	Italy	36,517
Australian government	Australia	36,399
Canada Mortgage & Housing Corp	Canada	31,785
Kreditanstalt für Wiederaufbau	Germany	27,475
Government of Indonesia	Indonesia	25,114
Brazilian government	Brazil	23,284
Government of South Africa	South Africa	21,139
European Investment Bank	International organisation	19,530
Government of Switzerland	Switzerland	18,757
Government of Canada	Canada	18,275
Indian government	India	17,007
Government of Malaysia	Malaysia	16,958

**Chart 19** 10-year government bond yields. Percent



Source: Bloomberg

**Table 25** Currency composition of the fund's bond holdings

Currency	Millions of kroner <sup>1</sup>	Percent
US dollar	1,157,451	45.7
Euro	666,827	26.3
Japanese yen	256,250	10.1
British pound	109,355	4.3
Canadian dollar	93,096	3.7
Australian dollar	63,304	2.5
South Korean won	43,299	1.7
Mexican peso	40,599	1.6
Swiss franc	28,668	1.1
Brazilian real	23,284	0.9
Indonesian rupiah	23,278	0.9
Swedish krona	23,232	0.9
South African rand	21,088	0.8
Indian rupee	17,089	0.7
Malaysian ringgit	16,958	0.7
Singapore dollar	15,693	0.6
Danish krone	12,771	0.5
Russian rouble	10,649	0.4
Colombian peso	9,649	0.4
New Zealand dollar	8,216	0.3
Polish zloty	6,034	0.2
Philippine peso	5,065	0.2
Turkish lira	2,966	0.1
Thai baht	2,088	0.1
Chinese yuan	1,974	0.1
Chilean peso	966	0.0

<sup>1</sup> Does not sum up to total market value because cash and derivatives are not included.



**Table 26** Sector composition of the fund's bond holdings

Sector	Millions of kroner <sup>1</sup>	Percent
Government bonds	1,433,456	56.6
Government bonds	1,433,456	56.6
Government-related bonds	336,579	13.3
Bonds issued by federal agencies	159,691	6.3
Bonds issued by local authorities	110,036	4.3
Bonds issued by supranational bodies	57,409	2.3
Sovereign bonds	9,443	0.4
Inflation-linked bonds	139,396	5.5
Inflation-linked bonds	139,396	5.5
Corporate bonds	609,314	24.1
Bonds issued by industrial companies	313,046	12.4
Bonds issued by financial institutions	252,867	10.0
Bonds issued by utilities	43,401	1.7
Securitised bonds	141,105	5.6
Covered bonds	141,105	5.6

<sup>1</sup> Does not sum up to total market value because cash and derivatives are not included.



4

# Management

# Lower return than the benchmark index

---

**We aim to leverage the fund's long-term investment horizon and considerable size to generate the highest possible return with acceptable risk. In 2018, the fund's return was 0.30 percentage point lower than the return on the benchmark index.**

The return on the fund's investments is measured against the return on a benchmark index from the Ministry of Finance consisting of global equity and bond indices. The equity portion of the benchmark index is based on the FTSE Global All Cap Index, which comprised 7,616 listed companies at the end of 2018. The bond portion of the benchmark index is based on indices from Bloomberg Barclays Indices, comprising 14,203 bonds from 2,407 issuers.

At the end of 2018, the fund was invested in 9,158 listed companies (including listed real estate companies) and 4,811 bonds from 1,254 issuers. The fund also had investments in 737 unlisted properties. The fund's allocation to real estate is funded through sales of equities and bonds tailored to the currency of each real estate investment. The benchmark index for equity and fixed-income management is therefore adjusted for these sales to permit accurate measurement of the relative return for all three asset classes.

In 2018, the fund's overall return was 0.30 percentage point lower than the return on the benchmark index. The fund has outperformed the benchmark index by 0.25 percentage point since 1998, 0.58 percentage point over the past decade, and 0.03 percentage point over the past five years. Equity management and fixed-income management generated relative returns of -0.69 percentage point and -0.01 percentage point against their respective benchmark indices.

### Reference portfolios for equities and fixed income

We construct a reference portfolio that reflects the fund's special characteristics better than the benchmark index from the Ministry of Finance. This reference portfolio serves as the starting point for the fund's investments. The aim of the reference portfolio is to obtain the best possible long-term risk/return profile for the fund, within the constraints imposed by the management mandate. We seek to improve diversification by including additional markets and market segments, and to improve returns through allocation to systematic factor strategies.

The internal reference portfolio for equity management returned -8.98 percent in 2018, 0.18 percentage point less than the equity portion of the benchmark index. This contributed -0.12 percentage point to the fund's relative return. The reference portfolio was invested more broadly in Chinese stocks than the benchmark index. This made a negative contribution, as did a higher weight of small companies.

The internal reference portfolio for fixed-income management returned 0.22 percent in 2018, 0.34 percentage point less than the bond portion of the benchmark index. This contributed -0.10 percentage point to the fund's relative return. The reference portfolio's allocation to emerging market countries outside the benchmark index contributed negatively to the relative return.

### Return relative to the reference portfolio

Equity management is measured against the equity portion of the reference portfolio and returned 0.51 percentage point less than the

reference portfolio in 2018, contributing -0.35 percentage point to the fund's relative return. Investments in the financial and consumer goods sectors contributed most negatively to the relative return. Of the countries the fund was invested in, the US made the most negative contribution to the relative return. The fund also had a higher weight of value stocks than the reference portfolio, which performed less well than the market as a whole in 2018 and so contributed negatively to the relative return.

Fixed-income management is compared with the bond portion of the reference portfolio and returned 0.33 percentage point more than the reference portfolio in 2018. This contributed 0.10 percentage point to the fund's relative return. A lower weight of corporate bonds in the portfolio compared with the reference portfolio made a positive contribution.

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.

We invest in real estate to improve the trade-off between risk and return in the fund. Real estate management contributed 0.19 percentage point to the fund's relative return in 2018. Unlisted real estate investments made a positive contribution of 0.24 percentage point to the relative return. The fund's properties in the US, with a return of 7.8 percent in local currency, made the greatest contribution. Listed real estate investments made a negative contribution of -0.05 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 6.0 percent. During this period, real estate investments were funded by selling bonds. The annual return on bond investments in the same period was 4.4 percent. From 2017, unlisted real estate has been funded through sales of equities and bonds. This benchmark index returned -2.1 percent in 2018, compared with 7.5 percent for the actual unlisted real estate portfolio.

#### **Contributions to relative return**

We employ a range of investment strategies in our management of the fund. These fall into three main categories: fund allocation, security selection and asset management. Fund allocation strategies aim to improve the fund's long-term exposure to markets and risks through a reference portfolio tailored more closely to the fund's special characteristics than the benchmark index, and contributed -0.24 percentage point to the fund's relative return in 2018. Security selection strategies consist of company analyses to enhance returns, provide fundamental insights into the fund's largest investments, and support the fund's role as a responsible and active owner, and contributed

-0.04 percentage point to the fund's relative return. Asset management strategies consist of systematic strategies and securities lending, and contributed -0.01 percentage point.

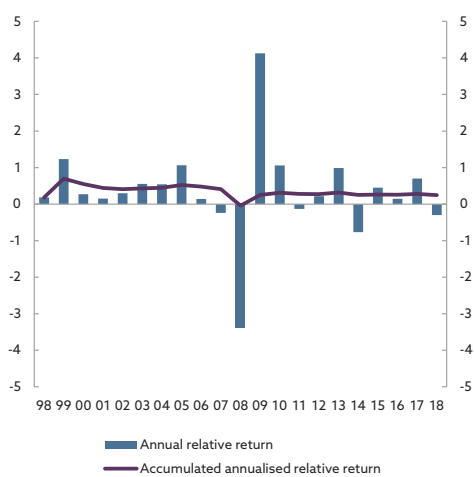
Equity investments produced a relative return of -0.69 percentage point in 2018, and fixed-income investments 0.00 percentage point.

The fund's relative return can also be broken down by asset class, where listed real estate investments are included under equity investments, and unlisted real estate investments are measured against the benchmark index defined by the Ministry of Finance. Decomposed in this way, equity investments contributed -0.48 percentage point to the fund's relative return, fixed-income investments 0.00 percentage point and unlisted real estate investments 0.34 percentage point. The allocation effect between asset classes was -0.16 percentage point.

**Table 27** Relative return. Percentage points

	2018
Fund	-0.30
Equity investments	-0.69
Fixed-income investments	0.00

**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

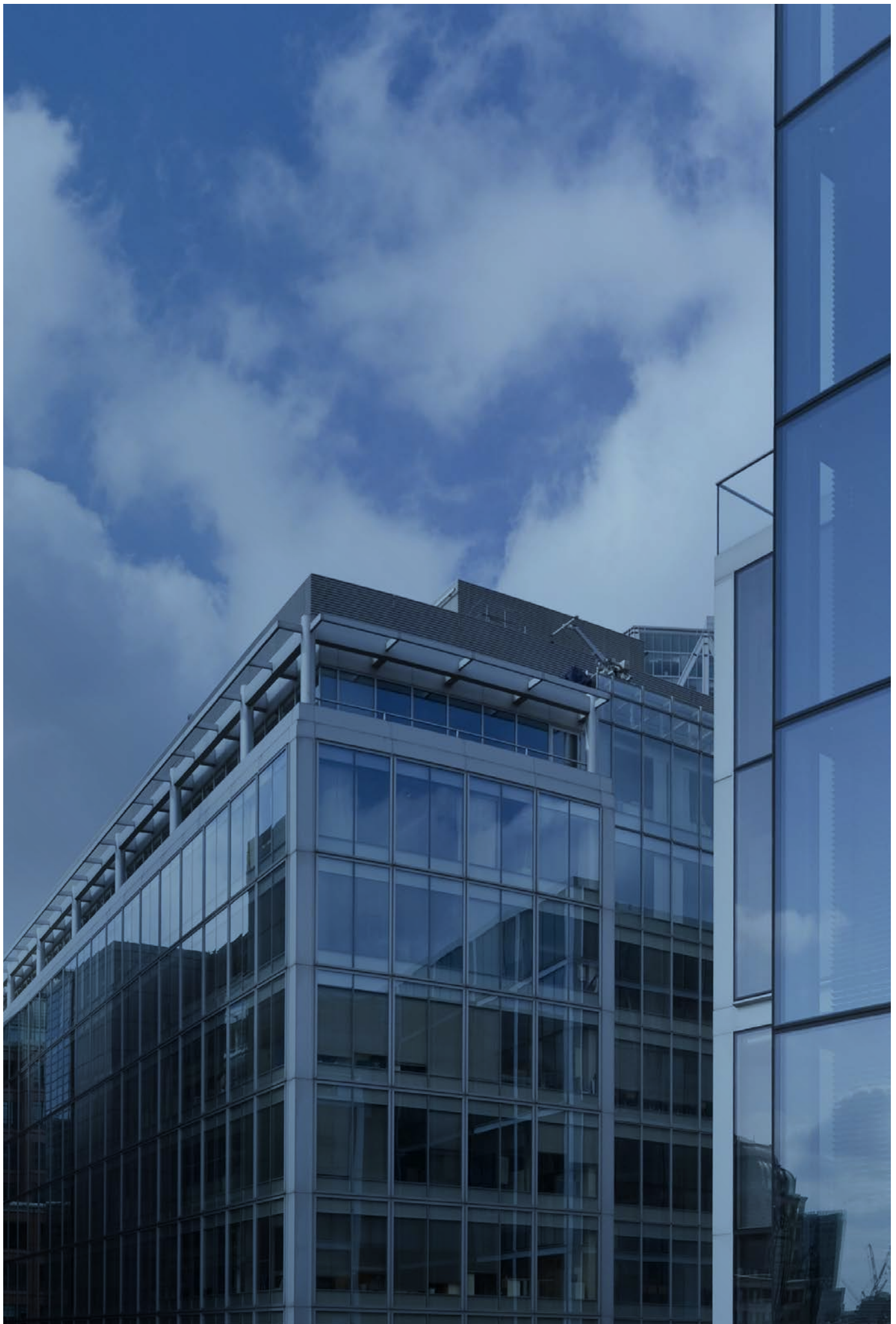


**Table 28** Relative return on the fund's asset management. Percentage points

Year	Fund <sup>1</sup>	Equity management	Fixed-income management	Real estate management
2018 <sup>2</sup>	-0.30	-0.69	-0.01	5.49
2017 <sup>2</sup>	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	-

<sup>1</sup> Includes real estate management from 01.01.2017. Relative return prior to 2017 is calculated on the equity and fixed-income management only.

<sup>2</sup> Measured against actual funding.



**Table 29** Contributions to the fund's relative return from investment strategies in 2018. Percentage points

	Equity management	Fixed-income management	Real estate management	Allocation	Total
Fund allocation	-0.32	-0.10	0.19	-0.01	-0.24
Reference portfolio	-0.12	-0.10			-0.22
of which systematic factors	-0.05				-0.05
Allocations	-0.20	-0.01	0.00	-0.01	-0.21
Real estate			0.19		0.19
Unlisted real estate			0.24		0.24
Listed real estate			-0.05		-0.05
Security selection	-0.10	0.06			-0.04
Internal security selection	-0.14	0.06			-0.09
External security selection	0.05				0.05
Asset management	-0.06	0.04			-0.01
Asset positioning	-0.02	0.02			0.01
Systematic factors	-0.09	0.01			-0.08
Securities lending	0.04	0.02			0.06
<b>Total</b>	<b>-0.47</b>	<b>0.00</b>	<b>0.19</b>	<b>-0.01</b>	<b>-0.30</b>

65

**Table 30** Contributions to the fund's relative return from investment strategies for 2013-2018. Annualised. Percentage points

	Equity management	Fixed-income management	Real estate management	Allocation	Total
Fund allocation	-0.07	-0.10	0.04	0.02	-0.10
Reference portfolio	-0.01	-0.09		0.00	-0.11
of which systematic factors	0.01				0.01
Allocations	-0.05	0.00	0.00	0.02	-0.03
Real estate			0.04		0.04
Unlisted real estate			0.05		0.05
Listed real estate			-0.01		-0.01
Security selection	0.10	0.01			0.10
Internal security selection	0.00	0.01			0.00
External security selection	0.10	0.00			0.10
Asset management	0.10	0.08		0.01	0.18
Asset positioning	0.06	0.07		0.01	0.14
Systematic factors <sup>1</sup>	-0.02	0.00			-0.02
Securities lending	0.05	0.01			0.06
<b>Total</b>	<b>0.13</b>	<b>-0.01</b>	<b>0.04</b>	<b>0.03</b>	<b>0.18</b>

<sup>1</sup> Systematic factors under Asset management is a new sub-strategy from 2018.

# Large fluctuations in market value

The value of the fund can fluctuate widely. In 2018, it ranged from a low of 7,952 billion kroner on 23 March to a high of 8,740 billion kroner on 29 August.

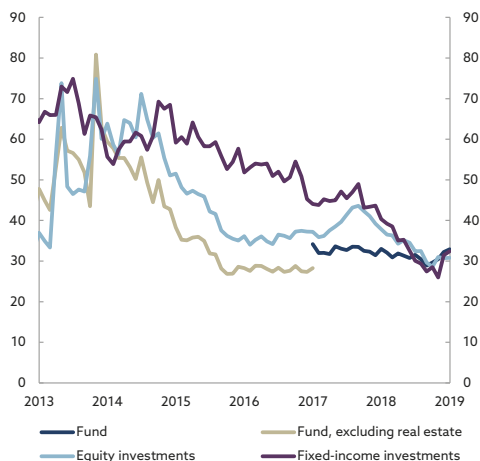
The fund's market risk is determined by the composition of its investments and by movements in share prices, exchange rates, interest rates, credit risk premiums and property values. As no single measure or analysis can fully capture the fund's market risk, we use a variety of measures and analyses – including expected volatility, factor exposures, concentration analysis and liquidity risk – to obtain the broadest possible picture of the fund's market risk.

Risk is controlled at the regional, sector and issuer levels. Some investment strategies expose the fund to tail risks, and we monitor these risks closely.

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 equity and fixed-income investments can normally be expected to fluctuate. Expected absolute volatility at the end of 2018 was 8.6 percent at the end of the year, or about 710 billion kroner, compared with 10.8 percent a year earlier. The decrease was due mainly to lower market volatility over the past three years than at the end of 2017.

We invest in real estate to create a more diversified portfolio. We expect real estate investments to have a different return profile to

**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)



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

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 expected relative volatility, or tracking error, which 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. Under the management mandate, all of the fund's investments, are now 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, including unlisted real estate, is 1.25 percentage points. The actual level at the end of 2018, including unlisted real estate, was 0.33 percentage point.

