NORGES BANK
INVESTMENT MANAGEMENT

Government Pension Fund Global

Annual report

2019

No. 22

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

The fund's annual return

19.9%

1,692 billion kroner

The Government Pension Fund Global returned 19.9 percent, or 1,692 billion kroner, in 2019. This is the highest return in kroner in a single year in the fund's history and the second best year in percent.

Equity

26.0%

return on the fund's equity investments

Unlisted real estate

6.8%

return on the fund's investments in unlisted real estate

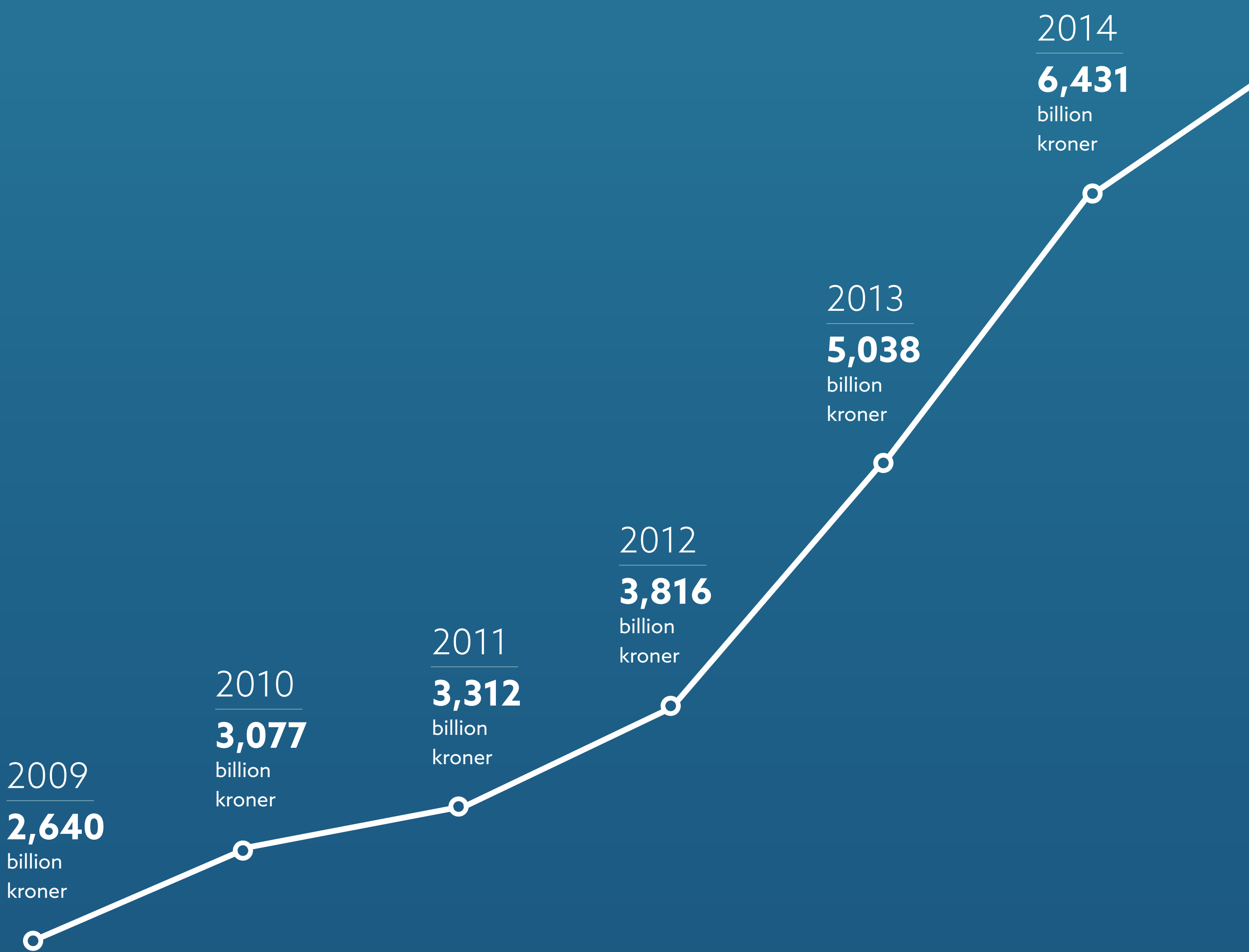
Fixed-income investments

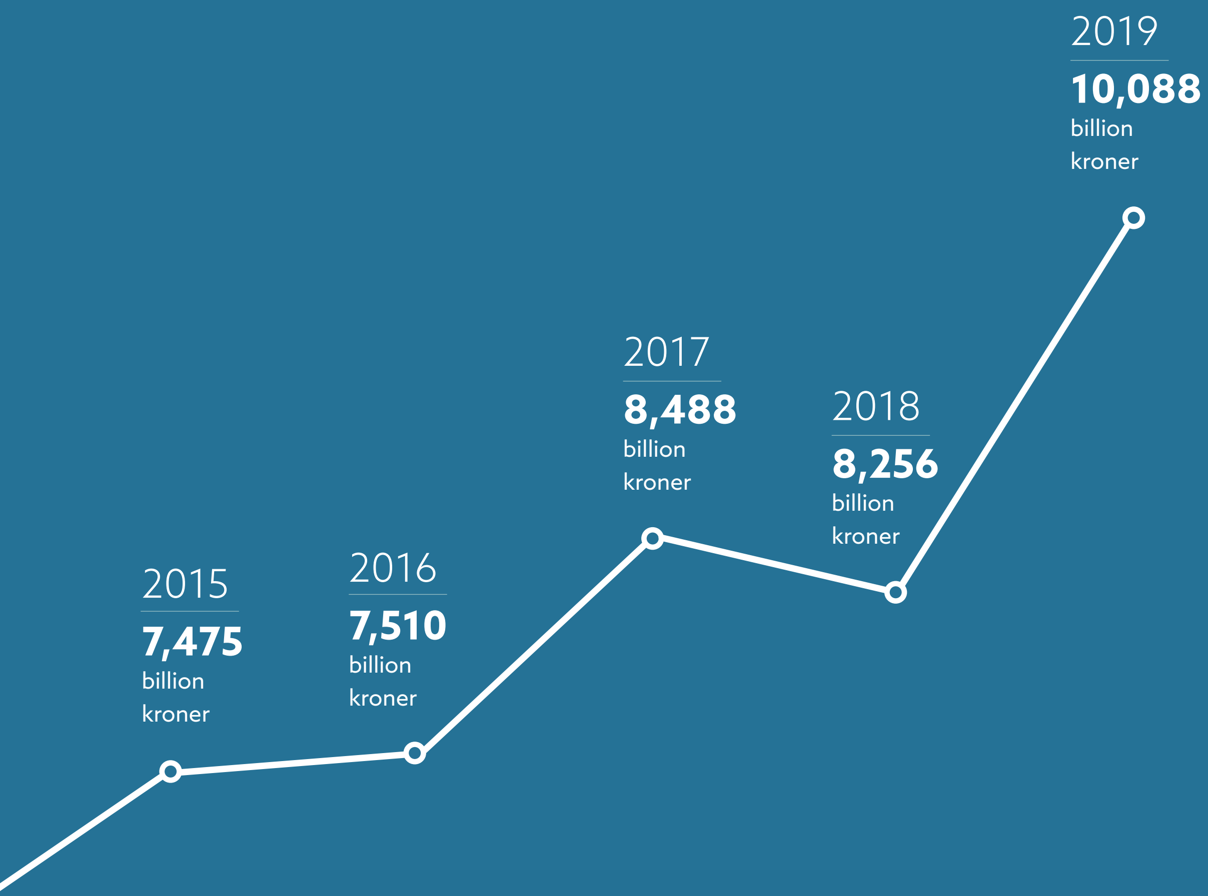
7.6%

return on the fund's fixed-income investments

10,088,082,903,897

The fund's market value was 10,088 billion kroner at the end of 2019, up from 8,256 billion kroner a year earlier. This is the largest increase in the fund's value in a single year in the fund's history.