The Executive Board has also set a limit for expected shortfall between the return on 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 1.37 percentage points at the end of 2018.

#### Relative exposures

The fund is positioned differently to its benchmark index along several dimensions, including currencies, sectors, countries, regions, individual stocks and individual bond issuers. At the end of 2018, the fund had a higher weight of stocks of greater volatility than the average in the benchmark, and a higher weight of small companies than the benchmark. The equity portfolio also had an overweight to Chinese equities and to countries outside the benchmark's universe. The fixed-income portfolio had significant relative exposure to emerging market currencies. It also had less exposure to corporate bonds and a lower duration than the benchmark. This lower duration means that, in general, the fund is less sensitive than the benchmark index to changes in interest rates.

**Table 31** Key figures for the fund's risk and exposure

	Limits set by the Ministry of Finance	31.12.2018
Allocation	Equity portfolio 50 - 80 percent of fund's market value <sup>1</sup>	66.2
	Unlisted real estate no more than 7 percent of the fund's market value	3.0
	Fixed-income portfolio 20 - 50 percent of fund's market value <sup>1</sup>	32.2
Market risk	1.25 percentage points expected relative volatility for the fund's investments	0.3
Credit risk	Maximum 5 percent of fixed-income investments may be rated below BBB-	2.2
Ownership	Maximum 10 percent of voting shares in a listed company in the equity portfolio <sup>2</sup>	9.6

<sup>1</sup> Derivatives are represented with their underlying economic exposure.

<sup>2</sup> Investments in listed and unlisted real estate companies are exempt from this restriction.



The fund had 246 billion kroner invested in unlisted real estate and an allocation to listed real estate investments of 81 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 now measured against the fund's benchmark index composed of global equity and bond indices. Real estate investments were among the fund's largest relative exposures at the end of the year.

**Factor exposures**

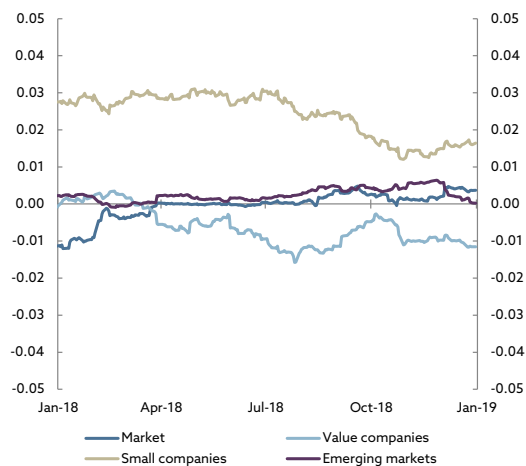
We measure the fund's exposure to various systematic risk factors, such as small companies, value stocks and bonds with credit premiums. These risk factors capture common variations in returns on securities with similar characteristics and contribute to both the risk and the return on investments. Exposure to these factors can be estimated using the

correlation between the fund's historical relative return and the return on these factors.

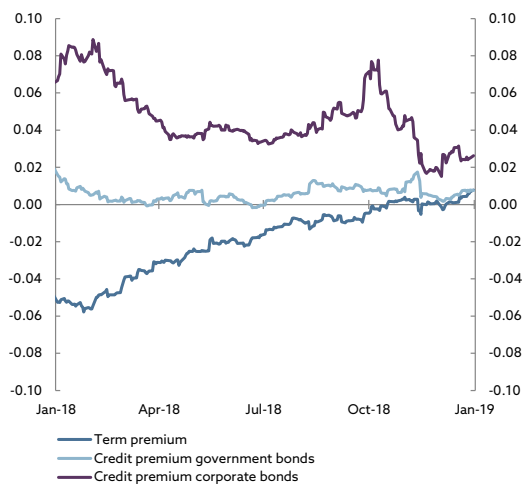
Such an analysis of factor exposures for equity management indicates that the fund was more closely correlated with small companies than the benchmark index was at the end of 2018. Around 25 percent of the variation in the relative return from equity management could be explained by general market movements and exposure to value stocks, small companies and emerging markets. An analysis of fixed-income management indicates that the fund had limited correlation with movements in the term and credit premiums at the end of 2018. The model's explanatory power was around 5 percent.

The results of such statistical regressions are uncertain, and we also use several other approaches to analyse the fund's factor exposures. For more information on the fund's investment risk, see note 8 to the financial reporting.

**Chart 23** Factor exposures of the fund's equity management. Coefficients



**Chart 24** Factor exposures of the fund's fixed-income management. Coefficients



**Table 32** Expected relative volatility of investment strategies as at 31 December 2018. 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 estate management	Allocation	Total
Fund allocation	11	9	26	5	30
Reference portfolio	9	9			12
of which systematic factors	7				7
Allocations	5	3	0	5	8
Real estate			26		26
Unlisted real estate			19		19
Listed real estate			9		9
Security selection	12	2			12
Internal security selection	10	2			10
External security selection	5				5
Asset management	6	2			7
Asset positioning	5	2			7
Systematic factors	3				3
<b>Total</b>	<b>20</b>	<b>9</b>	<b>26</b>	<b>5</b>	<b>33</b>

**Table 33** The fund's fixed-income investments as at 31 December 2018 based on credit ratings. Percentage of bond holdings

	AAA	AA	A	BBB	Lower rating	Total
Government bonds	27.8	7.0	13.5	3.8	1.8	53.9
Government-related bonds	5.5	4.8	1.8	0.6	0.0	12.7
Inflation-linked bonds	4.3	0.5	0.2	0.2	0.0	5.2
Corporate bonds	0.2	1.9	8.4	12.0	0.4	22.9
Securitised bonds	4.3	0.9	0.1	0.0	0.0	5.3
<b>Total</b>	<b>42.1</b>	<b>15.1</b>	<b>24.0</b>	<b>16.6</b>	<b>2.2</b>	<b>100.0</b>

**Further information on return and risk**

An extended report on return and risk in 2018 will be available on our website [www.nbim.no](http://www.nbim.no) as soon as it is published.



## 4.3 INVESTING RESPONSIBLY

# Long-term and responsible

## Responsible investment supports the objective of the highest possible return with acceptable risk.

Responsible investment supports the fund's 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 therefore consider governance and sustainability issues that could impact on the fund's long-term return. We integrate this into our work on setting standards, active ownership and investing sustainably.

### Establishing principles

Our goal is to contribute to well-functioning markets and good corporate governance. The fund's investments span 73 countries. Common standards and principles provide consistency across markets and raise the bar for all companies. We recognise a set of 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 2018, we participated in 13 public consultations relating to responsible investment and were in regular contact with international organisations, regulators and other standard setters. These consultations covered issues that we consider important, such as differentiated voting rights, national corporate governance codes, sound voting systems, and standards for corporate disclosure. We had meetings with the OECD, the UN Global Compact and the European Commission as well as standard setters in France, Germany, Japan, South Korea, Sweden, Switzerland and the UK. We used these meetings to raise issues we consider a priority, such as board composition and independence,

shareholders' voting rights, executive remuneration, and anti-corruption.

Since 2008, we have published clear expectations of the companies we invest in. We want companies to be equipped to deal with global challenges that may lead to major changes in the market and eventually affect their profitability. We have previously issued expectation documents on children's rights, climate change, water management, human rights, and tax and transparency. In 2018, we published two new expectation documents on anti-corruption and ocean sustainability and updated the expectations on climate change and water management. We expect boards to understand how their companies impact on the environment and society, set their own priorities and report on the results.

In February, we published our expectations of companies when it comes to combating corruption, which is important for long-term profitability and responsible business practices. As a financial investor, we expect companies to have clear policies and take effective action to prevent corruption. Our expectations reflect international anti-corruption legislation and global anti-corruption standards. Boards should ensure that measures are implemented and enforced, and that the ensuing responsibilities are assigned and communicated in the organisation. Measures to combat corruption should be continuously monitored and improved.

In September, we published our expectations of companies when it comes to sustainable uses of the ocean. Pollution and over-exploitation of the

ocean could impair companies' long-term economic performance. At the same time, the ocean offers new and more sustainable business opportunities for many industries. Our expectations are aimed both at companies with activities directly in or on the ocean, and at land-based companies that depend or impact on the ocean through their activities or products. The fund is invested in around 1,000 such companies. Our expectations cover topics such as overfishing, land-based pollution, sustainable shipping, and economic activity in areas of particular ecological or biological significance. The expectations form the basis for dialogue with companies, and we have also used them to support our work on developing principles for sustainable ocean business for the UN Global Compact.

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 2018, we supported two research projects looking at the financial consequences of climate change, one at New York University Stern School of Business and one at Columbia University.

### **Exercising ownership**

The fund has a small stake in 9,158 companies across the globe. We hold boards to account for their decisions, and we consider who should sit on the board.

We voted on 113,546 items at 11,287 shareholder meetings in 2018. To support our ownership work, we publish our views on selected corporate governance issues. In 2018, we issued three position papers on the effectiveness and composition of the board. We

will use these as a starting point for our voting and our dialogue with company boards.

The board should collectively have a thorough understanding of the industry in which the company operates, and have sufficient industry expertise to monitor management's implementation of corporate strategy. We therefore believe that a majority of independent board members should have fundamental industry insight, and at least two of the independent members should have worked in the industry.

Board members should devote sufficient time to fulfil their responsibilities effectively. We therefore believe that board members at listed companies should not serve on more than five boards at one time, and that the chairperson of a leading company should generally not chair the board of another company.

The board should exercise objective judgement and be able to make decisions independently of management. The board should therefore be chaired by an independent non-executive member, and the roles of CEO and chairman should not be held by the same individual.

We held 3,256 meetings with 1,420 companies during the year. In our dialogue with companies, we raise governance and sustainability issues relevant to our long-term return. We prioritise a number of strategic topics in this dialogue that we follow up over a number of years. In 2018, the focus was on sustainability, board accountability and effectiveness, executive remuneration and shareholder rights. In addition to these strategic topics, we monitored ongoing governance and sustainability developments at companies in the portfolio. We prioritise our largest investments, which we know best, and engage in regular dialogue with companies

representing about two-thirds of the value of the portfolio. In addition, we publish expectations and positions which are relevant to all of the companies in our portfolio, and we engage with individual companies on our strategic priorities and specific developments.

In 2018, we followed up our seven expectation documents by engaging with selected companies, assessing companies' sustainability reporting, and supporting various industry initiatives. In our dialogue with companies, we raised matters such as banks' climate disclosure, deforestation, automotive supply chains, tax and transparency at UK companies, marine pollution from agriculture, the marketing of breast-milk substitutes, and the management of corruption risks. We also brought up company-specific incidents coming to our attention in our management of the fund.

We assessed 1,700 companies' reporting on climate change, 598 companies' reporting on water management and 600 companies' reporting on children's rights during the year. We also looked at how selected companies report on deforestation, anti-corruption, human rights, tax and ocean sustainability. The companies assessed accounted for 62 percent of the equity portfolio's market value at the end of the year. We have been assessing companies' sustainability reporting since 2008. We saw improvements in all of the areas we looked at in 2018. When it comes to climate risks, more than half of companies in selected high-risk sectors reported data to the CDP disclosure platform for the first time. We reach out to companies with poor or limited disclosure. In 2018, we sent letters to 35 companies on children's rights, 35 on climate change and 30 on water management. Of the companies we contacted about weak reporting in 2017, 36 percent of those contacted about climate change have now

introduced climate reporting, while 39 percent of companies contacted about water management and 18 percent contacted about children's rights have improved their performance.

We support initiatives that bring companies together to find joint solutions and standards for sustainable business conduct. These initiatives work best when numerous companies in a particular sector or value chain face the same challenges. In 2018, we contributed to initiatives on children's rights in the apparel sector, water risks related to food production, climate data for the financial sector, human rights in the global apparel supply chain, tax disclosure in the consumer sector, and anti-corruption efforts in the pharmaceutical sector.

### **Investing sustainably**

Investing sustainably is an integral part of the fund's investment strategy. Our aim is to identify long-term investment opportunities and reduce the fund's exposure to unacceptable risks.

We encourage companies to move from words to numbers, so that we can evaluate their business activities and obtain a better understanding of financial risks and opportunities. To perform analyses of this kind, we need governance and sustainability data.

We support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) 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 greenhouse gas emissions from companies in our portfolio and various climate scenarios for



the fund. In 2018, the equity portfolio emitted 107 million tonnes of CO<sub>2</sub>-equivalents.

We had 43.3 billion kroner invested in dedicated environment-related equity mandates at the end of the year, down 24.5 billion kroner from 67.8 billion kroner a year earlier. We also had 13.4 billion kroner invested in green bonds, up 6.3 billion kroner from 7.1 billion kroner at the end of 2017. The environment-related equity mandates returned -8.3 percent in 2018, while the FTSE Global All Cap index returned -7.3 percent. The environment-related mandates were originally managed both internally and externally, but the Bank decided to discontinue the external mandates in 2018 to reduce management costs. The environment-related mandates are now managed entirely in-house.

The Ministry of Finance has established ethically motivated guidelines for observation and exclusion of companies from the fund. The guidelines contain criteria for exclusion based either on the companies' products or on their conduct. The fund must not be invested in companies that produce certain types of weapons, base its operations on coal, or produce tobacco. The fund must also not be invested in companies that through their conduct contribute to violations of fundamental ethical norms. In 2018, Norges Bank excluded 13 companies, placed four companies under observation, and decided on active ownership for one company. The Executive Board's decisions were based on recommendations from the Council on Ethics. These recommendations were generally followed, the exception being the case where the Executive Board opted for active ownership instead of placing the company under observation.

The fund itself may also decide to divest from companies that impose substantial costs on other companies and society as a whole, and so

are not considered long-term sustainable. In 2018, we divested from 30 companies following assessments of governance and sustainability risks. We divested from 15 companies in response to climate risks, nine as a result of corruption risks, four for their handling of human rights, and two in the light of other unacceptable risks. Altogether, we have divested from 240 companies since 2012.

#### Responsible real estate investment

We work with our partners and asset managers to integrate sustainability measures into the business plans for the fund's properties.

We measure the environmental performance of the real estate portfolio annually against the Global Real Estate Sustainability Benchmark (GRESB). The portfolio scored 76 out of 100 in 2018, up from 70 in 2017. 66 percent of the fund's portfolio of office and retail properties were environmentally certified at the end of the year, up from 60 percent a year earlier. In addition, 31 logistics properties had obtained green building certifications on the basis of their sustainable design and construction.

Many of the fund's real estate investments are in cities exposed to extreme weather risks. We estimate that 4 percent of the portfolio by value is in locations that have experienced coastal or river flooding at least once in the last century. We have integrated flood risks into our strategy for buying and managing real estate.

In 2018, we joined an investor network co-ordinated by the UN Environment Programme's Finance Initiative which aims to help real estate investors assess their exposure to physical climate risks. We also launched a platform for various types of sustainability data across the real estate portfolio, including information on energy and water consumption, and carbon emissions.



**Further information on responsible investment**

An extended report on responsible investment in 2018 is available on our website [www.nbim.no](http://www.nbim.no).



# 5

# Organisation

# Organisation

38

Nationalities

New York

77

601

Employees



78



○ Oslo

**349**

○ London

**126**

○ Singapore

**40**

○ Shanghai

**9**





# A focused investment organisation

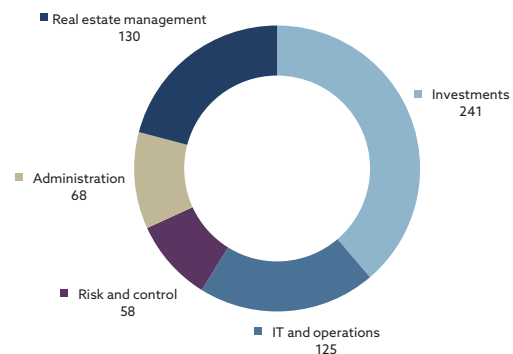
**The management of the fund is an important and complex undertaking that requires constant development of the management organisation.**

Our employees have the knowledge and experience needed to manage a fund that is invested across much of the world. We have a performance and investment culture tailored to this task. Employees are result-oriented and expected to meet high standards of precision and quality. We work actively on further developing an international investment organisation and performance culture.

Employees from 38 different nations bring considerable diversity to the organisation. One particular aim is to increase the proportion of women. We are keen to attract and retain female staff in general and female managers in particular. At the end of 2018, 29 percent of employees and 22 percent of managers were women.

We had 601 employees at the end of the year. The organisation is geared to the scope and complexity of the fund's management. The number of permanent employees increased by 28 during the year, compared with five in 2017. There are also 21 employees at subsidiaries related to the management of the real estate portfolio. A total of 42 percent of the workforce was based at our overseas offices in London, New York, Shanghai and Singapore at the end of the year, against 45 percent a year earlier. We have expanded and upgraded our office capacity in London and New York.

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



### Investment platform

We launched a new technological platform in 2018 that is more secure, efficient and automated. Investment management is heavily IT- and data-intensive. We use IT systems in every area of the fund's management, including trading, securities lending, valuation, accounting and the measurement of performance and risk. These processes are largely automated. Most of our IT systems are standard solutions customised to our requirements, and are supplied and operated by third parties. In some areas, our needs mean that standard solutions cannot be used, in which case we develop our own IT solutions and integrate them with our portfolio management system.

We consolidated and simplified our portfolio of IT systems in 2018, insourcing a number of areas to ensure a more efficient operating model and better data quality. We implemented and monitored 360,806 transactions in 2018. To make our operating model even more streamlined and efficient, we are working on migrating our system solutions to a cloud environment. Automation and standardisation are important for ensuring scalable and efficient processes. We have sound processes for developing and updating our systems as well as for managing and following up disruptions. Investments in less-developed markets require expertise and capacity to handle more manual and non-standardised processes. We pay considerable attention to IT and information security. Information security has been tightened further in the light of new requirements and external threats.

IT infrastructure is an important element of the operational execution of our management task and a source of operational risk in itself. We have processes in place to manage this risk and have established internal control activities for

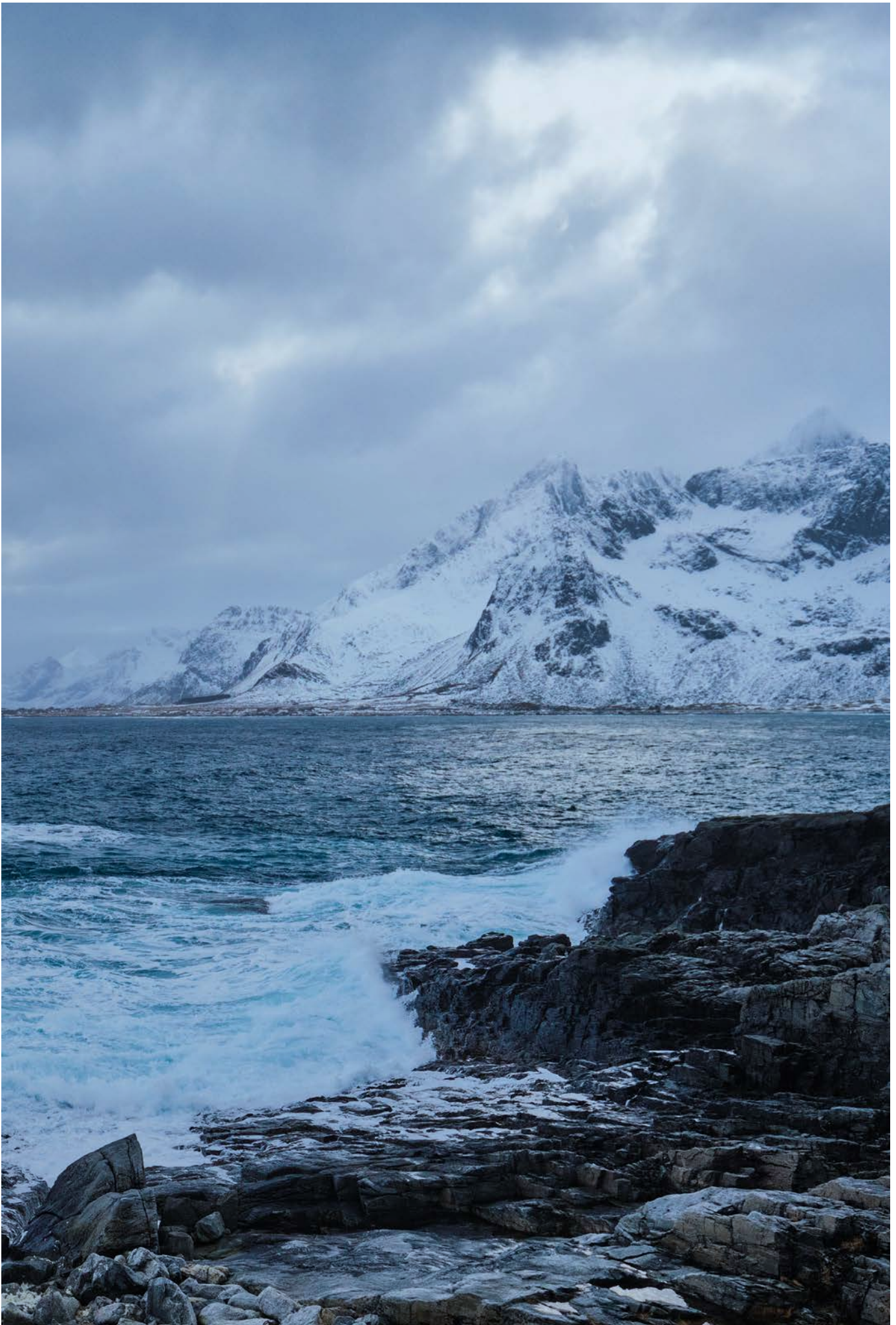
information security and transaction management. This includes access management, integrity and traceability in automated processes.

### Transparency

Our role is to manage financial assets for future generations responsibly, efficiently and transparently. Given the fund's size and importance, there is considerable public interest in its management both in Norway and abroad.

A high degree of transparency is a key element of our strategy. We strive constantly to increase knowledge about the fund and provide clear and relevant information on all aspects of its management.

We held five press seminars and two press conferences during the year, where we presented our reports and results. We also responded to around 800 media requests, more than half of them from outside Norway. In 2018, we hosted the Norwegian Finance Research Conference for an eighth time, issued two publications on topics relevant to the management of the fund, and published 11 letters to the Ministry of Finance with advice and information on investment strategy. We also receive numerous invitations to present the fund at conferences each year. The leader group and selected representatives of the fund gave presentations at more than 130 events in 2018. The fund also launched a Facebook page during the year.



5.2 OPERATIONAL RISK MANAGEMENT

# 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.

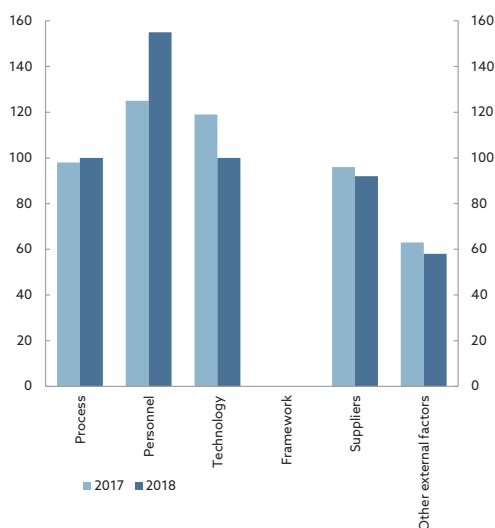
Our calculated operational risk exposure was within this limit throughout 2018. We work systematically to identify operational risks and improve our processes to prevent unwanted events. Reporting and following up on these events are an important part of our efforts to improve operations and internal controls.

**Unwanted events in 2018**

We registered 505 unwanted events in 2018, up from 501 in 2017. Most had no financial consequences, while five were considered significant. Altogether, unwanted events had an estimated financial impact of 40.8 million kroner.

Two of the five significant events had direct financial consequences, amounting to around 14.6 million kroner in total. The first was a human error in securities trading, while the second was a failure in the handling of a corporate action when transferring securities from external to internal managers. The other three events were related to information technology and security and had no direct financial consequences.

**Chart 26** Unwanted events at Norges Bank Investment Management sorted by cause



**Compliance with guidelines**

The Ministry of Finance has issued guidelines for the fund’s management. No significant breaches of these guidelines were registered in 2018, and we did not receive any notifications from local supervisory authorities of any significant breaches of market rules or general legislation.



# Low management costs

**We maintain a high level of cost awareness in our management of the fund and work continually to simplify and streamline operations in order to realise economies of scale.**

We place emphasis on upholding high standards of quality in the fund's management and ensuring robust controls, good risk management and cost effectiveness.

Total management costs as a share of assets under management have been relatively stable in recent years, despite the build-up of a portfolio of unlisted real estate investments and an increase in capital managed externally. Management of the fund has become more complex over time, with a higher allocation to equities, investments in more markets and currencies, as well as increased expectations and requirements related to responsible investment and reporting.

The fund's objective as set out in the mandate from the Ministry of Finance is the highest possible return after costs. Management costs are low, both as a percentage of assets under management and in comparison with other investment managers. 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 management costs have been between 11 and 14 basis points lower than for comparable funds since 2012. This analysis takes into account the size and composition of different asset classes.

The CEM report is considered the best source of information on cost levels in comparable funds.

## Management costs

Total management costs in Norges Bank were 4.5 billion kroner in 2018, down from 4.7 billion kroner in 2017. The reduction is primarily due to lower costs for external managers and slightly lower personnel costs. The weak return in 2018 reduced performance-based pay. This was partly offset by implementation costs related to the new model for IT services, and implementation of the EU's MiFID II regulations which resulted in increased costs for research services. There was also a slight increase in depreciation costs relating to previously completed projects.

The Ministry of Finance sets an upper limit for management costs as a proportion of assets under management. In 2018, the limit was 7 basis points. Norges Bank is reimbursed for costs incurred in its management of the fund up to this limit. Management costs in subsidiaries are measured against the limit, but are not reimbursed since they are expensed directly in the portfolio result. In addition, Norges Bank is reimbursed for performance-based fees paid to external managers. Management costs measured against the upper limit were 4.0 billion kroner in 2018, consisting of 3.9 billion kroner incurred in Norges Bank, excluding performance-based fees to external managers, and 0.1 billion kroner incurred in subsidiaries. This is equivalent to 0.047 percent of assets under management, a reduction from 0.050 percent in 2017.

Management costs are incurred in subsidiaries that have been established as part of the fund's unlisted real estate investments. These amounted to 108 million kroner in 2018, down

from 116 million kroner in 2017. The subsidiaries also incur other operating costs for maintaining, operating and developing properties and leases. These are not costs related to investing in real estate, but costs for operating the underlying properties once they are acquired and are therefore not defined as management costs.

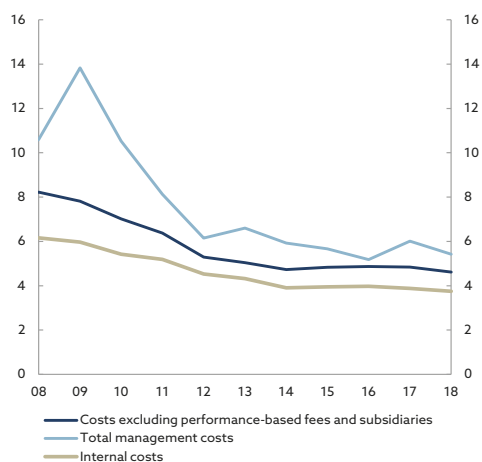
Fixed and variable fees to external managers accounted for 31 percent of management costs in 2018. Our strategy is to use external managers mainly for investments in emerging markets and small- and mid-cap stocks in certain markets where it is not efficient to build up internal expertise. Some of these costs vary with achieved excess return compared to a benchmark index. Fees to external managers are expected to be offset by excess returns for the fund and will increase in line with excess returns. Agreements with external managers for performance-based fees are structured so that

the majority of the positive excess return is retained by the fund.

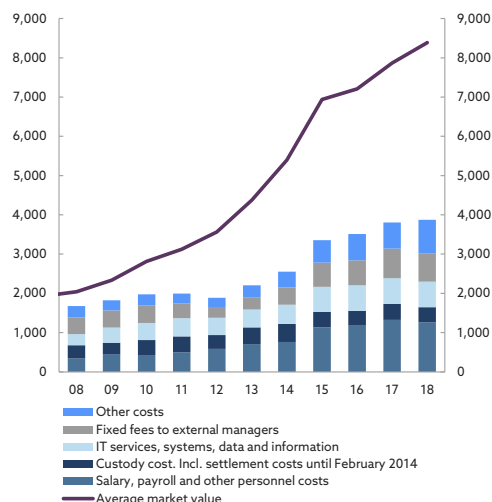
Performance-based fees to external managers were lower than in 2017, due to lower excess returns from external management and reduced assets under external management. Base fees to external managers were also reduced due to reduced assets under external management.

The fund's investments in equities and bonds must be registered with local securities depositories around the world. We have enlisted a global custodian institution to assist us with this process. Custody and related services accounted for 8 percent of management costs in 2018. Custody costs have fallen substantially in recent years.

**Chart 27** Management costs as a share of assets under management. Basis points



**Chart 28** Development of individual cost components. Costs<sup>1</sup> (millions of kroner, left-hand axis) and average market value (billions of kroner, right-hand axis)



<sup>1</sup>Excluding performance-based fees and subsidiaries



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 billed and paid in foreign currency. For example, a 10 percent change in the exchange rate for the Norwegian krone against other currencies will increase or decrease management costs by around 340 million kroner. The weakening of Norwegian kroner 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 the completed transactions. For equities and bonds, these normally comprise commission fees, transaction taxes and stamp duties. For unlisted real estate, these are one-off costs incurred when purchasing or selling properties, such as transaction taxes, stamp duty, registration fees, due diligence costs and insurance.

We work continuously to keep transaction costs low. We do this by taking account of transaction 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. The fund also selects the counterparties that can execute our investment decisions most cost-efficiently and with low commissions. Transaction costs are

expensed directly in the portfolio result and are not included in management costs. Transaction costs amounted to 3.0 billion kroner in 2018, compared to 3.1 billion kroner in 2017. This includes 0.4 billion kroner related to unlisted real estate, and 2.5 billion kroner related to equity transactions.

#### **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 based on actual costs or by using allocation keys such as for example the number of employees or volume.

Management costs for unlisted real estate for 2018 are equivalent to 0.19 percent of assets under management. Management costs in the same period for external security selection are equivalent to 0.40 percent of assets under management, compared with 0.04 percent for internal security selection.

**Table 34** Management costs per investment strategy in 2018. Costs as reimbursed by the Ministry of Finance. Basis points

	Contribution to the fund's management costs	Management costs based on assets under management
Fund allocation	0.9	
of which unlisted real estate	0.5	19.4
Security selection	2.4	12.5
Internal security selection	0.7	4.5
External security selection <sup>1</sup>	1.8	39.8
Asset management	2.1	2.9
<b>Total</b>	<b>5.4</b>	

<sup>1</sup> Includes all externally managed capital.

**Table 35** Management costs per investment strategy 2013–2018. Costs as reimbursed by the Ministry of Finance. Basis points

	Contribution to the fund's management costs	Management costs based on assets under management
Fund allocation	0.4	
Security selection	2.7	16.6
Internal security selection	0.7	6.0
External security selection <sup>1</sup>	1.9	46.4
Asset management	2.3	2.9
Unlisted real estate <sup>2</sup>	0.5	24.3
<b>Total</b>	<b>5.8</b>	

<sup>1</sup> Includes all externally managed capital.

<sup>2</sup> Unlisted real estate is part of the fund allocation strategy from 2017.

### Remuneration system

Norges Bank's Executive Board establishes the principles for the remuneration system at Norges Bank Investment Management.

Members of the leader groups receive only a fixed salary. New members of the leader groups who were previously in receipt of performance-based pay will, however, still receive any such pay that has been held back over the following three years. The CEO's salary and pay bands for other members of the leader groups are set by the Executive Board. The CEO's salary totalled 6.7 million kroner in 2018.

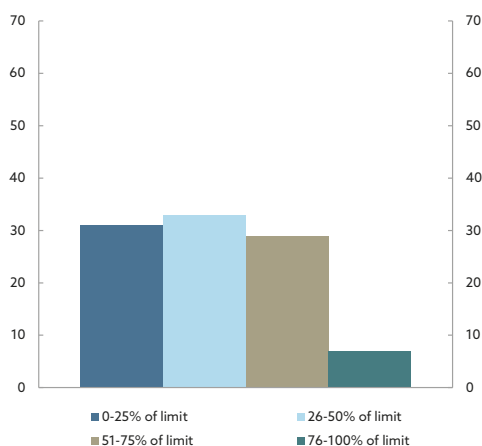
In addition to a fixed salary, those working directly on investment decisions and various other employees may also be entitled to performance-based pay. This is calculated on the basis of the performance of the fund, group and individual measured against set targets, and is paid over a number of years. 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.