Equity

7,145
billion
kroner

70.8%
of the fund

Unlisted real estate

273
billion
kroner

2.7%
of the fund

Fixed-income investments

2,670
billion
kroner

26.5%
of the fund

Equity investments had a market value of 7,145 billion kroner, unlisted real estate 273 billion kroner, and fixed-income investments 2,670 billion kroner at the end of 2019. The fund's asset allocation was 70.8 percent in equities, 2.7 percent in unlisted real estate and 26.5 percent in fixed income.

Contents

Translated from Norwegian. For information only.

Related information published on www.nbim.no Holdings, voting records, composition of benchmark indices, GIPS report, monthly return figures, risk-adjusted return figures and external managers.

4 Management

5 Organisation

6 Financial statements

1 | Results


Øystein Olsen
Chairman of the Executive Board

The Executive Board's assessment of the results

The investments in the Government Pension Fund Global returned 19.9 percent in 2019, which is 0.23 percentage point more than the return on the benchmark index the fund is measured against. The Executive Board is satisfied that the return both in 2019 and over a longer period has been good and higher than the return on the benchmark index.

The Government Pension Fund Global had a market value of 10,088 billion kroner at the end of 2019. The fund's return before management costs was 19.9 percent measured in the fund's currency basket. Equities returned 26.0 percent, bonds 7.6 percent, and listed and unlisted real estate 10.4 percent. Management costs amounted to 0.05 percent of assets under management.

The fund's return in 2019 was the second-highest since 1998 in percentage terms, and the highest in krone terms. The strong return in 2019 provides a reminder that the fund's market value could also fluctuate substantially in the future. In isolation, a global stock market downturn equivalent to that in 2008 would reduce the value of the fund by almost 3 trillion kroner.

The Executive Board emphasises that performance must be assessed over time. Measured over the period 1998-2019 as a whole, the annual return on the fund was 6.1 percent. The annual net real return, after deductions for inflation and management costs, was 4.2 percent in this period. The annual return before management costs was 0.25 percentage point higher than that on the benchmark index from the Ministry of Finance.

Norges Bank manages the fund with a view to achieving the highest possible long-term return within the constraints laid down in the mandate from the Ministry of Finance. The Bank pursues a variety of investment strategies. For the period 2013-2019, these strategies can be grouped into three main categories: fund allocation, security selection and asset management. The different strategies are complementary and build on the fund's special characteristics as a large, long-term investor with limited short-term liquidity needs.

In 2019, the fund's return before management costs was 0.23 percentage point higher than that on the benchmark index. The contributions from the various investment strategies show that fund allocation contributed negatively to the relative return, while security selection and asset management both contributed positively. The single largest contribution to the relative return in 2019 came from internal security selection in equity management.

The contributions to the relative return from equity, fixed-income and real estate management show a negative contribution from real estate management and positive contributions from both equity and fixed-income management in 2019.

The Executive Board emphasises the importance of assessing the performance of the fund as a whole and over time. Viewed over the seven-year period 2013-2019, the different strategies produced an annual excess return before management costs of 0.19 percentage point. Fund allocation made a negative contribution to the relative return during the period, while security selection and asset management both made positive contributions. The Board is satisfied that the overall return was higher than that on the benchmark index during this period.

The Executive Board has noted that fund allocation served to reduce the fund's relative return in the period 2013-2019. Fund allocation comprises a diverse group of sub-strategies, and the design of this part of the fund's management was adjusted and further developed during the period. Some of the sub-strategies seek to increase excess returns, while others aim to increase diversification or ensure cost-effective implementation of changes in the management mandate. The Board emphasises the importance of considering the results in this light and over a long period.

The Executive Board has approved a new strategy plan for the period 2020-2022 which builds on those for previous years. The main strategies will be continued. By investing in real estate and renewable energy infrastructure, the Bank will seek to contribute to further diversification by broadening the fund's investments.

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. It was 0.33 percentage point at the end of 2019. Measured over the period 1998–2019 as a whole realised relative volatility has been 0.67 percentage point. The Executive Board is satisfied that the management of the fund has generated an excess return over time while remaining well within this risk limit.

The Executive Board attaches importance to cost-effective management, which also supports the objective of the highest possible net return. In the period 2013-2019, annual management costs averaged 0.06 percent of assets under management. In 2019, management costs amounted to 4.3 billion kroner, or 0.05 percent of assets under management. Management costs are low compared to other managers.

The Executive Board has issued principles for responsible management of the fund. Norges Bank works systematically on establishing principles, exercising ownership and investing responsibly. This work supports the objective of the highest possible return and is considered by the Board to be well-integrated into the Bank's activities. The Board decides on the observation and exclusion of companies based on advice from the Council on Ethics. The criteria for observation and exclusion are set out in ethically motivated guidelines laid down by the Ministry of Finance.

An important part of the Executive Board's work on the Government Pension Fund Global is to advise on the further development of the fund's management. In 2019, this included advice on the benchmark index for emerging equity markets and on the geographical distribution of the fund's equity benchmark.

The Executive Board
Oslo, 27 February 2020

Øystein Olsen
Chairman of
the Executive Board

Jon Nicolaisen
First Deputy Chair

Egil Matsen
Second Deputy Chair

Kristine Ryssdal
Board member

Arne Hyttnes
Board member

Karen Helene Ulltveit-Moe
Board member

Hans Aasnæs
Board member

Nina Udnes Tronstad
Board member

Historic results

The fund returned no less than 19.9 percent in 2019 as global equity markets surged.

Oslo, 27 February 2020

Yngve Slyngstad
CEO, Norges Bank
Investment Management

2019 brought a record-high krone return of 1,692 billion kroner, and the percentage return was the second-highest in the fund's history, topped only by the rebound from the financial crisis in 2009.

The fund reached a historic milestone on 25 October 2019, when the market value passed 10 trillion kroner for the first time, 50 years to the day after Norway hit oil in the North Sea. At year-end, the fund had a market value of 10,088 billion kroner.

After a record year in 2019, and after 25 years with a value increase no one had imagined, it is worth taking a deep breath. For the first 25 years after the start of oil production in 1971, we did not set aside any oil revenues. In the last 25 years, however, we have set a total of 3,389 billion kroner into the oil fund. In the first years, returns were low, but the fund grew due to large inflows. In the past decade, the fund has had a lower inflow, but the return has been an incredible 4,875 billion kroner. The strong return the past decade was facilitated by the equity purchase of 1,010 billion kroner during the financial crisis. The fund is now worth more than the Norwegian people's combined net wealth and three times the country's GDP.

We now have wealth invested in the world's financial markets that exceeds the government's total oil revenue over the past 50 years. This wealth belongs to our grandchildren and their grandchildren again. We work to safeguard and build financial wealth for future generations.

Record growth in fund value

The market value of the Government Pension Fund Global increased by a record 1,832 billion kroner in 2019.

The fund generated a very strong return of 19.9 percent in 2019. Equity investments returned 26.0 percent, unlisted real estate investments 6.8 percent, and fixed-income investments 7.6 percent.

Return since inception more than 5 trillion kroner
The Norwegian government first allocated capital to the fund in May 1996 and had transferred a total of 3,389 billion kroner by the end of 2019. Norges Bank Investment Management was set up on 1 January 1998 to manage the fund on behalf of the Ministry of Finance. Since then, the fund has generated a return of 5,358 billion kroner, equivalent to an annual return of 6.1 percent. After management costs and inflation, the annual return has been 4.2 percent. Over the last 10 years, the fund's accumulated return has been 4,875 billion kroner, which gives an annual return of 7.8 percent. After management costs and inflation, the annual return has been 6,0 percent.

Returns measured in international currency
The fund is invested in international securities and real estate in foreign currency. We generally measure returns in international currency – a weighted combination of the currencies in the fund's benchmark indices for equities and bonds. This is referred to as the fund's currency basket and consisted of 36 currencies at the end of 2019. Unless otherwise stated in the text, results are measured in this currency basket.

Market value passes 10 trillion kroner
The fund's market value climbed 1,832 billion kroner to 10,088 billion kroner in 2019. The market value is affected by investment returns, capital inflows and withdrawals, and exchange rate movements. The fund returned 1,692 billion kroner in 2019, and there was an inflow from the government of 13 billion kroner after paid management fees. The krone weakened against many of the currencies the fund is invested in, which in isolation increased its market value by 127 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 70.8 percent equities, 2.7 percent unlisted real estate and 26.5 percent fixed income.

Table 1 Return figures. Percent

	2019	2018	2017	2016	2015
Returns measured in the fund's currency basket					
Equity investments	26.02	-9.49	19.44	8.72	3.83
Unlisted real estate investments [1]	6.84	7.53	7.52	0.78	9.99
Fixed-income investments	7.56	0.56	3.31	4.32	0.33
Return on fund	19.95	-6.12	13.66	6.92	2.74
Relative return on fund (percentage points) [2]	0.23	-0.30	0.70	0.15	0.45
Management costs	0.05	0.05	0.06	0.05	0.06
Return on fund after management costs	19.90	-6.17	13.60	6.87	2.68
Returns measured in Norwegian kroner					
Equity investments	28.20	-6.56	19.74	3.67	16.77
Unlisted real estate investments [1]	8.68	11.02	7.80	-3.91	23.71
Fixed-income investments	9.41	3.82	3.57	-0.53	12.83
Return on fund	22.01	-3.07	13.95	1.95	15.54

[1] Includes listed real estate investments from 01.11.2014 to the end of 2016.
[2] Includes unlisted real estate investments from 01.01.2017. The fund's relative return prior to 2017 is calculated on the aggregated equity and fixed-income investments.

Table 2 Historical key figures as at 31 December 2019. 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
Return on fund (percent)	**6.09**	**6.46**	**7.83**	**7.05**	**19.95**
Annual price inflation (percent)	1.77	1.84	1.68	1.54	1.80
Annual management costs (percent)	0.08	0.08	0.06	0.05	0.05
Net real return on fund (percent)	4.17	4.46	5.98	5.38	17.78
The fund's actual standard deviation (percent)	7.41	8.10	7.14	7.09	7.55
Relative return on fund (percentage points) [1]	0.25	0.15	0.24	0.23	0.23
The fund's realised relative volatility (percentage points) [1]	0.67	0.77	0.36	0.33	0.35
The fund's information ratio (IR) [1,2]	0.39	0.24	0.64	0.66	0.58

[1] Based on aggregated equity and fixed-income investments until end of 2016.
[2] The fund's information ratio (IR) is the ratio of the fund's average monthly relative return to the fund's realised relative volatility. 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 2019, measured in various currencies. Percent

	Since 01.01.1998 Annualised figures	2019	2018	2017	2016	2015
US dollar	6.31	20.24	-8.44	19.92	4.83	-2.13
Euro [1]	6.21	22.45	-3.83	5.33	7.97	9.02
British pound	7.40	15.59	-2.75	9.54	25.05	3.54
Norwegian krone	7.20	22.01	-3.07	13.95	1.95	15.54
Currency basket	6.09	19.95	-6.12	13.66	6.92	2.74

[1] 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

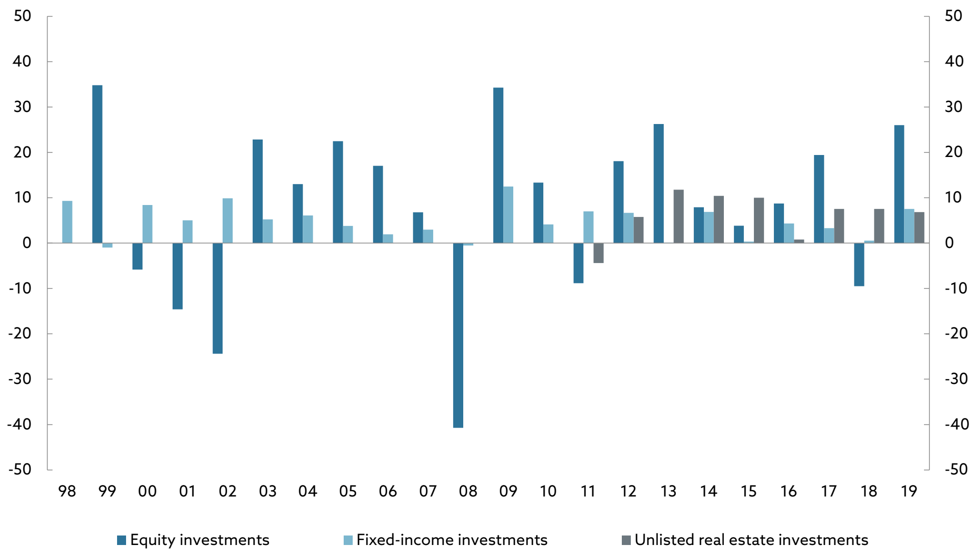


Table 4 Historical returns on the fund's investments. Percent

	Fund	Equity investments	Fixed-income investments	Unlisted real estate investments [1]
2019	19.95	26.02	7.56	6.84
2018	-6.12	-9.49	0.56	7.53
2017	13.66	19.44	3.31	7.52
2016	6.92	8.72	4.32	0.78
2015	2.74	3.83	0.33	9.99
2014	7.58	7.90	6.88	10.42
2013	15.95	26.28	0.10	11.79
2012	13.42	18.06	6.68	5.77
2011 [2]	-2.54	-8.84	7.03	-4.37
2010	9.62	13.34	4.11	-
2009	25.62	34.27	12.49	-
2008	-23.31	-40.71	-0.54	-
2007	4.26	6.82	2.96	-
2006	7.92	17.04	1.93	-
2005	11.09	22.49	3.82	-
2004	8.94	13.00	6.10	-
2003	12.59	22.84	5.26	-
2002	-4.74	-24.39	9.90	-
2001	-2.47	-14.60	5.04	-
2000	2.49	-5.82	8.41	-
1999	12.44	34.81	-0.99	-
1998	9.26	-	9.31	-

[1] Includes listed real estate investments from 01.11.2014 to the end of 2016.
[2] Unlisted real estate investments from 01.04.2011.

The fund was invested in 9,202 companies at the end of 2019. It had an ownership share of more than 2 percent in 1,469 companies and more than 5 percent in 39 companies.

Table 5 Key figures. Billions of kroner

	2019	2018	2017	2016	2015
Market value					
Equity investments	7,145	5,477	5,653	4,692	4,572
Unlisted real estate investments [1]	273	246	219	242	235
Fixed-income investments	2,670	2,533	2,616	2,577	2,668
Market value of fund [2]	**10,088**	**8,256**	**8,488**	**7,510**	**7,475**
Accrued, not paid, management fees [2]	-4	-5	-5	-4	-4
Owner's capital [2]	10,084	8,251	8,484	7,507	7,471
Inflow/withdrawal of capital [3]	18	34	-61	-101	46
Paid management fees [3]	-5	-5	-4	-4	-3
Return on fund	1,692	-485	1,028	447	334
Changes due to fluctuations in krone	127	224	15	-306	668
Total change in market value	**1,832**	**-233**	**978**	**35**	**1,044**
Changes in value since first capital inflow in 1996					
Total inflow of capital [4]	3,389	3,371	3,337	3,397	3,499
Return on equity investments	4,023	2,545	3,062	2,129	1,786
Return on unlisted real estate investments [1]	85	69	53	38	31
Return on fixed-income investments	1,249	1,052	1,037	955	859
Management fees [5]	-48	-44	-39	-35	-31
Changes due to fluctuations in krone	1,390	1,263	1,040	1,025	1,331
Market value of fund	**10,088**	**8,256**	**8,488**	**7,510**	**7,475**
Return on fund	**5,358**	**3,666**	**4,151**	**3,123**	**2,676**
Return after management costs	**5,309**	**3,622**	**4,111**	**3,088**	**2,645**

[1] Includes listed real estate investments from 01.11.2014 to the end of 2016.
[2] The fund's market value shown in this table does not take into account the management fee. Owner's capital in the financial reporting equals the fund's market value less accrued, not paid, management fees.
[3] Paid management fees are specified separately, and not included in Inflow/withdrawal of capital.
[4] Total inflow of capital shown in this table is adjusted for accrued, not paid, management fees.
[5] 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