A total of 251 employees were entitled to performance-based pay in 2018, including 12 at subsidiaries. Their fixed salaries totalled 345 million kroner, while the upper limit for performance-based pay was 375.4 million kroner. On average, employees eligible for performance-based pay accrued 51 percent of the limit for 2018 based on multi-year performance. Performance-based pay may not exceed 100 percent of fixed salary, except for a small number of employees at the overseas offices where the limit may be up to 200 percent.

Besides the leader groups and employees in receipt of performance-based pay, 353 permanent employees worked in risk management, compliance and control, operations and support at the end of 2018, including 9 at subsidiaries. Their fixed salaries totalled 342.6 million kroner.

**Chart 29** Performance-based pay relative to upper limit in 2018. Percentage of workforce



**Table 36** Remuneration of senior management in 2018. Kroner

Position	Name	Paid salary	Performance-based pay	Value of other benefits	Pension benefit earned	Employee loan
<b>Norges Bank Investment Management</b>						
Chief Executive Officer	Yngve Slyngstad	6,721,094	-	8,814	550,932	-
Deputy CEO	Trond Grande	4,697,597	-	8,628	354,744	-
Chief Compliance and Control Officer	Stephen A. Hirsch	4,207,019	-	11,804	320,929	-
Chief Corporate Governance Officer	Carine Smith Ihenacho <sup>1,2,3</sup>	3,466,550	174,485	77,071	346,655	-
Chief Financial Officer	Hege Gjerde <sup>1</sup>	2,790,083	318,979	8,628	299,032	1,465,575
Chief Human Resources Officer	Sirine Fodstad	2,738,907	-	6,756	432,105	-
Chief Investment Officer Allocation Strategies	Ole Christian Bech-Moen <sup>1</sup>	4,480,402	217,930	10,969	252,455	-
Chief Investment Officer Asset Strategies	Geir Øivind Nygård <sup>1</sup>	4,632,367	958,159	9,172	211,936	500,000
Chief Investment Officer Equity Strategies	Petter Johnsen <sup>2,3</sup>	7,583,076	-	87,047	758,308	-
Chief Operating Officer	Age Bakker	3,768,939	-	8,628	385,739	-
Chief Risk Officer	Dag Huse <sup>1</sup>	4,620,774	209,733	8,628	577,068	-
<b>Norges Bank Real Estate Management</b>						
Chief Executive Officer	Karsten Kallevig	5,322,133	-	9,027	338,497	-
Chief Administrative Officer	Mie Caroline Holstad	2,044,234	-	8,628	233,428	-
Chief Compliance and Control Officer	Jan Thomsen	3,446,713	-	9,015	386,198	-
Chief Investment Officer Europe	Romain Veber <sup>1,2,3</sup>	4,874,836	1,522,259	66,085	487,484	-
Chief Investment Officer US	Per Løken <sup>1</sup>	2,572,855	73,542	7,068	232,007	-
Chief Operating Officer	Nina Kathrine Hammerstad	3,025,926	-	8,695	300,128	-
Chief Risk Officer	Lars Oswald Dahl	3,430,421	-	8,628	398,033	-

<sup>1</sup> Senior managers receive only a fixed salary. Senior managers who were previously in receipt of performance-related pay will, however, still receive any such pay that has been held back. The figures reported are paid out in the fiscal year of 2018 but are earned in previous fiscal years.

<sup>2</sup> Receives pay in British pounds. The figure includes currency effect from conversion to Norwegian kroner.

<sup>3</sup> The value is based on the Defined Contribution pension plan.



# 6

## Financial reporting



# Financial reporting

---



92

## FINANCIAL STATEMENTS

6.1 Income statement _____	94
Balance sheet _____	95
Statement of cash flows _____	96
Statement of changes in owner's capital _____	97

## NOTES

6.2 Notes to the financial reporting	
Note 1 General information _____	98
Note 2 Accounting policies _____	99
Note 3 Returns _____	102
Note 4 Income/expense from equities, bonds and financial derivatives _____	103
Note 5 Holdings of equities, bonds and financial derivatives _____	105
Note 6 Unlisted real estate _____	108
Note 7 Fair value measurement _____	113

Note 8	
Investment risk _____	120
Note 9	
Tax _____	135
Note 10	
Foreign exchange gains/loss _____	138
Note 11	
Management costs _____	141
Note 12	
Secured lending and borrowing _____	144
Note 13	
Collateral and offsetting _____	147
Note 14	
Related parties _____	150
Note 15	
Interests in other entities _____	151

## AUDITOR

6.3 Independent auditor's report _____	155	—
		93

## Income statement

Amounts in NOK million	Note	2018	2017
<b>Profit/loss on the portfolio before foreign exchange gain/loss</b>			
Income/expense from:			
- Equities	4	-517 214	933 501
- Bonds	4	14 568	81 410
- Unlisted real estate	6	16 421	14 237
- Financial derivatives	4	2 819	278
- Secured lending	12	4 733	3 532
- Secured borrowing	12	-1 466	-345
Tax expense	9	-5 050	-4 796
Interest income/expense		10	-16
Other income/expense		-13	-11
<b>Profit/loss on the portfolio before foreign exchange gain/loss</b>		<b>-485 192</b>	<b>1 027 790</b>
Foreign exchange gain/loss	10	223 611	14 701
<b>Profit/loss on the portfolio</b>		<b>-261 581</b>	<b>1 042 492</b>
Management fee	11	-4 544	-4 728
<b>Profit/loss and total comprehensive income</b>		<b>-266 126</b>	<b>1 037 764</b>

## Balance sheet

Amounts in NOK million	Note	31.12.2018	31.12.2017
<b>Assets</b>			
Deposits in banks		11 561	11 027
Secured lending	12,13	216 768	185 046
Cash collateral posted	13	1 806	1 894
Unsettled trades		13 767	13 389
Equities	5	5 048 647	5 250 871
Equities lent	5,12	437 651	411 664
Bonds	5	1 996 929	2 080 061
Bonds lent	5,12	662 920	591 277
Financial derivatives	5,13	3 576	9 025
Unlisted real estate	6	243 818	217 160
Other assets		3 448	3 219
<b>Total assets</b>		<b>8 640 892</b>	<b>8 774 633</b>
<b>Liabilities and owner's capital</b>			
Secured borrowing	12,13	360 105	260 136
Cash collateral received	13	5 017	5 804
Unsettled trades		15 565	15 905
Financial derivatives	5,13	4 222	3 919
Other liabilities		37	415
Management fee payable	11	4 544	4 728
<b>Total liabilities</b>		<b>389 491</b>	<b>290 907</b>
Owner's capital		8 251 401	8 483 727
<b>Total liabilities and owner's capital</b>		<b>8 640 892</b>	<b>8 774 633</b>

### 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 GPF 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*.

Management fee shown in the *Statement of cash flows* for a period is the settlement of the fee that was accrued and expensed in the previous year.

## Statement of cash flows

Amounts in NOK million, receipt (+) / payment (-)	Note	2018	2017
<b>Operating activities</b>			
Receipts of dividend from equities		146 082	128 293
Receipts of interest from bonds		70 360	73 575
Receipts of interest and dividend from unlisted real estate	6	5 822	3 869
Net receipts of interest and fee from secured lending and borrowing		3 330	3 426
<i>Receipts of dividend, interest and fee from holdings of equities, bonds and unlisted real estate</i>		225 594	209 163
Net cash flow from purchase and sale of equities		-345 478	-141 382
Net cash flow from purchase and sale of bonds		36 052	17 878
Net cash flow to investments in unlisted real estate	6	-8 638	-17 234
Net cash flow financial derivatives		11 494	-4 886
Net cash flow cash collateral related to derivative transactions		-1 685	2 754
Net cash flow secured lending and borrowing		59 834	-21
Net payment of taxes	9	-4 343	-6 786
Net cash flow related to interest on deposits in banks and bank overdraft		-14	-84
Net cash flow related to other income/expense, other assets and other liabilities		263	-857
Management fee paid to Norges Bank	11	-4 728	-3 731
<b>Net cash inflow/outflow from operating activities</b>		<b>-31 650</b>	<b>54 813</b>
<b>Financing activities</b>			
Inflow from the Norwegian government		42 320	-
Withdrawal by the Norwegian government		-9 799	-60 837
<b>Net cash inflow/outflow from financing activities</b>		<b>32 520</b>	<b>-60 837</b>
<b>Net change deposits in banks</b>			
Deposits in banks at 1 January		11 027	17 759
Net increase/decrease of cash in the period		870	-6 024
Net foreign exchange gain/loss on cash		-336	-708
<b>Deposits in banks at end of period</b>		<b>11 561</b>	<b>11 027</b>

**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.

**Statement of changes in owner's capital**

Amounts in NOK million	Inflows from owner	Retained earnings	Total owner's capital
1 January 2017	3 393 340	4 113 423	7 506 763
Profit/loss and total comprehensive income	-	1 037 764	1 037 764
Withdrawal during the period <sup>1</sup>	-60 800	-	-60 800
<b>31 December 2017</b>	<b>3 332 540</b>	<b>5 151 187</b>	<b>8 483 727</b>
1 January 2018	3 332 540	5 151 187	8 483 727
Profit/loss and total comprehensive income	-	-266 126	-266 126
Inflow during the period <sup>1</sup>	43 200	-	43 200
Withdrawal during the period <sup>1</sup>	-9 400	-	-9 400
<b>31 December 2018</b>	<b>3 366 340</b>	<b>4 885 061</b>	<b>8 251 401</b>

<sup>1</sup> In 2018 there was an inflow to the krone account of NOK 43.2 billion, while NOK 14.1 billion was withdrawn from the krone account. Of this, NOK 4.7 billion was used to pay the accrued management fee for 2017. In 2017, there was a withdrawal from the krone account of NOK 64.5 billion. Of this, NOK 3.7 billion was used to pay the accrued management fee for 2016.



# Notes to the financial reporting

---

## Note 1 General Information

### 1. Introduction

Norges Bank is Norway's central bank. Norges bank manages the Government Pension Fund Global (GPFG) on behalf of the Ministry of Finance, in accordance with section 2, 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 equities,

fixed-income securities and real estate. 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 for the GPFG. 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 8 *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 2018 were approved by the Executive Board on 6 February 2019 and adopted by the Supervisory Council on 26 February 2019.

## 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.

#### 1. Basis of preparation

In accordance with the *regulation on the financial reporting of Norges Bank (the regulation)*, the financial reporting of the GPFG is prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, subject to the exemptions and additions specified in 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 kroner. Rounding differences may occur.

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

IFRS 9 *Financial Instruments* was implemented on 1 January 2018 and replaced IAS 39 *Financial Instruments: Recognition and Measurement*. IFRS 9 introduced new principles for classification and measurement, impairment of some financial assets and hedge accounting. Principles relevant to the financial reporting are described below. IFRS 9 had no impact on how financial instruments are classified and measured.

Other changes in IFRS that became effective in 2018 did not have any impact on how the financial reporting was prepared and presented.

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

#### 3.1 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 12 *Secured lending and borrowing* for details of transferred assets that are not derecognised.

Financial liabilities are derecognised when the obligation has been settled, extinguished or cancelled.

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

##### 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 established 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 fund's financial assets are therefore measured at fair value through profit or loss.

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 held for trading and are therefore measured at fair value through profit or loss.

#### 3.2 Subsidiaries

Investments in unlisted real estate are made through entities controlled by the GPFG, which are exclusively established as part of the management of the fund. 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 15 *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 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 3.1 above, and are presented in the balance sheet as *Unlisted real estate*. See note 6 *Unlisted real estate* for supplementing policies.

##### Consolidated subsidiaries

Subsidiaries that perform investment-related services, and which are not investment entities themselves, are consolidated. Consolidated subsidiaries do not own, directly or indirectly, investments in real estate.

**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.

**4. New and amended standards and interpretations effective in 2019 or later**

Issued IFRS standards with effective dates from 2019 or later that are considered applicable to the financial reporting, are described below. Other standards, changes to existing standards and interpretations that have been issued, are expected to be immaterial or not applicable at the time of implementation.

*IFRS 16 Leases*

IFRS 16 *Leases* is effective from 1 January 2019 and regulates the recognition of lease agreements and related note disclosures. Norges Bank has assessed the expected impact on the financial reporting. Based on the current portfolio of relevant contracts, it is not considered that the standard will impact the financial statements upon implementation 1 January 2019.

## Note 3 Returns

Table 3.1 Returns

	2018	2017
<b>Returns measured in the fund's currency basket (percent)</b>		
Return on equity investments	-9.49	19.44
Return on fixed-income investments	0.56	3.31
Return on unlisted real estate investments	7.53	7.52
Return on fund	-6.12	13.66
<b>Returns measured in Norwegian kroner (percent)</b>		
Return on equity investments	-6.56	19.74
Return on fixed-income investments	3.82	3.57
Return on unlisted real estate investments	11.02	7.80
Return on fund	-3.07	13.95

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 relative return includes returns on unlisted real estate investments. 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.

## 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 have been 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 period for the related balance sheet line item, that are not attributable to the aforementioned categories.

103

Tables 4.1 to 4.3 specify the income and expense elements for *Equities, Bonds* and *Financial derivatives*, where the line *Income/expense* shows the amount recognised in profit or loss for the respective income statement line.

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

Amounts in NOK million	2018	2017
Dividends	147 630	128 846
Realised gain/loss	190 643	233 652
Unrealised gain/loss	-855 488	571 003
<b>Income/expense from equities before foreign exchange gain/loss</b>	<b>-517 214</b>	<b>933 501</b>

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

Amounts in NOK million	2018	2017
Interest	69 505	71 811
Realised gain/loss	-17 918	9 283
Unrealised gain/loss	-37 020	316
<b>Income/expense from bonds before foreign exchange gain/loss</b>	<b>14 568</b>	<b>81 410</b>

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

Amounts in NOK million	2018	2017
Dividends	6	140
Interest	541	-1 933
Realised gain/loss	2 181	128
Unrealised gain/loss	91	1 943
<b>Income/expense from financial derivatives before foreign exchange gain/loss</b>	<b>2 819</b>	<b>278</b>



## 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 12 *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 as *Deposits in banks*. Norges Bank does not engage in hedge accounting, and therefore no financial instruments are designated as hedging instruments.

For further information on fair value measurement of equities, bonds and financial derivatives, see note 7 *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

Amounts in NOK million	31.12.2018		31.12.2017	
	Fair value incl. accrued dividends	Accrued dividends	Fair value incl. accrued dividends	Accrued dividends
Equities	5 486 298	7 659	5 662 535	6 111
<b>Total equities</b>	<b>5 486 298</b>	<b>7 659</b>	<b>5 662 535</b>	<b>6 111</b>
<i>Of which equities lent</i>		437 651		411 664

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

**Table 5.2** Bonds

Amounts in NOK million	31.12.2018			31.12.2017		
	Nominal value	Fair value incl. accrued interest	Accrued interest	Nominal value <sup>1</sup>	Fair value incl. accrued interest	Accrued interest
<b>Government bonds</b>						
Government bonds issued in the government's local currency	1 370 667	1 433 456	9 859	1 372 187	1 458 828	10 712
<b>Total government bonds</b>	<b>1 370 667</b>	<b>1 433 456</b>	<b>9 859</b>	<b>1 372 187</b>	<b>1 458 828</b>	<b>10 712</b>
<b>Government-related bonds</b>						
Sovereign bonds	9 221	9 443	116	7 477	8 094	119
Bonds issued by local authorities	103 401	110 036	671	94 610	101 287	615
Bonds issued by supranational bodies	55 770	57 409	349	54 476	57 374	472
Bonds issued by federal agencies	157 576	159 691	781	146 737	150 032	732
<b>Total government-related bonds</b>	<b>325 968</b>	<b>336 579</b>	<b>1 917</b>	<b>303 300</b>	<b>316 787</b>	<b>1 938</b>
<b>Inflation-linked bonds</b>						
Inflation-linked bonds issued by government authorities	135 717	139 396	398	123 090	131 125	375
<b>Total inflation-linked bonds</b>	<b>135 717</b>	<b>139 396</b>	<b>398</b>	<b>123 090</b>	<b>131 125</b>	<b>375</b>
<b>Corporate bonds</b>						
Bonds issued by utilities	42 717	43 401	513	42 619	46 599	522
Bonds issued by financial institutions	259 045	252 867	2 461	244 859	248 894	2 322
Bonds issued by industrial companies	314 502	313 046	3 057	322 230	336 464	3 116
<b>Total corporate bonds</b>	<b>616 264</b>	<b>609 314</b>	<b>6 031</b>	<b>609 708</b>	<b>631 957</b>	<b>5 960</b>
<b>Securitised bonds</b>						
Covered bonds	138 121	141 105	938	128 365	132 642	1 013
<b>Total securitised bonds</b>	<b>138 121</b>	<b>141 105</b>	<b>938</b>	<b>128 365</b>	<b>132 642</b>	<b>1 013</b>
<b>Total bonds</b>	<b>2 586 737</b>	<b>2 659 849</b>	<b>19 144</b>	<b>2 536 650</b>	<b>2 671 338</b>	<b>19 999</b>
<i>Of which bonds lent</i>		662 920			591 277	

<sup>1</sup> Certain comparative amounts have been restated to conform to current year presentation.