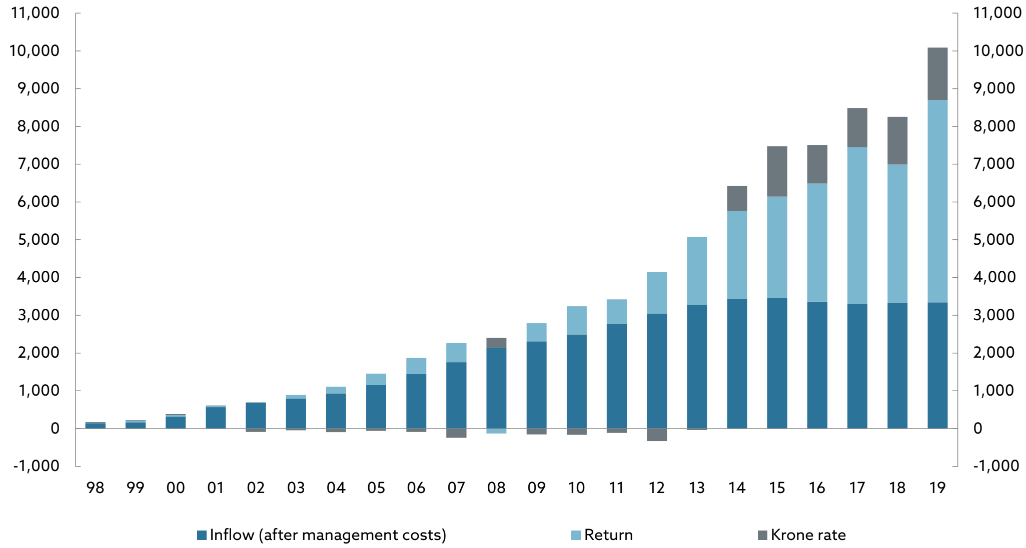


Chart 4 Changes in the fund's market value. Billions of kroner

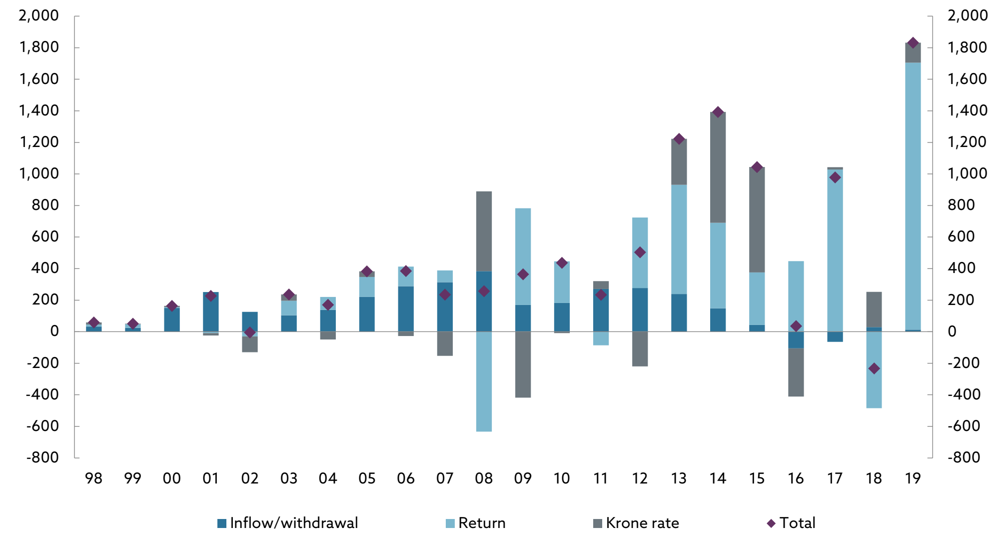


Chart 5 The fund's market value

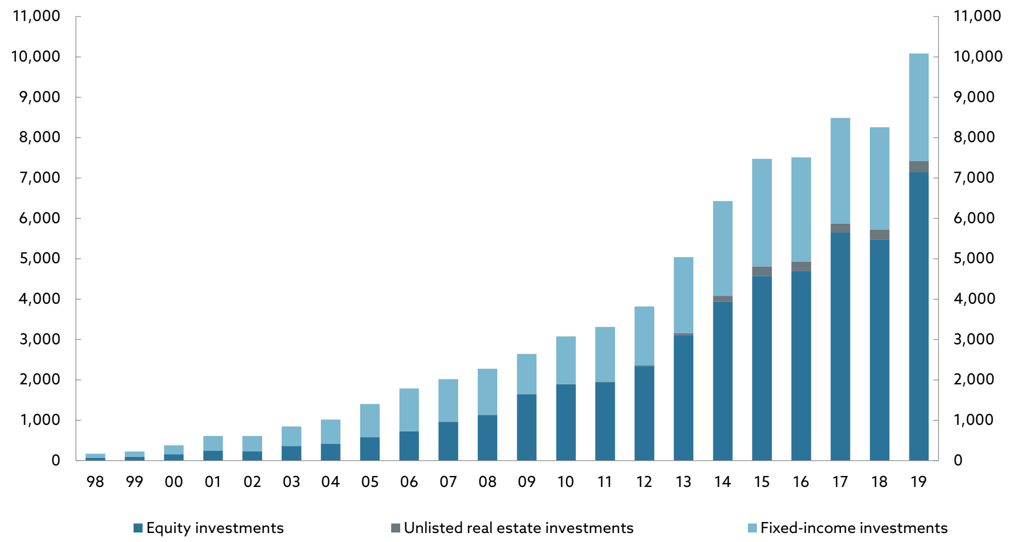


Table 6 Changes in the fund's market value. Billions of kroner

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

[1] After paid management fees.

Table 7 The fund's market value by asset class. Billions of kroner

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

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

2 | 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 the CEO of Norges Bank Investment Management

Norges Bank Investment Management

Policies
The CEO delegates investment mandates and job descriptions

Our mission

The fund is owned by the Norwegian people. The Ministry of Finance sets the overall investment strategy, and any major changes to this strategy require the approval of the Storting – the Norwegian parliament. Long-term management of the fund ensures that both current and future generations of Norwegians can benefit from Norway's oil wealth.

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 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. The new Central Bank Act assigns the role of managing the fund to Norges Bank. The CEO of Norges Bank Investment Management implements the management mandate in accordance with instructions and mandates from Norges Bank's Executive Board.

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. We spread our investments widely all around the world to limit the fund's exposure to developments in individual companies, industries and countries.

The management mandate from the Ministry of Finance permits Norges Bank to invest the fund in listed equities, bonds, unlisted real estate and renewable energy infrastructure. The fund's equity and bond investments largely 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. Property purchases are funded through the sale of equities and bonds. Unlisted and listed real estate investments are managed under a combined strategy for real estate. Investments in renewable energy infrastructure are part of the fund's environmental mandates, which are subject to an upper limit of 120 billion kroner. Unlisted renewable energy infrastructure was not added to the mandate until November 2019, and no such investments had been made by the end of the year.

This means that the proportions of the fund invested in equities and bonds will differ from the benchmark index from the Ministry of Finance. We therefore seek to construct a reference portfolio that reflects the fund's special characteristics such as size, long-term horizon and limited liquidity requirements. 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.

Responsible investment is an integral part of our management task. We are an active owner and prioritise work on well-functioning boards and good corporate governance. Our investment decisions take account of how we view companies' long-term financial, environmental and social performance. We attach importance to high standards of quality and cost effectiveness in the management of the fund. Extensive reporting, an informative website and high media availability ensure the greatest possible transparency about the management of the fund.

Global economic growth fell in 2019 to its lowest level since the financial crisis.

Weak growth in the global economy

Global economic growth slowed in 2019, weighed by weaker industrial production and world trade. Monetary easing and hopes of more market-friendly outcomes of both the US-China trade war and Brexit nevertheless helped push up share prices during the year.

Global economic growth fell in 2019 to its lowest level since the financial crisis. There was a particular decline worldwide in industrial production and trade. Growth held up better outside the manufacturing sector. Weak growth in business investment was offset by relatively solid growth in consumer spending. Uncertainty around the trade conflict between the US and China and the UK's departure from the EU probably made a negative contribution to economic growth, but hopes of more market-friendly outcomes spread towards the end of the year. Together with monetary easing and stronger economic data, this meant that expectations for economic growth in 2020 picked up late in the year.

In the financial markets, weak economic growth, lower inflation expectations and a shift in monetary policy led to substantial declines in both short- and long-term yields. Together with signals of a trade deal between the US and China, this contributed to higher equity prices. Equity prices climbed despite firms reporting lower earnings growth. In the currency markets, the dollar remained relatively strong during the year, gaining against both the euro and the Chinese renminbi.

US economic growth was slightly slower than in 2018, but the country's low dependence on exports helped cushion the fall relative to other major economies. The Federal Reserve also lowered its policy rate during the year and cut short its balance sheet runoff programme. Together with low unemployment and continued employment growth, this monetary easing contributed to relatively strong growth in consumer spending and higher activity in the housing market. Turbulence in the money markets prompted the Federal Reserve to expand its balance sheet again in the latter part of the year.

Chinese economic growth fell to its lowest since the early 1990s on the back of concerns about the trade war with the US and relatively restrictive economic policy. Growth in capital investment was weak outside the housing market, and a drop in car sales contributed to low growth in consumer spending. The authorities took various steps to ease fiscal and monetary policy during the year, but these measures were relatively minor in comparison with the stimuli applied in previous periods of weaker growth.

In Europe, global trade concerns, persistent uncertainty about Brexit and reduced demand from China put a damper on growth. These factors hit Germany particularly hard, as its manufacturing sector – and especially the automotive industry – accounts for a high share of value added and has a high export ratio. Combined with lower inflation expectations, this weaker activity led the ECB to lower its policy rate and reintroduce quantitative easing. It also warned that fiscal policy needs to play a more prominent role with interest rates already so low.

Invested widely outside Norway

The fund was invested in 9,202 companies at the end of 2019. Its average holding in the world's listed companies was 1.5 percent.

The fund's investments spanned 74 countries and 50 currencies at the end of 2019.

43.9 percent of the fund was invested in North America, up from 43.0 percent a year earlier, 33.7 percent in Europe, down from 34.1 percent, and 19.2 percent in Asia-Pacific, down from 19.3 percent. Emerging markets accounted for 10.1 percent of the fund's investments, down from 10.3 percent.

Holdings in more than 9,000 companies

The fund was invested in 9,202 companies at the end of 2019, up from 9,158 a year earlier. It had holdings of more than 2 percent in 1,469 companies and more than 5 percent in 39 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 1.5 percent at the end of the year. Ownership was highest in Europe at 2.6 percent, up from 2.5 percent. Holdings in developed markets averaged 1.5 percent, while those in emerging markets (including frontier markets) averaged 1.6 percent.

The fund's fixed-income investments consisted of 4,608 securities from 1,177 issuers, down from 4,811 securities from 1,254 issuers. These investments were spread across 26 currencies at the end of the year, unchanged from a year earlier.

8.0 percent of fixed-income investments were in emerging markets, down from 8.2 percent. Bonds denominated in dollars, euros, pounds and yen climbed from 82.6 percent to 84.6 percent of fixed-income investments.
Debt instruments issued by governments and companies in countries classified as emerging markets will be limited to 5 percent of the market value of the bond portfolio going forward.

Broad geographical exposure

Investment opportunities evolve over time. New markets become available for investment, new opportunities emerge, and the risk picture changes. We must constantly adjust the fund's overall exposure to different markets and different sources of risk and return. 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 index. We have then chosen to add further countries in our reference portfolio. The aim of the reference portfolio is to obtain the best risk/return profile. In this reference portfolio, we select securities, instruments and markets from a broader universe than the strategic benchmark index in order 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 was unchanged at 68 at the end of 2019.

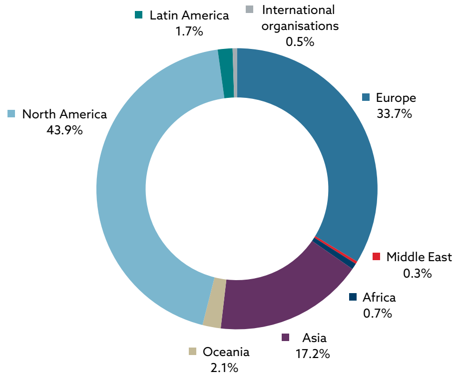
Investments in emerging markets
At the end of 2019, we had 1,024 billion kroner invested in equities and fixed-income securities in emerging markets, up from 813 billion a year earlier. Investments in equities in frontier markets amounted to 13.3 billion kroner, against 21.8 billion kroner at the end of 2018. The reduction was mainly due to the reclassification of Saudi Arabia to an emerging market.

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. Investments in frontier markets pose a risk to the fund, and we therefore place great importance on having sound risk management processes in place.

Table 8 The fund's ten largest holdings by country as at 31 December 2019. Percent

Country	Total	Equity	Fixed income	Unlisted real estate
US	39.8	27.8	10.8	1.2
Japan	8.7	5.9	2.8	0.0
UK	8.1	6.1	1.4	0.6
Germany	5.7	3.4	2.2	0.1
France	5.6	3.6	1.5	0.5
Switzerland	3.7	3.2	0.4	0.1
China	3.1	3.0	0.1	-
Canada	2.6	1.5	1.1	-
Australia	2.0	1.4	0.6	-
Spain	1.9	1.2	0.7	0.0

Chart 6 The fund's investments as at 31 December 2019. Equities and unlisted real estate distributed by country and bonds by currency. Percent



Germany

The fund had

582 billion kroner

invested in Germany at the end of 2019.

188

investments in companies

77

bond issuers

14

properties

Thailand

The fund had

28 billion kroner

invested in Thailand at the end of 2019

128

investments in companies

South Africa

The fund had

63 billion kroner

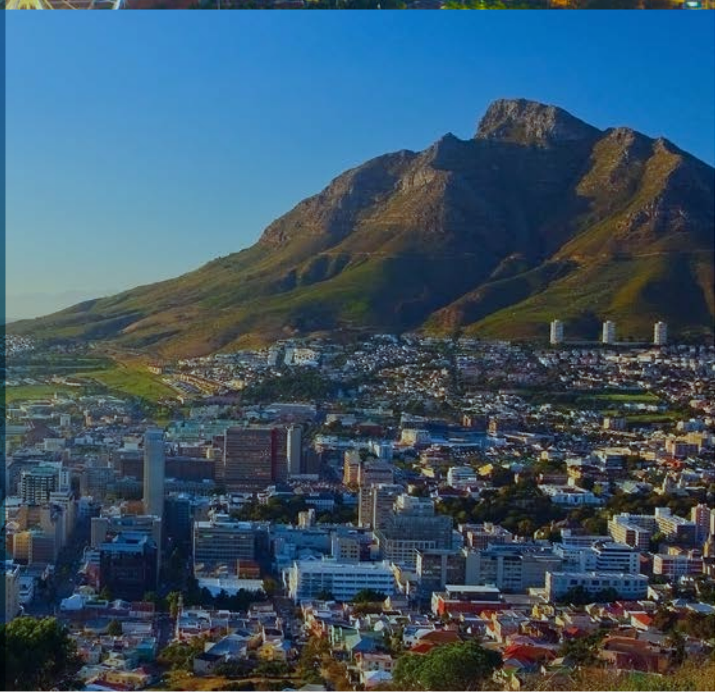
invested in South Africa at the end of 2019