Financial derivatives, such as foreign exchange derivatives, interest rate derivatives and futures, are used to adjust the exposure in various portfolios, as a cost-efficient alternative to trading in the underlying securities. Furthermore, foreign

exchange derivatives are used in liquidity management. Equity derivatives with an option component are often a result of corporate actions and these can be converted to equities or be sold.

Table 5.3 gives a specification of financial derivatives recognised in the balance sheet. Notional amounts (the nominal values of the underlying) are the basis for calculating any cash flows and gains/losses for the contracts. This provides information regarding the extent to which different types of financial derivatives are used. The GPFG also uses equity swaps in combination with purchases or sales of equities. Equity swaps are not recognised in the balance sheet. See note 12 *Secured lending and borrowing* and note 13 *Collateral and offsetting* for further information.

**Table 5.3** Financial derivatives

Amounts in NOK million	31.12.2018			31.12.2017		
	Notional amount	Fair value		Notional amount	Fair value	
		Asset	Liability		Asset	Liability
Foreign exchange derivatives	451 527	3 022	3 863	252 601	770	2 687
Interest rate derivatives	25 693	504	358	34 225	1 304	1 232
Equity derivatives	593	50	-	7 379	6 951	-
<b>Total financial derivatives</b>	<b>477 812</b>	<b>3 576</b>	<b>4 222</b>	<b>294 205</b>	<b>9 025</b>	<b>3 919</b>

### Over-the-counter (OTC) financial derivatives

#### *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. One party pays a floating rate of interest and the other pays a fixed rate.

#### *Equity derivatives*

Equity derivatives are derivatives with exposure to an underlying equity. Equity derivatives include instruments with an option component such as

warrants and rights. These instruments grant the owner the right to purchase an equity at an agreed price within a certain time frame. During 2018, the fund's holdings of participatory certificates were converted to shares in companies listed on the Saudi Arabian stock exchange, Tadawul. See note 7 *Fair value measurement* for further information. Participatory certificates were classified as equity derivatives.

### Exchange-traded 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. Gains and losses are settled daily with margin payments.

---

## 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 GPF. 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 more information.

The fair value of unlisted real estate is determined as the sum of the GPF's share of assets and liabilities in the underlying subsidiaries, measured at fair value. For further information, see note 7 *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 the interest is accrued.

*Dividends* are recognised when the dividend is formally approved by the general meeting/equivalent decision-making body, or as a consequence of the company's articles of association.

Payments of interest and dividend in the period are presented in table 6.1. Accrued interest and dividends which are not cash-settled are included in *Unrealised gain/loss*.

Table 6.1 provides a specification of the income statement line *Income/expense from unlisted real estate*, before foreign exchange gain/loss.

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

Amounts in NOK million	2018	2017
Payments of interest and dividend from unlisted real estate	5 822	3 869
Unrealised gain/loss	10 599	10 368
<b>Income/expense from unlisted real estate before foreign exchange gain/loss</b>	<b>16 421</b>	<b>14 237</b>

The change in the period for the balance sheet line *Unlisted real estate* is specified in table 6.2.

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

Amounts in NOK million	31.12.2018	31.12.2017
Unlisted real estate, opening balance for the period	217 160	188 469
Net cash flow to investments in unlisted real estate	8 638	17 234
Unrealised gain/loss	10 599	10 368
Foreign exchange gain/loss	7 421	1 089
<b>Unlisted real estate, closing balance for the period</b>	<b>243 818</b>	<b>217 160</b>

### 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 may be distributed back to the GPFG in the form of interest and dividend as well as repayment of equity and long-term loan financing. Some of the net income generated in the underlying real estate companies is not distributed back to the GPFG, but is reinvested in the underlying entities to finance for instance property development and repayment of external debt. There are no significant restrictions on distribution of interest and dividend from subsidiaries to the GPFG.

Table 6.3 provides a specification of the cash flows between the GPFG and subsidiaries presented as *Unlisted real estate* as presented in the statement of cash flows. *Receipts of interest and dividend from unlisted real estate* comprise the share of net income in the underlying real estate companies which is distributed back to the GPFG. *Net cash flows to/from investments in unlisted real estate* comprise cash flows related to equity and long-term loan financing between the GPFG and the subsidiaries. This is further specified by transaction type in table 6.3. A net cash flow from the GPFG to subsidiaries will result in an addition to the balance sheet value of unlisted real estate, while a net cash flow from subsidiaries to the GPFG will result in a decrease.

**Table 6.3** Cash flow to/from unlisted real estate subsidiaries

Amounts in NOK million	31.12.2018	31.12.2017
Interest and dividend from ongoing operations	4 440	3 839
Interest and dividend from sales	1 381	30
<b>Receipts of interest and dividend from unlisted real estate</b>	<b>5 822</b>	<b>3 869</b>
Payments to new investments	-12 710	-14 771
Repayments from sales	4 717	1 059
Payments for property development	-1 562	-1 590
Repayments from ongoing operations	1 430	888
Net payments external debt	-513	-2 820
<b>Net cash flow to investments in unlisted real estate</b>	<b>-8 638</b>	<b>-17 234</b>

**Underlying real estate companies**

Real estate subsidiaries have investments in other non-consolidated, unlisted companies. For further information, see note 15 *Interests in other entities*.

A further specification of *Unlisted real estate* is provided in tables 6.4 and 6.5. 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 6.5 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.

**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 and loss.

*Unrealised gain/loss* presented in table 6.1 includes undistributed profits and will therefore not reconcile with fair value changes for properties, debt and other assets and liabilities presented in table 6.4.

*Transaction costs for purchases and sales* of properties are incurred as one-off costs and are expensed as incurred.

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

Amounts in NOK million	2018	2017
Net rental income	9 312	8 579
External asset management - fixed fees	-506	-482
External asset management - variable fees	-88	-248
Internal asset management - fixed fees <sup>1</sup>	-38	-32
Management costs within the limit from the Ministry of Finance <sup>2</sup>	-88	-97
Other operating costs, not within the limit from the Ministry of Finance	-94	-88
Interest expense external debt	-506	-626
Tax expense payable	-256	-140
<i>Net income from ongoing operations</i>	<i>7 736</i>	<i>6 866</i>
Realised gain/loss - properties	1 212	199
Unrealised gain/loss - properties	7 807	8 375
Unrealised gain/loss - debt	233	-420
Unrealised gain/loss - other assets and liabilities	-176	-461
<i>Realised and unrealised gain/loss</i>	<i>9 077</i>	<i>7 693</i>
Stamp duty and registration fees	-147	-217
Due diligence and insurance costs	-244	-107
<i>Transaction costs purchases and sales</i>	<i>-391</i>	<i>-324</i>
<b>Net income underlying real estate companies</b>	<b>16 421</b>	<b>14 237</b>

<sup>1</sup> Internal asset management is carried out on 100 percent owned properties by employees in a wholly-owned, consolidated subsidiary.

<sup>2</sup> See table 11.2 for specification of management costs that are measured against the upper limit from the Ministry of Finance.

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

Amounts in NOK million	31.12.2018	31.12.2017
Properties	262 364	235 507
External debt	-18 361	-17 694
Net other assets and liabilities <sup>1</sup>	-185	-653
<b>Total assets and liabilities underlying real estate companies</b>	<b>243 818</b>	<b>217 160</b>

<sup>1</sup> 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.

Table 6.6 provides an overview of announced agreements for purchases and sales of real estate which are not completed at the balance sheet date.

**Table 6.6** Announced agreements for purchases and sales of real estate<sup>1</sup>

Type	Property address	City	Ownership percent	Currency	Price in stated currency (million) <sup>2</sup>	Quarter announced	Expected completion
Purchase	Schützenstrasse 26	Berlin	100.0	EUR	425	3Q 2017	4Q 2019
Purchase	79 avenue des Champs-Élysées	Paris	100.0	EUR	613	4Q 2018	4Q 2019

<sup>1</sup> Purchases and sales above USD 25 million are announced.

<sup>2</sup> The stated price is for the GPFG's share.

## Note 7 Fair value measurement

### Accounting policy

All assets and liabilities presented as *Equities, Bonds, Unlisted real estate, Financial derivatives, Secured lending and borrowing, Deposits in banks 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. If the market is not active, fair value is established using standard valuation techniques. Estimating fair value may be complex and require 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 7.1. 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 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 per 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 7.1 classifies the investment portfolio into the three categories in the fair value hierarchy.

**Table 7.1** Categorisation of the investment portfolio by level in the fair value hierarchy

Amounts in NOK million	Level 1		Level 2		Level 3		Total	
	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017
<b>Equities</b>	<b>5 450 137</b>	<b>5 616 897</b>	<b>35 808</b>	<b>34 265</b>	<b>353</b>	<b>11 373</b>	<b>5 486 298</b>	<b>5 662 535</b>
Government bonds	1 331 386	1 417 376	102 070	41 452	-	-	1 433 456	1 458 828
Government-related bonds	284 545	271 415	51 609	43 151	425	2 221	336 579	316 787
Inflation-linked bonds	131 271	126 023	8 125	5 102	-	-	139 396	131 125
Corporate bonds	519 829	597 276	89 457	34 572	28	109	609 314	631 957
Securitised bonds	126 377	113 337	14 728	18 863	-	442	141 105	132 642
<b>Total bonds</b>	<b>2 393 408</b>	<b>2 525 427</b>	<b>265 989</b>	<b>143 140</b>	<b>453</b>	<b>2 772</b>	<b>2 659 849</b>	<b>2 671 338</b>
Financial derivatives (assets)	20	120	3 544	8 905	12	-	3 576	9 025
Financial derivatives (liabilities)	-	-	-4 222	-3 919	-	-	-4 222	-3 919
<b>Total financial derivatives</b>	<b>20</b>	<b>120</b>	<b>-678</b>	<b>4 986</b>	<b>12</b>	<b>-</b>	<b>-646</b>	<b>5 106</b>
<b>Unlisted real estate</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>243 818</b>	<b>217 160</b>	<b>243 818</b>	<b>217 160</b>
<b>Other (assets)<sup>1</sup></b>	<b>-</b>	<b>-</b>	<b>247 351</b>	<b>214 575</b>	<b>-</b>	<b>-</b>	<b>247 351</b>	<b>214 575</b>
<b>Other (liabilities)<sup>2</sup></b>	<b>-</b>	<b>-</b>	<b>-380 724</b>	<b>-282 260</b>	<b>-</b>	<b>-</b>	<b>-380 724</b>	<b>-282 260</b>
<b>Total</b>	<b>7 843 565</b>	<b>8 142 444</b>	<b>167 746</b>	<b>114 706</b>	<b>244 636</b>	<b>231 305</b>	<b>8 255 945</b>	<b>8 488 454</b>
<b>Total (percent)</b>	<b>95.0</b>	<b>95.9</b>	<b>2.0</b>	<b>1.4</b>	<b>3.0</b>	<b>2.7</b>	<b>100.0</b>	<b>100.0</b>

<sup>1</sup> Other (assets) consists of the balance sheet line items *Deposits in banks, Secured lending, Cash collateral posted, Unsettled trades (assets)* and *Other assets*.

<sup>2</sup> Other (liabilities) consists of the balance sheet line items *Secured borrowing, Cash collateral received, Unsettled trades (liabilities)* and *Other liabilities*.

The majority of the total portfolio is priced based on observable market prices. At the end of 2018, 97.04 percent was classified as Level 1 or 2, which is a marginal reduction compared to year-end 2017. 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 (99.34 percent) are valued based on official closing prices from stock exchanges and are classified as Level 1. A small number of equities (0.65 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 (0.01 percent) that are not listed, or where trading has been suspended over a longer period, 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 (89.98 percent) have observable, executable market quotes and are classified as Level 1. 10.00 percent of bonds are classified as Level 2. These are securities that do not have a sufficient number of observable quotes

or that are priced based on comparable liquid bonds. A few bonds (0.02 percent) that do not have observable quotes, are classified as Level 3 as 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 cases of 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 so that adjustments to valuations are 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 relative share of equities classified as Level 1 has increased marginally by 0.15 percentage point compared to year-end 2017.

In 2018, the fund's holdings of participatory certificates were converted to shares in companies listed on the Saudi Arabian stock exchange, Tadawul. Participatory certificates were previously classified as Level 2 derivatives, while the shares received are classified as Level 1. The participatory certificates had a carrying value of NOK 6 802 million at year-end 2017.

The share of bonds classified as Level 1 has decreased by 4.56 percentage points in 2018 with a corresponding increase in the share of Level 2 holdings of 4.64 percentage points. This is due to reclassifications from Level 1 to Level 2, mainly as a result of reduced liquidity for bonds in emerging markets and corporate bonds denominated in US

dollar. Some of the reclassification for corporate bonds denominated in US dollar is due to an improved information base for analysis of liquidity and observable quotes compared to prior periods.

#### *Reclassifications between Level 2 and Level 3*

A shareholding with a lock-in period which was received as compensation following the merger of two companies in 2016 has been reclassified from Level 3 to Level 2. This is because the remaining lock-in period no longer entails significant use of unobservable inputs in the valuation. At year-end 2017, this shareholding comprised almost 90 percent of the value of equities classified as Level 3. Several government-related bonds and corporate bonds denominated in US dollar and euro have been reclassified from Level 3 to Level 2, as they were valued based on comparable bonds at year-end 2018.

**Table 7.2** Changes in Level 3 holdings

Amounts in NOK million	01.01.2018	Purchases	Sales	Settlements	Net gain/loss	Transferred into Level 3	Transferred out of Level 3	Foreign exchange gain/loss	31.12.2018
Equities	11 373	39	-480	-11	77	45	-10 705	15	353
Bonds	2 772	2	-17	-87	-34	-	-2 215	32	453
Financial derivatives (assets)	-	12	-	-	-	-	-	-	12
Unlisted real estate <sup>1</sup>	217 160	8 638	-	-	10 599	-	-	7 421	243 818
<b>Total</b>	<b>231 305</b>	<b>8 691</b>	<b>-497</b>	<b>-98</b>	<b>10 642</b>	<b>45</b>	<b>-12 920</b>	<b>7 468</b>	<b>244 636</b>

Amounts in NOK million	01.01.2017	Purchases	Sales	Settlements	Net gain/loss	Transferred into Level 3	Transferred out of Level 3	Foreign exchange gain/loss	31.12.2017
Equities	11 863	97	-1 534	-48	-632	1 099	-258	786	11 373
Bonds	1 390	406	-327	-71	-33	1 457	-6	-44	2 772
Unlisted real estate <sup>1</sup>	188 469	17 234	-	-	10 368	-	-	1 089	217 160
<b>Total</b>	<b>201 722</b>	<b>17 737</b>	<b>-1 861</b>	<b>-119</b>	<b>9 703</b>	<b>2 556</b>	<b>-264</b>	<b>1 831</b>	<b>231 305</b>

<sup>1</sup> Purchases represent the net cash flow in the period to investments in unlisted real estate. See table 6.3 in note 6 Unlisted real estate.

The GPF's aggregate holdings in Level 3 was NOK 244 636 million at year-end, an increase of NOK 13 331 million compared to year-end 2017.

The relative share of equities classified as Level 3 has decreased by 0.19 percentage point compared to 2017. The decrease is primarily due to the aforementioned reclassification of the shareholding with a lock-in period from Level 3 to Level 2.

The relative share of bond holdings classified as Level 3 has decreased compared to 2017. Bonds classified as Level 3 have decreased by NOK 2 319 million compared to 2017, mainly due to reclassifications of holdings to Level 2.

All unlisted real estate investments are classified as Level 3, and the increase of NOK 26 658 million in 2018 is mainly due to new investments, value increases and currency effects.

#### 4. Valuation techniques

Norges Bank Investment Management has defined hierarchies for which price sources to be used for valuation. Holdings that are included in the benchmark indices are normally valued in accordance with the index providers' prices, 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.

The next section sets out the main valuation techniques for instruments included in Level 2 and Level 3 of the fair value hierarchy. Furthermore, it highlights the most significant observable and unobservable inputs used in the valuation models.