101

investments in companies

2

bond issuers



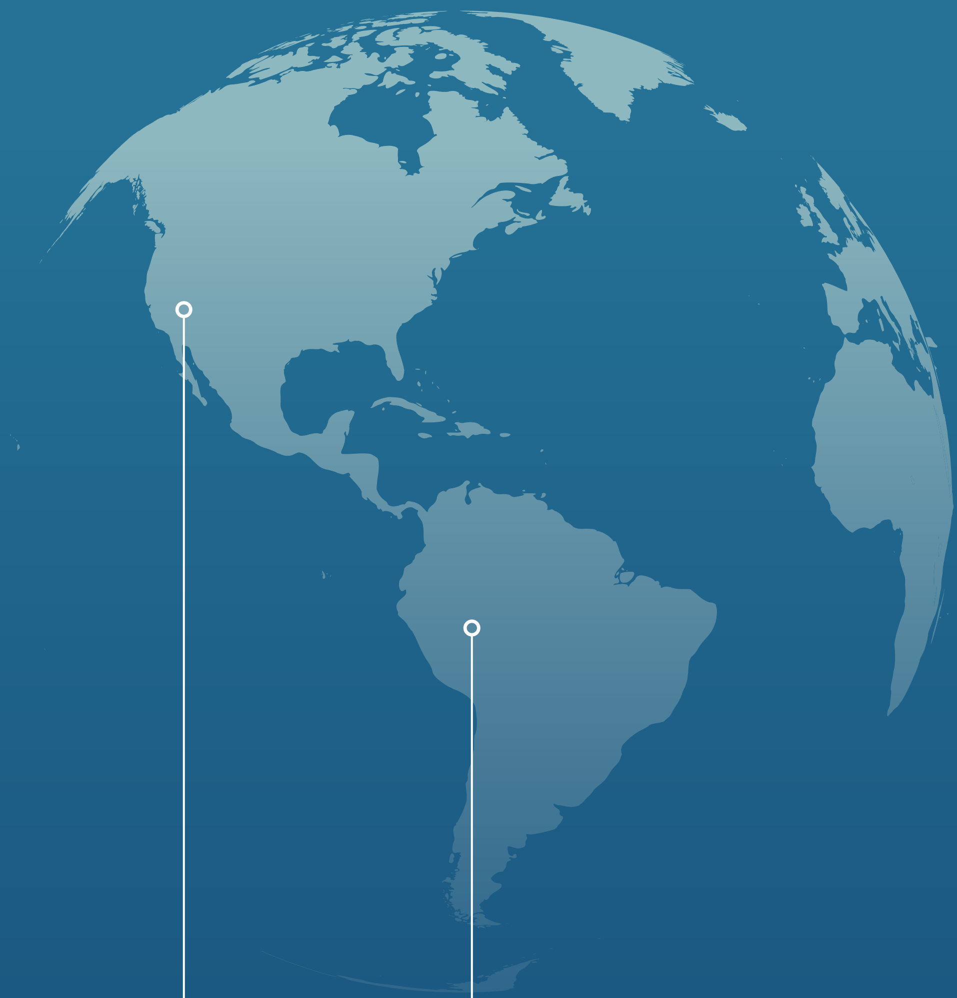
The fund has investments in 22 countries normally classified as frontier markets. The fund had 24.1 billion kroner invested in these markets at the end of 2019. These markets are not included in the benchmark index from the Ministry of Finance: Bahrain, Bangladesh, Botswana, Croatia, Cyprus, Estonia, Ghana, Iceland, Kenya, Latvia, Lithuania, Malta, Mauritius, Morocco, Nigeria, Oman, Romania, Slovakia, Slovenia, Sri Lanka, Tunisia and Vietnam. It also has investments in four countries classified as frontier markets but not included in the FTSE index: Kyrgyzstan, Moldova, Tanzania and Ukraine. The fund had 0.5 billion kroner invested in these markets at the end of 2019. In addition the fund had 3.7 billion kroner invested in Saudi Arabia at the end of the year. Some of these investments are in equities listed on exchanges in other countries.

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

Country	2019
Slovenia [2]	4,375
Vietnam	4,205
Slovakia	2,487
Lithuania [1]	2,240
Bangladesh	1,653
Romania [1,2]	1,471
Iceland [1,2]	1,324
Kenya	1,060
Sri Lanka	1,005
Latvia	844
Morocco	834
Nigeria	575
Oman	451
Croatia	370
Cyprus [2]	354
Bahrain [2]	342
Malta	162
Tunisia [2]	147
Mauritius	122
Estonia	84
Botswana	12
Ghana	5
Total	**24,120**
Other countries outside of the fund's benchmark index	
Saudi Arabia	3,651
Ukraine [2]	420
Kyrgyzstan [2]	55
Moldova [2]	35
Tanzania [2]	8
Total	**4,169**

[1] Including bonds denominated in a currency other than the local currency.
[2] Including investments in stocks listed on stock exchanges in other countries.

Global investments
Number of investments by asset class



North America
2,072
companies

1,951
bonds from
546 issuers

334
properties

Latin America
249
companies

99
bonds from
29 issuers

International organisations
126
bonds from
16 issuers

Africa

207
companies

17
bonds from
2 issuers

Europe

1,846
companies

1,709
bonds from
471 issuers

400
properties

Middle East

163
companies

3
bonds from
1 issuer

Asia

4,316
companies

536
bonds from
73 issuers

5
properties

Oceania

349
companies

167
bonds from
39 issuers

3 | Investments

Strong year for equities

The fund's equity investments generated a return of 26.0 percent in a year of gains in the main markets and positive returns in all sectors.

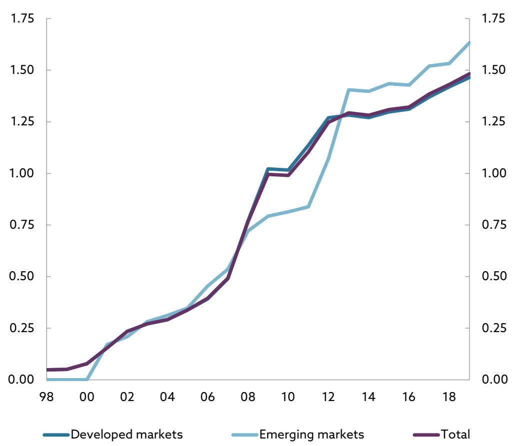
The fund's investments in developed markets returned 26.5 percent, while those in emerging markets returned 22.4 percent.

Investments in North America made up 42.0 percent of the fund's equity portfolio and returned 31.0 percent. US stocks returned 31.4 percent in local currency and accounted for 39.8 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 31.1 percent, due to the dollar falling slightly against the currency basket.

European stocks returned 25.2 percent and amounted to 33.5 percent of the fund's equity investments. The UK was the fund's second-largest single market with 8.8 percent of its equity investments and returned 19.7 percent in local currency. Measured in the fund's currency basket, the return was 24.3 percent, due to the pound gaining against the currency basket.

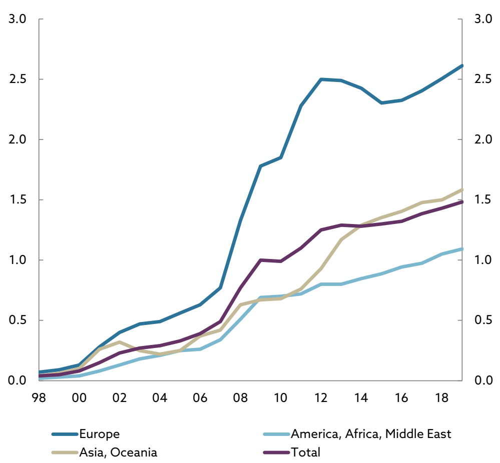
Investments in Asia-Pacific made up 22.2 percent of the fund's equity portfolio and returned 19.5 percent. Excluding Japan, the

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



Source: FTSE Russell, Norges Bank Investment Management

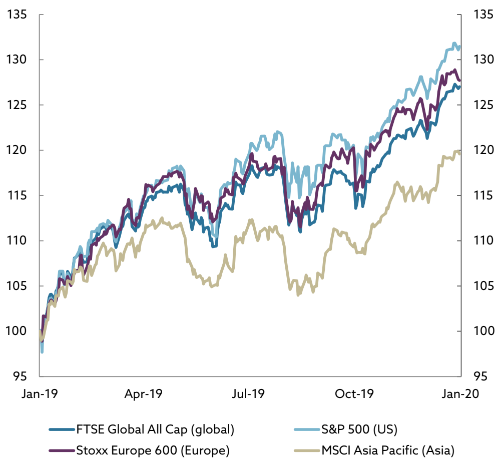
Chart 8 The fund's holdings in equity markets. Percentage of market value of equities in the benchmark index



Source: FTSE Russell, Norges Bank Investment Management fund's third-largest single market, the region also returned 19.5 percent. Japanese stocks made up 8.5 percent of the fund's equity holdings and returned 18.5 percent in local currency. Measured in the fund's currency basket, the return was 19.4 percent, due to the yen strengthening against the currency basket.

Emerging markets (including frontier markets) accounted for 11.3 percent of the fund's equity investments. Chinese equities returned 29.7 percent in local currency, or 27.6 percent in the fund's currency basket. China accounted for 4.3 percent of the fund's equity investments and was its single largest emerging market, followed by Taiwan at 1.8 percent and India at 1.2 percent. The fund's investments in these last two countries returned 31.5 and 6.6 percent respectively in local currency, or 34.5 and 4.0 percent measured in the fund's currency basket.

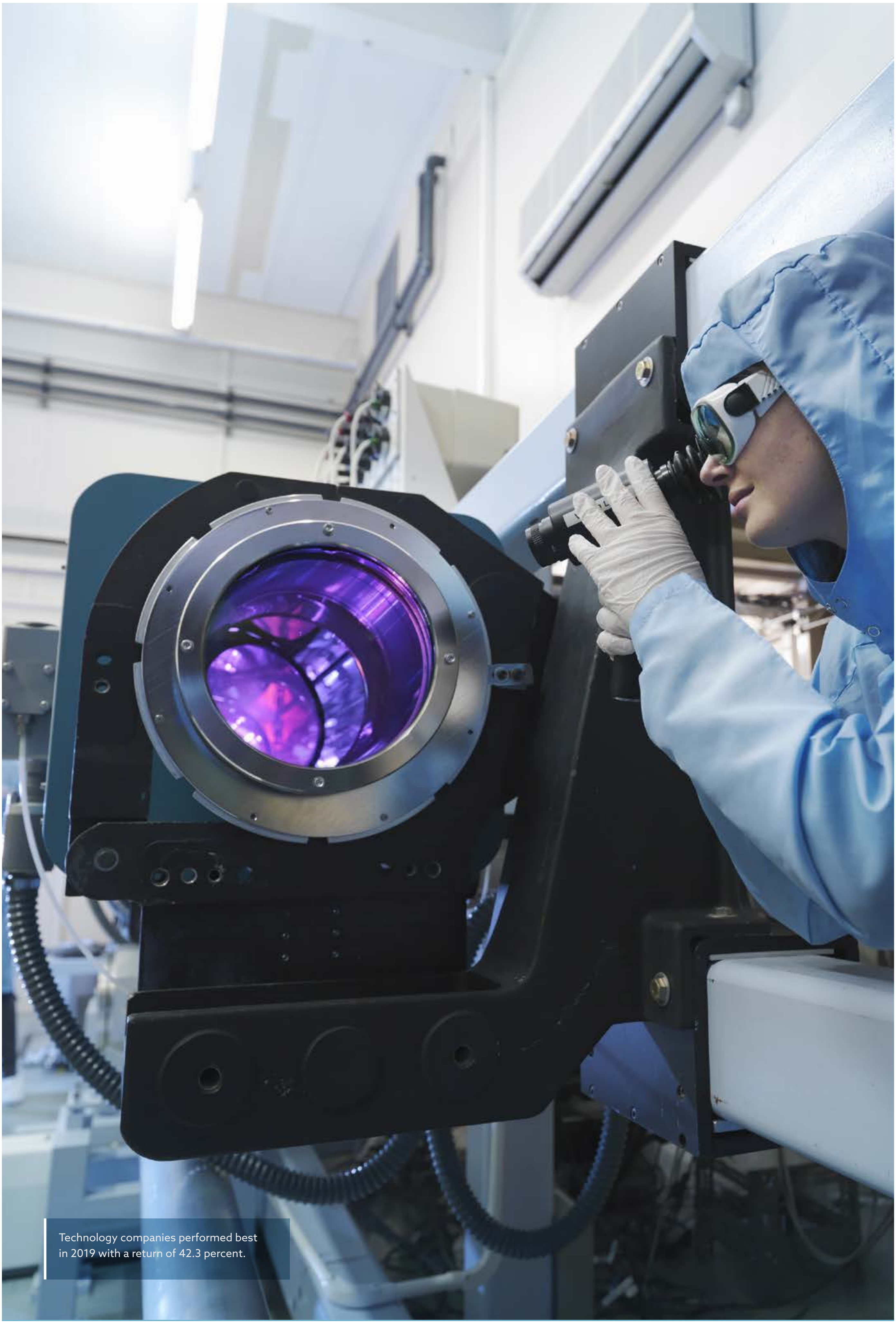
Chart 9 Price developments in regional equity markets. Measured in US dollars, except for the Stoxx Europe 600, which is measured in euros. Indexed total return 31.12.2018 = 100



Source: Bloomberg

Table 10 Return on the fund's largest equity investments in 2019 by country. Percent

Country	Return in international currency	Return in local currency	Share of equity investments
US	31.1	31.4	39.8
UK	24.3	19.7	8.8
Japan	19.4	18.5	8.5
France	27.0	29.6	5.2
Germany	21.6	24.1	4.8
Switzerland	32.9	30.9	4.7
China	27.6	29.7	4.3
Canada	29.5	23.2	2.2
Australia	22.0	22.5	2.0
Netherlands	28.2	30.9	1.9



Technology companies performed best in 2019 with a return of 42.3 percent.

Tech stocks perform best
Technology companies performed best in 2019 with a return of 42.3 percent. This strong return was driven by software and semiconductor producers. Software stocks were buoyed by the transition to cloud solutions, and semiconductor stocks by expectations of an upswing in that market.

Industrials returned 30.3 percent. Expectations of a resolution of the US-China trade war and more expansionary monetary policy prompted a strong rebound after a weak return in 2018.

Utilities returned 26.9 percent. Falling interest rates in global financial markets and the sector's limited exposure to world trade contributed to the strong return. There was also a positive contribution from power companies focused on cutting carbon emissions.

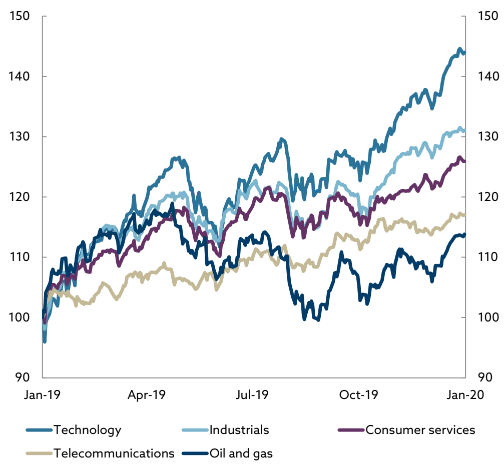
All sectors delivered a positive return in 2019. The weakest came from oil and gas at 12.9 percent. Oil prices were stable in 2019 despite rallying from a fall in the fourth quarter of 2018.

Table 11 Return on the fund's equity investments in 2019 by sector. International currency. Percent

Sector	Return	Share of equity investments[1]
Financials	23.7	23.6
Technology	42.3	14.6
Industrials	30.3	13.4
Consumer goods	23.6	11.5
Health care	24.3	11.3
Consumer services	25.1	10.7
Oil and gas	12.9	5.0
Basic materials	18.3	4.4
Utilities	26.9	2.8
Telecommunications	13.9	2.7

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

Chart 10 Price developments in stock sectors in the FTSE Global All Cap Index. Measured in US dollars. Indexed total return 31.12.2018 = 100



Source: FTSE Russell

Largest investments
Investments in technology companies Apple Inc and Microsoft Corp contributed the most to the fund's return in 2019, followed by consumer goods company Nestlé SA. The worst-performing investments were in technology company Nokia Oyj, health care company Pfizer Inc and financial company Swedbank AB.

The largest investment in any one company was in Apple Inc. This investment accounted for 1.6 percent of the fund's equity portfolio and had a market value of 117 billion kroner at the end of the year. Otherwise the fund's top ten equity holdings consisted of three technology companies, two consumer services companies, two health companies, a consumer goods company and an oil and gas company.

Excluding listed real estate companies, the largest percentage holding in any one company was in consumer services company Nordic Entertainment Group AB. The fund's 9.3 percent stake was worth 1.8 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 182 initial public offerings during the year. The largest of these were at consumer services companies Alibaba Group Holding Ltd and Uber Technologies Inc and consumer goods company Budweiser Brewing Company APAC Ltd. These were also the offerings in which the fund invested the most.

Apple
Apple Inc is a US technology company that designs, develops and sells consumer electronics, services, software and computers. Apple is the most valuable of the companies in the fund's portfolio, with a market value of more than 1 trillion dollars. The company has its headquarters in Cupertino in California and has more than 130,000 employees.