*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 each reporting date by external 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 mainly 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, and are based on market conditions.

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 impacted by changes in assumptions related to, but not limited to:

- Expected inflation (market, consumer price index, costs, etc.)
- Market rental value, market rental value growth, renewal probabilities, void periods and costs
- Tenant defaults
- Changes in credit spreads and discount rates for commercial real estate loans.

*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 have been suspended from trading for a prolonged period. 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 that are valued based on indicative quotes or liquid comparable issues are classified as Level 2. These holdings usually consist of less liquid bonds than those that are actively traded.

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 rate yields.

Interest rate derivatives, which consist entirely 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, such as rights and warrants, are mainly valued based on prices provided by vendors according to the fair value 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

**Table 7.3** Additional specification Level 3 and sensitivities

Amounts in NOK million	Specification of Level 3 holdings 31.12.2018	Sensitivities 31.12.2018		Specification of Level 3 holdings 31.12.2017	Sensitivities 31.12.2017	
		Unfavourable changes	Favourable changes		Unfavourable changes	Favourable changes
<b>Equities</b>	<b>353</b>	<b>-116</b>	<b>116</b>	<b>11 373</b>	<b>-2 409</b>	<b>2 409</b>
Government-related bonds	425	-43	43	2 221	-222	222
Corporate bonds	28	-3	3	109	-11	11
Securitised bonds	-	-	-	442	-44	44
<b>Total bonds</b>	<b>453</b>	<b>-45</b>	<b>45</b>	<b>2 772</b>	<b>-277</b>	<b>277</b>
<b>Financial derivatives (assets)</b>	<b>12</b>	<b>-1</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Unlisted real estate</b>	<b>243 818</b>	<b>-14 627</b>	<b>17 888</b>	<b>217 160</b>	<b>-12 969</b>	<b>14 988</b>
<b>Total</b>	<b>244 636</b>	<b>-14 790</b>	<b>18 050</b>	<b>231 305</b>	<b>-15 655</b>	<b>17 674</b>

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.

### *Unlisted real estate*

Changes in key assumptions can have a material effect on the valuation of the unlisted real estate portfolio. 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 real estate portfolio, and reflects both favourable and unfavourable changes.

Real estate values are particularly sensitive to changes in yields and assumptions influencing future revenues. In an unfavourable outcome, an increase in the yield of 0.2 percentage point, and a reduction in future market rents of 2 percent will result in a decrease in value of the real estate

portfolio of approximately 6.0 percent (6.0 percent in 2017) or NOK 14 627 million. In a favourable outcome, a reduction in the yield of 0.2 percentage point and an increase in future market rents of 2 percent will increase the value of the real estate portfolio by 7.3 percent (6.9 percent in 2017) or NOK 17 888 million.

### *Equities*

Fair value of equities classified as Level 3 is sensitive to whether trading is resumed and how markets have moved from the time the trading was suspended, as well as specific factors related to the individual company such as the financial situation and volatility.

Sensitivity in absolute values has decreased for the equity portfolio, in line with the holdings classified as Level 3. The increase in relative sensitivity for the equity portfolio compared to 2017 is due to the reclassification of the equity holding with a lock-in period from Level 3 to Level 2. This holding had a slightly lower relative sensitivity compared to other equity holdings classified as Level 3.



*Bonds*

The fair value of bonds classified as Level 3 is sensitive to changes in risk premiums and liquidity discounts, as well as the future recovery in the event of default. In some instances, sensitivity analyses are carried out on the underlying discount rate or spread against the discount curve.

The sensitivity in fair value for bonds is somewhat lower than for equities, particularly for bonds with shorter maturities. The decrease in sensitivity in 2018 in absolute terms is in line with the decrease in the holdings classified as Level 3.

*Financial derivatives*

The fair value of financial derivatives classified as Level 3 is sensitive to changes in the assumption used for the historical volatility of the underlying equity.

**6. Control environment**

The control environment for fair value measurement of financial instruments and investments in unlisted real estate is organised around a formalised and documented valuation policy and guidelines, supported by work and control procedures. The policy document lays down valuation policies and outlines procedures for the Norges Bank Investment Management valuation committee.

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 unlisted real estate investments where valuations are performed quarterly. These processes are scalable with regard 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 each month-end for financial instruments and at the end of each quarter for unlisted real estate investments, more extensive controls are performed to ensure valuation is in accordance with fair value. As part of this review, particular attention is paid to illiquid financial instruments and unlisted real estate 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 uncertainties in the valuations.

The valuation committee, which includes several members of Norges Bank Investment Management's leader group, meets every quarter prior to the publication of the financial reporting. The committee reviews the valuation documentation, discusses major pricing issues and approves the valuation.

---

## Note 8 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 2, 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 benchmark, 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 Ministry of Finance has established a plan to increase the strategic equity share to 70 percent.

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, where government bonds have a weight of 70 percent and corporate bonds 30 percent. The currency distribution is a result of these weighting principles.

Investments in real estate are not defined by the fund's benchmark index. The investment mandate sets a maximum allocation to unlisted real estate of 7 percent of the investment portfolio. The fund's allocation to real estate 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 real estate, within the limits set in the investment mandate, and how it shall be financed.

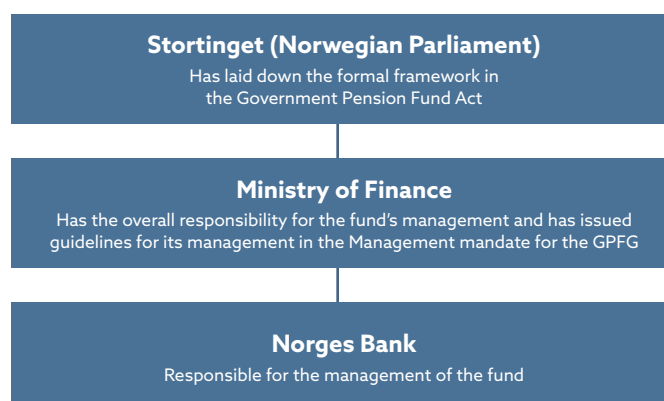
The fund may not invest in securities issued by Norwegian entities, securities issued in Norwegian kroner and real estate located in Norway. The fund can also not invest in companies which are excluded following the guidelines for observation and exclusion from the GPFG.

N

120

---

**Chart 8.1** 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 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. Norges Bank Real Estate Management is structured as a separate unit with its own leader group, and the CEO for Norges Bank Real Estate Management reports to the CEO of Norges Bank Investment Management.

**Chart 8.2** Norges Bank's governance structure



The investment risk committee complements the delegation of responsibility by advising on investment risk management, and the investment universe committee advises on 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. Equivalent reporting requirements are embedded in Norges Bank Real Estate Management.

#### 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 are regulated by a separate management framework in the investment mandate. The framework underpins how a diversified exposure to unlisted real estate 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 Chief Compliance and Control Officer (CCO). Risk management related to unlisted real estate investments is delegated to the CRO and CCO in Norges Bank Real Estate Management.

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. Risk analyses are required in advance of investments in unlisted real estate.

**Table 8.1** 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 and real estate 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 - Concentration risk - Volatility and correlation risk - Systematic factor risk - Liquidity risk	Measured at single issuer and portfolio levels - Probability of default - Loss given default - Correlation between instruments and issuers at portfolio level	Measured risk exposure by type of position - Securities lending - Unsecured bank deposits and securities - Derivatives including FX contracts - Repurchase and reverse repurchase agreements - 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 and real estate 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. 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 due to an issuer not meeting its 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 portfolio credit risk, where credit risk takes into account the correlation of credit losses between instruments and issuers. 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 unlisted real estate portfolio. 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.

*Asset class by country and currency*

The portfolio is invested across several asset classes, countries and currencies as shown in table 8.2.

**Table 8.2** Allocation by asset class, country and currency

Asset class	Market value in percent by country and currency <sup>1</sup>				Market value in percent by asset class		Assets minus liabilities excluding management fee	
	Market	31.12.2018	Market	31.12.2017	31.12.2018	31.12.2017	31.12.2018	31.12.2017
<b>Equities</b>	<b>Developed</b>	<b>89.0</b>	<b>Developed</b>	<b>89.0</b>				
	US	38.4	US	35.4				
	UK	9.4	UK	9.7				
	Japan	8.8	Japan	9.1				
	France	5.1	Germany	6.1				
	Germany	4.9	France	5.1				
	Total other	22.5	Total other	23.6				
	<b>Emerging</b>	<b>11.0</b>	<b>Emerging</b>	<b>11.0</b>				
	China	3.6	China	3.6				
	Taiwan	1.7	Taiwan	1.6				
	India	1.2	India	1.2				
	Brazil	1.0	Brazil	0.9				
	South Africa	0.7	South Africa	0.7				
	Total other	2.8	Total other	3.0				
<b>Total equities</b>					<b>66.34</b>	<b>66.60</b>	<b>5 477 159</b>	<b>5 653 440</b>
<b>Fixed income</b>	<b>Developed</b>	<b>91.8</b>	<b>Developed</b>	<b>90.5</b>				
	US dollar	44.6	US dollar	44.9				
	Euro	26.1	Euro	25.8				
	Japanese yen	7.7	Japanese yen	6.7				
	British pound	4.2	British pound	4.6				
	Canadian dollar	3.3	Canadian dollar	3.2				
	Total other	5.9	Total other	5.3				
	<b>Emerging</b>	<b>8.2</b>	<b>Emerging</b>	<b>9.5</b>				
	Mexican peso	1.7	Mexican peso	1.6				
	South Korean won	1.3	South Korean won	1.4				
	Indonesian rupiah	1.1	Indonesian rupiah	0.9				
	Indian rupee	0.7	Indian rupee	0.7				
	Malaysian ringgit	0.6	Brazilian real	0.7				
	Total other	2.9	Total other	4.1				
<b>Total fixed income</b>					<b>30.68</b>	<b>30.82</b>	<b>2 532 774</b>	<b>2 616 372</b>
<b>Unlisted real estate</b>								
	US	47.8	US	46.2				
	UK	23.0	UK	23.5				
	France	16.5	France	16.6				
	Switzerland	3.7	Switzerland	3.9				
	Germany	3.5	Germany	3.5				
	Total other	5.5	Total other	6.3				
<b>Total unlisted real estate</b>					<b>2.98</b>	<b>2.58</b>	<b>246 013</b>	<b>218 643</b>

<sup>1</sup> Market value in percent per country and currency includes derivatives and cash.

At the end of 2018, the share of equities in the fund was 66.3 percent, compared with 66.6 percent at year-end 2017. The bond portfolio's share of the fund was 30.7 percent, compared to 30.8 percent at year-end 2017. The unlisted real estate portfolio's share of the fund was 3.0 percent

at year-end 2018, an increase of 0.4 percentage point from year-end 2017.

*Concentration risk*

The GPFG has substantial investments in government-issued bonds.

Table 8.3 shows the largest holdings in bonds issued by governments. These include government bonds issued in local currency, sovereign bonds and inflation-linked bonds issued in local currency.

**Table 8.3** Largest holdings within the segment government bonds

Amounts in NOK million	Market value 31.12.2018	Amounts in NOK million	Market value 31.12.2017
US	638 715	US	607 651
Japan	237 179	Japan	190 956
Germany	106 116	Germany	119 591
UK	64 844	UK	70 061
France	47 998	France	63 517
South Korea	43 366	Spain	48 221
Mexico	42 594	Mexico	46 036
Spain	41 388	South Korea	45 425
Italy	36 517	Italy	42 150
Australia	36 399	Australia	34 860



The portfolio is also invested in companies which issue both equities and bonds. Table 8.4 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 8.4** Largest holdings excluding sovereigns, both bonds and equities

Amounts in NOK million, 31.12.2018	Sector	Equities	Bonds	Total
Apple Inc	Technology	62 740	7 176	69 915
Microsoft Corp	Technology	64 715	1 853	66 568
Alphabet Inc	Technology	57 634	792	58 426
Amazon.com Inc	Consumer services	54 771	2 985	57 756
Nestlé SA	Consumer goods	53 914	2 291	56 205
Royal Dutch Shell Plc	Oil and gas	51 274	1 627	52 902
Novartis AG	Health care	39 494	3 505	42 999
Roche Holding AG	Health care	39 573	1 968	41 541
Berkshire Hathaway Inc	Finance	33 423	4 936	38 359
JPMorgan Chase & Co	Finance	24 913	12 972	37 885

Amounts in NOK million, 31.12.2017	Sector	Equities	Bonds	Total
Apple Inc	Technology	66 029	8 122	74 152
Nestlé SA	Consumer goods	51 040	1 895	52 935
Royal Dutch Shell Plc	Oil and gas	50 258	2 673	52 930
Microsoft Corp	Technology	47 549	2 155	49 704
Alphabet Inc	Technology	47 892	844	48 737
Bank of America Corp	Finance	25 546	17 002	42 548
Novartis AG	Health care	36 770	3 952	40 722
Amazon.com Inc	Consumer services	36 579	3 428	40 006
JPMorgan Chase & Co	Finance	25 823	12 730	38 553
HSBC Holdings Plc	Finance	30 777	7 380	38 158

Table 8.5 shows the composition of the unlisted real estate asset class by sector.

**Table 8.5** Distribution of unlisted real estate investments by sector, percent

Sector	31.12.2018	31.12.2017
Office	59.3	58.2
Retail	18.0	19.4
Logistics	21.6	21.2
Other	1.2	1.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

#### *Volatility and correlation risk*

Norges Bank Investment Management uses models to quantify the risk of value changes associated with 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 provides an estimate of how much one can expect the portfolio 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 risk or relative risk. Norges Bank Investment Management uses the same model for portfolio risk and for relative volatility.

The fund's investments, including investments in unlisted real estate, are included in the calculations for relative volatility and are measured against the fund's benchmark index consisting of global equity and bond indices. The limit for the fund's expected relative volatility, including unlisted real estate, is 1.25 percentage points.

The Barra Private Real Estate 2 (PRE2) model from MSCI is used to calculate the market risk for the fund's investments in unlisted real estate. As a

general modelling issue there are few, if any, available historical prices for individual properties. Available data sources which may be used as approximations for the pricing of unlisted real estate investments include return time series from listed real estate companies (REITs) and valuation-based indices. The risk model from MSCI uses time series of valuations and actual transactions as a starting point, but also includes listed real estate shares prices to establish representative time series for unlisted real estate prices. This hybrid model is calibrated to market data for each location and type of property, and constructs synthetic time series of risk factor returns with daily frequency. The main risk sources from being exposed to these risk factors are currency risk, variance and correlation of the location and property type specific appraisal data and, via exposure to listed real estate returns, correlation to the equity and fixed-income markets. The risk model from MSCI then uses these factors for unlisted real estate 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 8.6 and 8.7 present risk both in terms of the portfolio's absolute risk and the relative risk.

**Table 8.6** Portfolio risk in terms of expected volatility, in percent

	Expected volatility, actual portfolio							
	31.12.2018	Min 2018	Max 2018	Average 2018	31.12.2017	Min 2017	Max 2017	Average 2017
Portfolio	8.6	8.5	11.0	9.5	10.8	10.7	11.2	11.0
Equities	11.6	11.4	13.7	12.4	13.6	13.6	14.1	14.0
Fixed income	7.0	6.8	9.4	7.8	9.4	9.4	9.8	9.7
Unlisted real estate	9.3	9.2	11.9	10.4	12.0	11.9	12.7	12.5

**Table 8.7** Relative risk measured against the fund's reference indices, expected relative volatility, in basis points

	Expected relative volatility							
	31.12.2018	Min 2018	Max 2018	Average 2018	31.12.2017	Min 2017	Max 2017	Average 2017
Portfolio	33	29	37	31	33	31	35	33

Risk measured as expected volatility indicates an expected annual value fluctuation in the fund of 8.6 percent, or approximately NOK 710 billion at the end of 2018, compared to 10.8 percent at year-end 2017. Expected volatility for the equity portfolio was 11.6 percent at year-end, down from 13.6 percent at year-end 2017, while expected volatility for the bond portfolio was 7.0 percent, down from 9.4 percent at year-end 2017. The decrease in expected volatility for the fund in 2018 is mainly due to decreased price volatility in the markets for the last three years than was the case at the end of 2017.

The management mandate specifies that expected relative volatility for the fund, including unlisted real estate, shall not exceed a limit of 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 33 basis points at the end of the year, which was the same level as the end of 2017.

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 measures the expected loss of a portfolio in extreme market situations. The expected shortfall measure provides an estimate of the annual expected loss for a given confidence level. Using historical simulations, relative returns of the current portfolio and benchmark 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 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 1.37 percentage points, compared to 1.49 percentage points at year-end 2017.

#### 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 model 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 the 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 return.

#### *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 GPF'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 8.8** Bond portfolio specified by credit rating

Amounts in NOK million, 31.12.2018	AAA	AA	A	BBB	Lower rating	Total
Government bonds	739 266	186 417	358 892	101 955	46 926	1 433 456
Government-related bonds	145 988	127 414	46 766	15 274	1 136	336 579
Inflation-linked bonds	114 351	12 444	6 007	6 190	403	139 396
Corporate bonds	5 965	51 202	224 458	318 135	9 553	609 314
Securitised bonds	114 035	23 461	2 408	786	414	141 105
<b>Total bonds</b>	<b>1 119 606</b>	<b>400 939</b>	<b>638 532</b>	<b>442 341</b>	<b>58 431</b>	<b>2 659 849</b>

Amounts in NOK million, 31.12.2017	AAA	AA	A	BBB	Lower rating	Total
Government bonds	724 614	214 529	292 828	174 394	52 463	1 458 828
Government-related bonds	141 463	119 116	44 171	10 719	1 318	316 787
Inflation-linked bonds	112 634	8 131	3 038	7 322	-	131 125
Corporate bonds	5 988	54 763	241 644	316 896	12 666	631 957
Securitised bonds	112 106	15 977	2 961	1 598	-	132 642
<b>Total bonds</b>	<b>1 096 805</b>	<b>412 516</b>	<b>584 642</b>	<b>510 929</b>	<b>66 447</b>	<b>2 671 338</b>

The share of holdings in corporate bonds was somewhat reduced during the year, to 22.9 percent of the bond portfolio at year-end 2018, from 23.7 percent at year-end 2017. Government and government-related bonds, including inflation-linked bonds, amounted to 71.8 percent of the bond portfolio, compared to 71.4 percent at year-end 2017.

The share of bonds with credit rating BBB decreased by 2.5 percentage points to 16.6 percent of the total bond portfolio at year-end. This reduction was mainly due to an upgrade of Spain in 2018 from the BBB category to the A category, as well as a reduction in the share of emerging markets government bonds in the BBB category. The share of the bond portfolio with credit rating A increased mainly due to the upgrade of Spain as well as an increase in the

holdings of Japanese government bonds. The share of the bond portfolio with credit rating AAA increased by 1.0 percentage point to 42.1 percent of the bond portfolio at year-end 2018. The increase is mainly due to an increase of American government bonds during the year.

The share of bonds grouped under *Lower rating* was reduced to 2.2 percent of the bond portfolio at year-end 2018, from 2.5 percent at year-end 2017. The decrease is mainly due to a lower exposure in both government bonds and corporate bonds in this category. Defaulted bonds had a market value of NOK 44 million at year-end 2018, down from NOK 109 million at year-end 2017. Defaulted bonds are grouped under *Lower rating*. The credit quality of the total bond portfolio improved slightly during the year.

**Table 8.9** Bond portfolio by credit rating and currency, in percent

31.12.2018	AAA	AA	A	BBB	Lower rating	Total
US dollar	25.3	2.4	6.5	9.1	0.2	43.5
Euro	9.5	6.3	4.8	4.3	0.2	25.1
Japanese yen	-	-	9.6	-	-	9.6
British pound	0.3	2.7	0.4	0.7	-	4.1
Canadian dollar	2.2	1.2	0.2	-	-	3.5
Other currencies	4.8	2.5	2.5	2.5	1.8	14.2
<b>Total</b>	<b>42.1</b>	<b>15.1</b>	<b>24.0</b>	<b>16.6</b>	<b>2.2</b>	<b>100.0</b>

31.12.2017	AAA	AA	A	BBB	Lower rating	Total
US dollar	24.5	2.2	7.0	8.5	0.4	42.6
Euro	9.8	6.6	2.9	6.4	0.2	25.8
Japanese yen	-	-	7.6	-	-	7.6
British pound	0.2	2.9	0.6	0.8	-	4.5
Canadian dollar	2.1	1.0	0.5	0.2	-	3.7
Other currencies	4.4	2.6	3.4	3.3	2.0	15.7
<b>Total</b>	<b>41.1</b>	<b>15.4</b>	<b>21.9</b>	<b>19.1</b>	<b>2.5</b>	<b>100.0</b>

There were no credit derivatives in the portfolio at year-end 2018.

In addition to the credit ratings from credit rating agencies, measurement of credit risk is complemented with two credit risk models, of which one is based on credit ratings and the other is based on observable credit premiums. Both methods also take into account correlation and expected value of bonds in a bankruptcy situation. 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 OTC derivatives and currency contracts, cleared OTC and listed derivatives, repurchase and reverse repurchase agreements, securities lending, and holdings of securities that are considered to be unsecured. Counterparty risk also arises from unsecured deposits in banks and in connection with the daily liquidity management of the fund, as well as in connection with purchases and sales of unlisted real estate. 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 risk 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 and repurchase and reverse repurchase agreements, in order to reduce counterparty risk. 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 transactions are conducted. Counterparty risk that arises is analysed in advance of the transaction and requires approval from the CRO. In 2018, 18 transactions were approved by the CRO through this process, compared to 11 in 2017.

Counterparty risk is also limited by setting exposure limits for individual counterparties. Exposure per counterparty is measured daily against limits set by the Executive Board and the CEO of Norges Bank Investment Management.

The methods 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 method used to calculate counterparty risk exposure arising from derivatives and foreign exchange contracts has been changed in 2018, from the Current Exposure Method to the new Standardised Approach for counterparty risk (SA-CCR). Both methods are issued by the Basel Committee on Banking Supervision. The new Standardised Approach seeks to improve the Current Exposure Method by considering collateral received and netting arrangements to a larger extent when calculating counterparty risk. The treatment of collateral has also been further developed, and stressed periods in the financial markets are to a greater extent taken into account when calculating future expected risk exposure. The new Standardised Approach has resulted in a



somewhat higher counterparty risk exposure for the portfolio at year-end 2018, compared to the Current Exposure Method.

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. These positions are also adjusted for netting and actual collateral received and posted when determining counterparty risk exposure.

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 for most currency trades is low. Settlement risk is reduced using the currency settlement system CLS (Continuous Linked Settlement), or by trading directly with the settlement bank. In a few 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 8.10.

Norges Bank Investment Management also invests in Saudi Arabian equities. Counterparty risk arises from these listed equities as they are considered to be unsecured.

In table 8.10, exposure is broken down by type of activity/instrument associated with counterparty risk.

Total counterparty risk increase to NOK 126.0 billion at year-end 2018, from NOK 118.0 billion at year-end 2017. The risk exposure from securities lending decreased, while the risk exposure from all other instruments has increased. Both bonds and equities are lent through the securities lending programme. The risk exposure for the programme was reduced to NOK 67.1 billion at year-end 2018, from NOK 71.2 billion at year-end 2017. Counterparty risk exposure from securities lending amounted to 53.3 percent of the fund's total counterparty risk exposure at year-end 2018.

**Table 8.10** Counterparty risk by type of position

Amounts in NOK million	Risk exposure	
	31.12.2018	31.12.2017 <sup>1</sup>
Securities lending	67 110	71 150
Unsecured bank deposits <sup>2</sup> and securities <sup>3</sup>	23 619	14 008
Derivatives including foreign exchange contracts <sup>4</sup>	22 529	18 769
Repurchase and reverse repurchase agreements	8 293	4 662
Settlement risk towards brokers and long settlement transactions	4 437	2 598
Participatory certificates <sup>3</sup>	-	6 802
<b>Total</b>	<b>125 988</b>	<b>117 989</b>

<sup>1</sup> Certain comparative amounts have been restated to conform to current period presentation.

<sup>2</sup> Includes bank deposits in non-consolidated subsidiaries.

<sup>3</sup> The fund's holdings of participatory certificates were converted to shares in companies listed on the Saudi Arabian stock exchange in 2018. Counterparty risk arises from these listed equities as they are considered to be unsecured.

<sup>4</sup> Comparative amounts are based on the methodology used at year-end 2017.

Norges Bank's counterparties have a credit rating from independent credit rating agencies. An internal credit evaluation can only be used as the basis for counterparty approval in cases where the

counterparty risk is against a central counterparty or the counterparty risk is considered low. Credit ratings for counterparties are monitored and complemented by alternative credit risk indicators.

Table 8.11 shows approved counterparties classified according to their credit rating category. The table also includes brokers that are used when purchasing and selling securities.

**Table 8.11** Counterparties by credit rating<sup>1</sup>

	Norges Bank's counterparties (excluding brokers)		Brokers	
	31.12.2018	31.12.2017	31.12.2018	31.12.2017
AAA	1	-	-	-
AA	33	30	33	30
A	61	63	76	77
BBB	8	11	28	16
BB	2	1	17	16
B	-	-	7	15
<b>Total</b>	<b>105</b>	<b>105</b>	<b>161</b>	<b>154</b>

<sup>1</sup> The table shows the number of legal entities. The same legal entity can be included as both broker and counterparty.

The number of counterparties has remained stable during the year. There were 105 counterparties at year-end 2018, unchanged from year-end 2017. The number of brokers increased to 161 at year-end 2018, from 154 at year-end 2017. There was a slight improvement in the credit quality of brokers and counterparties compared to year-end 2017. This is mainly due to more upgrades than downgrades in credit ratings for existing brokers and counterparties during the year. New approved brokers in 2018 also had a positive impact on the total credit rating quality.

### 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 both in 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 GPF's leverage was 1.5 percent for the aggregated equity and bond portfolio at the end of 2018, compared to 0.7 percent at the end of 2017. 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 leverage of 6.7 percent at the end of 2018, compared to 7.1 percent at the end of 2017.

### 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 2018.

---

## Note 9 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*, as well as tax on fee income from *Secured lending*. 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*. Refundable withholding taxes are recognised in the balance sheet as a receivable within *Other assets*.

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 is presented in the balance sheet as a payable within *Other liabilities*, until it has been settled. Deferred tax on capital gains is recognised as a liability in the balance sheet within *Other liabilities*, based on the expected future payment when GPFG is in a gain position in the applicable market. No deferred tax asset is presented in the balance sheet when GPFG is in a loss position, since the recognition criteria are not considered to be met. No deferred tax on capital gains is recognised in the balance sheet at year-end 2018.

Tax incurred in subsidiaries presented in the balance sheet line *Unlisted real estate* is recognised in the income statement as *Income/expense from unlisted real estate*. Only the tax expense in consolidated subsidiaries is included in the income statement line *Tax expense*. This is specified in table 9.1 in the line *Other*.

All uncertain tax positions, such as disputed refundable amounts for withholding taxes, are assessed each reporting period. The best estimate of the probable amount for collection or payment is recognised in the balance sheet.

Table 9.1 shows tax expense by type of investment and type of tax.

**Table 9.1** Specification tax expense

Amounts in NOK million, 2018	Gross income before taxes	Income tax on dividend, interest and fees	Capital gains tax	Other	Tax expense	Net income after taxes
<b>Income/expense from:</b>						
Equities	-517 214	-4 861	-15	-	-4 876	-522 090
Bonds	14 568	-32	-52	-	-84	14 484
Secured lending	4 733	-77	-	-	-77	4 656
Other	-	-	-	-13	-13	-
<b>Tax expense</b>		<b>-4 969</b>	<b>-67</b>	<b>-13</b>	<b>-5 050</b>	

Amounts in NOK million, 2017	Gross income before taxes	Income tax on dividend, interest and fees	Capital gains tax	Other	Tax expense	Net income after taxes
<b>Income/expense from:</b>						
Equities	933 501	-4 512	-153	-	-4 665	928 836
Bonds	81 410	-52	-16	-	-68	81 342
Secured lending	3 532	-55	-	-	-55	3 477
Other	-	-	-	-8	-8	
<b>Tax expense</b>		<b>-4 619</b>	<b>-169</b>	<b>-8</b>	<b>-4 796</b>	

Table 9.2 shows receivables related to withholding tax and tax payable recognised in the balance sheet within *Other assets* and *Other liabilities*, respectively.

**Table 9.2** Specification of balance sheet items on income tax

Amounts in NOK million	2018	2017
Withholding tax receivable	1 895	2 589
Tax payable	12	-

Table 9.3 specifies the line *Net payment of taxes* in the statement of cash flows.

**Table 9.3** Specification of net payment of taxes

Amounts in NOK million	2018	2017
Receipt of refundable withholding tax	4 469	3 699
Payment of taxes	-8 812	-10 485
<b>Net payment of taxes</b>	<b>-4 343</b>	<b>-6 786</b>

---

## Note 10 Foreign exchange gain/loss

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 located in Norway. The fund's return is measured primarily in the fund's currency basket, which is a weighted

composition 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 in relation to the bank's underlying activities. Owner's equity, in the form of the krone deposit for the GPFG, is denominated in Norwegian kroner and a share of the management costs for the GPFG are incurred in Norwegian kroner. The financial reporting for the GPFG is part of the financial statements of Norges Bank 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, no single investment currency is 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 are 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 for the holding is reversed in the current period.

*Security element*

Unrealised gain/loss due to changes in the security price are 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 market value of the investment portfolio that is due to changes in foreign exchange rates is presented in table 10.1.

**Table 10.1** Specification Foreign exchange gain/loss

Amounts in NOK million	2018	2017
Foreign exchange gain/loss - USD/NOK	163 983	-126 868
Foreign exchange gain/loss - EUR/NOK	14 654	111 425
Foreign exchange gain/loss - JPY/NOK	50 721	-8 367
Foreign exchange gain/loss - GBP/NOK	-1 329	20 745
Foreign exchange gain/loss - other	-4 418	17 766
<b>Foreign exchange gain/loss</b>	<b>223 611</b>	<b>14 701</b>



Table 10.2 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 8.2 in note 8 *Investment risk*.

**Table 10.2** Specification of the investment portfolio by currency

Amounts in NOK million	31.12.2018	31.12.2017
US dollar	3 418 802	3 345 022
Euro	1 678 501	1 811 389
Japanese yen	682 120	694 782
British pound	631 180	677 593
Other currencies	1 845 342	1 959 668
<b>Market value investment portfolio</b>	<b>8 255 945</b>	<b>8 488 454</b>

Table 10.3 gives an overview of exchange rates at the balance sheet date for the main currencies the GPFG is exposed to.

**Table 10.3** Exchange rates

	31.12.2018	31.12.2017	Percent change
US dollar	8.66	8.18	6 %
Euro	9.90	9.82	1 %
Japanese yen	0.08	0.07	13 %
British pound	11.03	11.06	0 %

---

## Note 11 Management costs

---

### Accounting policy

Management fee is recognised in the GPFG's income statement as an expense when incurred, but it is cash-settled in the following year. *Management fee payable* is a financial liability measured at amortised cost.

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 exclusively established as part of the management of the GPFG's investments in unlisted real estate.

### 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 11.1.

**Table 11.1** Management fee

Amounts in NOK million	2018		2017	
		Basis points		Basis points
Salary, social security and other personnel-related costs	1 262		1 325	
Custody costs	385		404	
IT services, systems, data and information	651		657	
Research, consulting and legal fees	282		252	
Other costs	400		251	
Allocated costs Norges Bank	167		161	
Base fees to external managers	724		755	
<b>Management fee excluding performance-based fees</b>	<b>3 872</b>	<b>4.6</b>	<b>3 804</b>	<b>4.8</b>
Performance-based fees to external managers	673		924	
<b>Management fee</b>	<b>4 544</b>	<b>5.4</b>	<b>4 728</b>	<b>6.0</b>

**Management costs in subsidiaries**

Management costs incurred in subsidiaries consist of costs related to the management of the unlisted real estate portfolio. These costs are expensed directly in the portfolio result and are not part of the management fee. Management

costs incurred in non-consolidated and consolidated subsidiaries are presented in the income statement as *Income/expense from unlisted real estate* and *Other income/expense*, respectively. These costs are specified in table 11.2.

**Table 11.2** Management costs, real estate subsidiaries

Amounts in NOK million	2018		2017	
		Basis points		Basis points
Salary, social security and other personnel-related costs	25		33	
IT services, systems, data and information	41		42	
Research, consulting and legal fees	30		23	
Other costs	13		17	
<b>Total management costs, real estate subsidiaries</b>	<b>108</b>	<b>0.1</b>	<b>116</b>	<b>0.2</b>
<i>Of which management costs non-consolidated subsidiaries</i>	88		97	
<i>Of which management costs consolidated subsidiaries</i>	20		19	

### Upper limit for reimbursement of management costs

The Ministry of Finance has established 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 2018, total management costs incurred in Norges Bank and its subsidiaries, excluding performance-based fees to external managers, are limited to 7.0 basis points of average assets under management. The equivalent limit in 2017 was 7.5 basis points. In accordance with guidelines from the Ministry of Finance, average assets under management is calculated based on the market value of the portfolio in Norwegian kroner at the start of each month in the calendar year.

Total management costs measured against the upper limit amounted to NOK 3 980 million in 2018. This consisted of management costs in Norges Bank, excluding performance-based fees to external managers, of NOK 3 872 million and management costs in subsidiaries of NOK 108 million. This corresponds to 4.7 basis points of assets under management.

Total management costs including performance-based fees to external managers amounted to NOK 4 652 million in 2018. This corresponds to 5.5 basis points of assets under management.

### Other operating costs in subsidiaries

In addition to the management costs presented in table 11.2, other operating costs are also incurred in subsidiaries related to the ongoing maintenance, operation and development of properties and leases. These are not costs related to investing in real estate, they are costs of operating the underlying properties 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 companies are presented in the income statement line *Income/expense from unlisted real estate*. See table 6.4 in note 6 *Unlisted real estate* for further information. Other operating costs incurred in consolidated subsidiaries are expensed in the income statement line *Other income/expense*.

## Note 12 Secured lending and borrowing

Secured lending and borrowing are collateralised (secured) transactions, where the GPFG posts or receives securities or cash 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, (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 12.1 specifies income and expense from secured lending and borrowing.

**Table 12.1** Income/expense from secured lending and borrowing

Amounts in NOK million	2018	2017
Income/expense from secured lending	4 733	3 532
Income/expense from secured borrowing	-1 466	-345
<b>Net income/expense from secured lending and borrowing</b>	<b>3 267</b>	<b>3 187</b>

**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 on separate lines in the balance sheet, *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 an equity swap, the sold equity is presented in the balance sheet as *Equities lent*, since the GPFG's exposure to the equity is 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 an equity swap, the GPFG has 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 12.2 shows the amount presented as *Secured lending*, and the associated collateral received in the form of securities.

**Table 12.2** Secured lending

Amounts in NOK million	31.12.2018	31.12.2017
Secured lending	216 768	185 046
<b>Total secured lending</b>	<b>216 768</b>	<b>185 046</b>
<b>Associated collateral in the form of securities (off balance sheet)</b>		
Equities received as collateral	38 018	52 413
Bonds received as collateral	182 703	134 430
<b>Total security collateral received related to lending</b>	<b>220 721</b>	<b>186 843</b>

Table 12.3 shows transferred securities with the associated liability presented as *Secured borrowing*, and collateral received in the form of securities or guarantees.

**Table 12.3** Transferred financial assets and secured borrowing

Amounts in NOK million	31.12.2018	31.12.2017
<b>Transferred financial assets</b>		
Equities lent	437 651	411 664
Bonds lent	662 920	591 277
<b>Total transferred financial assets</b>	<b>1 100 571</b>	<b>1 002 941</b>
<b>Associated cash collateral, recognised as liability</b>		
Secured borrowing	360 105	260 136
<b>Total secured borrowing</b>	<b>360 105</b>	<b>260 136</b>
<b>Associated collateral in the form of securities or guarantees (off balance sheet)</b>		
Equities received as collateral	486 470	573 127
Bonds received as collateral	309 951	232 465
Guarantees	10 696	12 537
<b>Total collateral received in the form of securities or guarantees related to transferred financial assets</b>	<b>807 117</b>	<b>818 129</b>

## Note 13 Collateral and offsetting

### Accounting policy

#### *Cash collateral OTC derivative transactions*

Cash collateral posted in connection with OTC 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 OTC 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 13.1 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 13.1.

*Cash collateral posted* and *Cash collateral received* in the balance sheet are related exclusively to OTC 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 12 *Secured lending and borrowing* for further information.

#### *Offsetting*

Table 13.1 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

effects of potential netting of recognised financial assets and liabilities with the same counterparty, together with posted or received cash collateral. This results in a net exposure 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 13.1** Assets and liabilities subject to netting agreements

Description	Amounts subject to enforceable master netting agreements						Gross financial assets recognised in the balance sheet
	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 not subject to enforceable netting agreements <sup>1</sup>	
<b>Assets</b>							
Secured lending	158 530	-	106 432	52 098	-	58 238	216 768
Cash collateral posted	1 806	1 685	-	-	<b>121</b>	-	1 806
Financial derivatives	3 526	2 593	908	-	<b>25</b>	50	3 576
<b>Total</b>	<b>163 862</b>	<b>4 278</b>	<b>107 340</b>	<b>52 098</b>	<b>146</b>	<b>58 288</b>	<b>222 150</b>

Description	Amounts subject to enforceable master netting agreements						Gross financial liabilities recognised in the balance sheet
	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 not subject to enforceable netting agreements <sup>2</sup>	
<b>Liabilities</b>							
Secured borrowing	308 358	-	106 432	200 752	<b>1 174</b>	51 746	360 105
Cash collateral received	5 017	1 488	-	-	<b>3 529</b>	-	5 017
Financial derivatives	4 222	2 593	1 176	-	<b>452</b>	-	4 222
<b>Total</b>	<b>317 597</b>	<b>4 081</b>	<b>107 608</b>	<b>200 752</b>	<b>5 155</b>	<b>51 746</b>	<b>369 344</b>

Description	Amounts subject to enforceable master netting agreements						Gross financial assets recognised in the balance sheet
	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 not subject to enforceable netting agreements <sup>1</sup>	
<b>Assets</b>							
Secured lending	120 952	-	91 571	29 382	-	64 094	185 046
Cash collateral posted	1 894	1 878	-	-	16	-	1 894
Financial derivatives	2 074	1 875	141	-	58	6 951	9 025
<b>Total</b>	<b>124 920</b>	<b>3 753</b>	<b>91 712</b>	<b>29 382</b>	<b>74</b>	<b>71 045</b>	<b>195 965</b>

Description	Amounts subject to enforceable master netting agreements						Gross financial liabilities recognised in the balance sheet
	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 not subject to enforceable netting agreements <sup>2</sup>	
<b>Liabilities</b>							
Secured borrowing	202 291	-	91 571	110 337	383	57 845	260 136
Cash collateral received <sup>3</sup>	5 804	740	-	-	5 064	-	5 804
Financial derivatives	3 919	1 875	1 342	-	701	-	3 919
<b>Total</b>	<b>212 014</b>	<b>2 615</b>	<b>92 913</b>	<b>110 337</b>	<b>6 148</b>	<b>57 845</b>	<b>269 859</b>

<sup>1</sup> Secured lending includes amounts related to shares purchased in combination with an equity swap. In 2018, this was NOK 37 billion (NOK 52 billion in 2017). See note 12 Secured lending and borrowing for further information.

<sup>2</sup> Secured borrowing includes amounts related to shares sold in combination with an equity swap. In 2018, this was NOK 37 billion (NOK 35 billion in 2017). See note 12 Secured lending and borrowing for further information.

<sup>3</sup> Certain comparative amounts have been restated to conform to current period presentation.

---

## Note 14 Related parties

### Accounting policy

Norges Bank is owned by the Norwegian government and under IAS 24.25 is 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 11 *Management costs*. In 2018, NOK 4.7 billion was deducted from the krone account to pay the accrued management fee for 2017 to Norges Bank, compared to NOK 3.7 billion in 2017.

Internal trades in the form of money market lending or borrowing and repurchase agreements 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 2018, the net balance between the portfolios represented a receivable for the GPFG of NOK 154 million, compared to a receivable of NOK 292 million at the end of 2017. Associated income and expense items are presented net in the income statement as *Interest income/expense*.

### Transactions with subsidiaries

Subsidiaries of Norges Bank are exclusively established as part of the management of the GPFG's investments in unlisted real estate. For an overview of the companies that own and manage the properties, as well as consolidated subsidiaries, see note 15 *Interests in other entities*. For further information regarding transactions with subsidiaries, see note 6 *Unlisted real estate*.

---

## Note 15 Interests in other entities

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

The overall objective of the ownership structures used for unlisted real estate investments 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 real estate investments. Expected tax expense for the fund is therefore one of the factors considered when determining the ownership structure.

Table 15.1 shows the companies that own and manage the properties, as well as the consolidated subsidiaries.

**Table 15.1** Real estate companies

Company	Business address	Property address	Ownership share and voting right in percent	Effective ownership share of underlying properties in percent	Recognised from
<b>Non-consolidated companies</b>					
<b>United Kingdom</b>					
NBIM George Partners LP <sup>1</sup>	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 James 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
<b>Luxembourg</b>					
NBIM S.à r.l.	Luxembourg	N/A	100.00	N/A	2011
<b>France</b>					
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
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

Company	Business address	Property address	Ownership share and voting right in percent	Effective ownership share of underlying properties in percent	Recognised from
<b>Germany</b>					
Die Welle 1 Frankfurt Immobilien GmbH & Co. KG	Cologne	Frankfurt	50.00	50.00	2012
Die Welle 3 Frankfurt Immobilien GmbH & Co. KG	Cologne	Frankfurt	50.00	50.00	2012
NKE Neues Kranzler Eck Berlin Immobilien GmbH & Co. KG	Cologne	Berlin	50.00	50.00	2012
STEG LBG 2 S.C.S	Luxembourg	Munich	94.90	94.90	2014
STEG LBG 3 S.C.S	Luxembourg	Munich	94.90	94.90	2014
<b>Switzerland</b>					
NBIM Antoine CHF S.à r.l.	Luxembourg	Zürich	100.00	100.00	2012
<b>Europe</b>					
Prologis European Logistics Partners S.à r.l.	Luxembourg	Multiple European cities	50.00	50.00	2013
<b>US</b>					
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

Company	Business address	Property address	Ownership share and voting right in percent	Effective ownership share of underlying properties in percent	Recognised from
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
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
<b>Japan</b>					
TMK Tokyo TN1	Tokyo	Tokyo	70.00	70.00	2017
<b>Consolidated subsidiaries</b>					
<b>Singapore</b>					
NBRE Management Singapore Pte. Ltd.	Singapore	N/A	100.00	N/A	2015
<b>Japan</b>					
NBRE Management Japan Advisors K.K.	Tokyo	N/A	100.00	N/A	2015
<b>United Kingdom</b>					
NBRE Management Europe Limited	London	N/A	100.00	N/A	2016

<sup>1</sup> One property in this company, 20 Air Street, has an ownership share of 50 percent from 1 September 2017.

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

In addition to the companies shown in table 15.1, Norges Bank has wholly-owned holding companies established in connection with investments in unlisted real estate. These holding companies do not engage in any operations and do not own any properties directly. The holding companies have their business address either in the same country as the property, in connection with NBIM S.à r.l. in Luxembourg or in Norway for the holding companies established for property investments in Japan, France and Germany.

To the Supervisory Council of Norges Bank

# Independent Auditor's Report

## 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 2018, the income statement, the statement of changes in owner's capital, the statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial reporting is prepared in accordance with law and regulations and gives a true and fair view of the financial position for the investment portfolio of the Government Pension Fund Global as at 31 December 2018, and its financial performance and 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 laws, regulations, and auditing standards and practices generally accepted in Norway, including International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of Norges Bank as required by laws and regulations, 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 judgement, were of most significance in our audit of the financial reporting for 2018. 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
<p>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.</p> <p>Deviations in the automated processes are analysed and followed up.</p> <p>Norges Bank's IT systems are based on standard systems with varying degrees of customisation and modifications. The technical operation of the IT systems is largely outsourced to various service providers.</p> <p>IT systems used in portfolio management are essential for accounting and reporting.</p> <p>For a more detailed description of the development, management and operation of IT systems in Norges Bank, see chapter 5.1 Management organisation in the annual report 2018.</p> <p>Effective internal controls in the automated portfolio management processes as well as in handling deviations forms the basis for ensuring accurate, complete and reliable financial reporting and is therefore a key audit matter.</p>	<p>Norges Bank has established overall governance models and control activities for evaluation of the equity and fixed-income management.</p> <p>We assessed those elements of the overall governance models that are relevant to financial reporting.</p> <p>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.</p> <p>We assessed whether selected valuation and calculation methods, including the method for currency conversion, were in accordance with IFRS.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>

**Valuation of investments in unlisted real estate**

Key audit matter	How the matter was addressed in the audit
<p>The Government Pension Fund Global has invested in unlisted real estate through subsidiaries of Norges Bank. Investments in subsidiaries presented as unlisted real estate in the balance sheet are measured at fair value. See notes 6 and 7 for a description of the investments, accounting policies and valuation methods.</p> <p>The valuation of unlisted real estate investments involves uncertainty and is based on information about each individual property type and location, as well as a number of assumptions and estimates.</p> <p>The assumptions and estimates are essential for the valuation, and the valuation of unlisted real estate is therefore a key audit matter.</p>	<p>Norges Bank has established various control activities for monitoring of 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 revenue streams, expenses and applicable discount rates. For a sample of properties, we have tested if these control activities have operated effectively in the reporting period.</p> <p>For a sample of properties in USA and Germany, we received the external valuation reports from Norges Bank throughout the year and assessed whether the applied valuation methods were in accordance with generally accepted valuation standards and practices. We assessed the reasonableness of the estimates for future rental income used in the valuation reports for the next 12 month period against budget or reported rental income for the past 12 month period, and assessed a sample of estimates for market rent and discount rates against external sources. We assessed the valuer's independence, qualifications and experience.</p> <p>We used our own experts in the review of the valuation reports.</p> <p>We reconciled the fair value in the financial reporting with the valuation reports.</p> <p>We assessed whether the disclosures in note 6 and 7 regarding valuation of unlisted real estate was adequate.</p>

## Risk and return disclosures

Key audit matter	How the matter was addressed in the audit
<p>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.</p> <p>In the management mandate for the Government Pension Fund Global, there are several limits and restrictions for the management of the fund. All of the fund's investments, including investments in unlisted real estate are included in the calculations of relative volatility and are measured against the fund's reference index consisting of global equity and bond indices.</p> <p>Absolute and relative return information for the Government Pension Fund Global's equity and fixed-income investments is presented in note 3 Returns. Information regarding risk is presented in note 8 Investment Risk.</p> <p>Measurement of absolute and relative returns and information regarding market risk, presented in note 8, tables 8.6 and 8.7 and in the section on volatility and correlation risk, is a complex matter in the financial reporting and is therefore a key audit matter.</p>	<p>Norges Bank has established various control activities related to the calculation of returns and market risk.</p> <p>We assessed and tested selected control activities related to the application of calculation methods used to calculate returns, the consistency between accounting and performance measurement, and that external sources of information were accurately applied in the calculations.</p> <p>In addition, we recalculated if the absolute returns for the year, and relative returns for selected days, were calculated in accordance with the methods described in note 3.</p> <p>For information regarding market risk in note 8, tables 8.6 and 8.7, and in the section on volatility and correlation risk, we assessed whether the calculations were conducted in accordance with the calculation methods and assumptions as described in note 8. In addition, we assessed and tested the design of selected controls established by Norges Bank to monitor the service provider. We tested that a sample of these control activities had operated effectively in the reporting period.</p> <p>We collected and compared the reports from the service providers regarding market risk with the disclosures in note 8, tables 8.6 and 8.7, and the disclosures regarding expected shortfall in the section on volatility and correlation risk.</p> <p>We assessed whether the disclosures on returns in note 3 and the disclosures on market risk in note 8, tables 8.6 and 8.7, and in the section on volatility and correlation risk were adequate.</p>

*Other information*

Management is responsible for the other information. The other information comprises information in the annual report, except the financial reporting and our auditor's report thereon.

Our opinion on the financial reporting does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial reporting, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial reporting or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

*Responsibilities of the Executive Board and management for the financial reporting*

The Executive Board and management are responsible for the preparation in accordance with law and regulations, including fair presentation of the financial reporting in accordance with International Financial Reporting Standards as adopted by the EU. The Executive Board and management are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements 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 laws, regulations, and auditing standards and practices generally accepted in Norway, including 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 laws, regulations, and auditing standards and practices generally accepted in Norway, including ISAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the financial statements, 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 the 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 represent the underlying transactions and events in a manner that achieves fair presentation.

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.

We also provide the Executive Board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

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, 6 February 2019  
Deloitte AS

Henrik Woxholt  
*State Authorised Public Accountant*

**Note: This translation from Norwegian has been prepared for information purposes only.**





NORGES BANK INVESTMENT MANAGEMENT  
Bankplassen 2, P.O. Box 1179 Sentrum, NO-0107 Oslo, Norway  
T: +47 24 07 30 00, [www.nbim.no](http://www.nbim.no)