Table 12 The fund's largest equity holdings as at 31 December 2019. Millions of kroner

Company	Country	Holding
Apple Inc	US	116,967
Microsoft Corp	US	104,640
Alphabet Inc	US	77,831
Nestlé SA	Switzerland	71,686
Amazon.com Inc	US	68,631
Roche Holding AG	Switzerland	55,297
Royal Dutch Shell PLC	UK	52,193
Alibaba Group Holding Ltd	China	51,992
Facebook Inc	US	46,241
Novartis AG	Switzerland	44,604
Berkshire Hathaway Inc	US	39,717
Taiwan Semiconductor Manufacturing Co Ltd	Taiwan	38,238
Samsung Electronics Co Ltd	South Korea	36,257
Johnson & Johnson	US	35,206
Tencent Holdings Ltd	China	34,056
JPMorgan Chase & Co	US	33,031
TOTAL SA	France	29,464
Bank of America Corp	US	29,377
Procter & Gamble Co/The	US	28,412
HSBC Holdings PLC	UK	28,355

Table 13 The fund's largest ownership shares in the equity markets as at 31 December 2019. Percent

Company [1]	Country	Ownership
Nordic Entertainment Group AB	Sweden	9.3
Lear Corp	US	8.7
Smurfit Kappa Group PLC	UK	7.0
Modern Times Group MTG AB	Sweden	6.3
Valeo SA	France	6.0
R22 SA	Poland	5.8
iRhythm Technologies Inc	US	5.7
ATM Grupa SA	Poland	5.7
Humansoft Holding Co KSC	Kuwait	5.5
DS Smith PLC	UK	5.4
Covestro AG	Germany	5.2
AXA Equitable Holdings Inc	US	5.2
Osaki Electric Co Ltd	Japan	5.2
Mersen SA	France	5.2
Tamura Corp	Japan	5.2
Boliden AB	Sweden	5.1
Tecnicas Reunidas SA	Spain	5.1
PP Persero Tbk PT	Indonesia	5.1
Northgate PLC	UK	5.1
HSS Engineers Bhd	Malaysia	5.0

[1] Excluding listed real estate investments

Alphabet
Alphabet Inc is a US conglomerate formed through the restructuring of the search engine company Google in 2015. Alphabet is the parent company of Google and several former Google subsidiaries, and has a market value of more than 900 billion dollars. The company has its headquarters in Mountain View in California and has more than 100,000 employees.

Table 14 Regional composition of the fund's equity holdings

Region	Millions of kroner[1]	Percent
North America	2,998,236	42.0
US	2,841,769	39.8
Canada	156,467	2.2
Europe	2,390,433	33.5
UK	626,496	8.8
France	368,537	5.2
Germany	343,344	4.8
Switzerland	332,986	4.7
Netherlands	136,913	1.9
Spain	117,220	1.6
Sweden	115,277	1.6
Italy	97,247	1.4
Denmark	70,954	1.0
Finland	46,236	0.6
Belgium	43,605	0.6
Asia	1,429,821	20.0
Japan	605,095	8.5
China	308,738	4.3
Taiwan	125,998	1.8
South Korea	112,811	1.6
India	82,730	1.2
Hong Kong	81,731	1.1
Oceania	155,127	2.2
Australia	145,151	2.0
Latin America	99,637	1.4
Brazil	67,242	0.9
Africa	50,424	0.7
South Africa	43,003	0.6
Middle East	29,273	0.4

[1] 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[1]	Percent
Financials	1,688,039	23.6
Banks	624,705	8.7
Real estate	421,296	5.9
Insurance	336,522	4.7
Financial services	305,515	4.3
Technology	1,040,121	14.6
Technology	1,040,121	14.6
Industrials	957,011	13.4
Industrial goods and services	806,613	11.3
Construction and materials	150,398	2.1
Consumer goods	822,711	11.5
Personal and household goods	358,902	5.0
Food and beverage	301,818	4.2
Automobiles and parts	161,991	2.3
Health care	808,672	11.3
Health care	808,672	11.3
Consumer services	763,653	10.7
Retail	430,248	6.0
Travel and leisure	186,705	2.6
Media	146,700	2.1
Oil and gas	357,473	5.0
Oil and gas	357,473	5.0
Basic materials	317,600	4.4
Chemicals	166,355	2.3
Basic resources	151,246	2.1
Utilities	203,296	2.8
Utilities	203,296	2.8
Telecommunications	194,375	2.7
Telecommunications	194,375	2.7

[1] 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 real estate returned 10.4 percent in 2019 and made up 4.1 percent of the fund at the end of the year. The unlisted real estate investments returned 6.8 percent, while the listed real estate investments returned 20.9 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 414 billion kroner at the end of the year.

Unlisted real estate investments

We invested a total of 8.1 billion kroner in unlisted real estate during the year, down from 12.7 billion kroner in 2018. We also sold properties for 4.2 billion kroner. Our unlisted real estate investments had a market value of 273 billion kroner at the end of the year, equivalent to 2.7 percent of the fund and 65.9 percent of our total real estate investments.

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 2019. 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 3.1 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.

Transaction costs made a contribution of -0.1 percentage point, while exchange rate movements made a positive contribution of 0.1 percentage point as a result of differences between the currency composition of the real estate portfolio and the fund's currency basket.

Table 16 Value of real estate investments as at 31 December 2019. Millions of kroner

	Value [1]
Unlisted real estate investments	273,014
Listed real estate investments	141,346
Aggregated real estate investments	414,359

[1] Including bank deposits and other receivables.

Investments in Europe returned 6.0 percent in local currency and accounted for 50.1 percent of the fund's unlisted real estate investments at the end of the year. Office rents continued to rise rapidly in Berlin, and the Paris market was also strong with low vacancy. The London office market has fared relatively well since the Brexit referendum in 2016, and parts of the drop in rents reversed in 2019. Retail properties in Europe – and especially the UK – performed less well than office properties in 2019, but there were variations within the sector, with the most exclusive shopping streets doing relatively well. The logistics sector was the strongest sector in Europe in 2019.

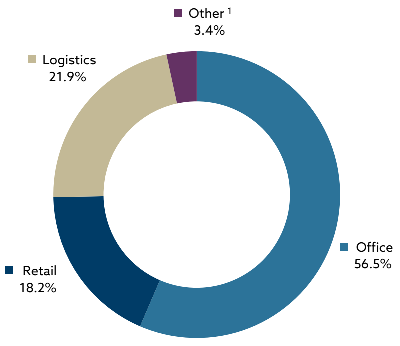
Investments in the US returned 7.6 percent in local currency and made up 48.5 percent of the fund's unlisted real estate investments at the end of the year. Prime office rents continued to climb in 2019, but more slowly than in previous years. Rental growth was particularly strong in San Francisco and Boston, but relatively flat in New York and Washington, D.C. Logistics properties continued its strong value increase in the US in 2019, driven by both continued rental increases, as well as further yield decline due to strong investor interest. However, some submarkets were experienced increased newbuilding activity which weakened the outlook somewhat.

Investments in Asia returned 1.6 percent in local currency and accounted for 1.4 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	2019	2018	2017	2016	2015
Rental income (percentage points)	3.9	3.6	3.6	3.7	3.7	4.1
Change in value (percentage points)	3.5	3.1	4.1	3.8	0.7	6.7
Transaction costs (percentage points)	-1.1	-0.1	-0.2	-0.2	-0.2	-0.2
Currency effect (percentage points)	0.0	0.1	-0.1	0.1	-2.5	0.1
Total (percent)	**6.4**	**6.8**	**7.5**	**7.5**	**1.7**	**10.8**

Chart 11 The fund's unlisted real estate investments by sector as at 31 December 2019. Percent



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

Chart 12 The fund's unlisted real estate investments by country as at 31 December 2019. Percent

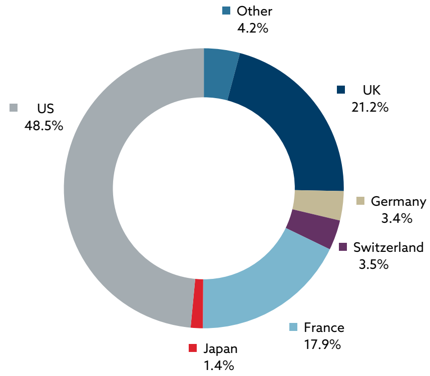


Table 18 The fund's largest unlisted real estate investments. Office and retail by city as at 31 December 2019

City	Percent
London	21.5
Paris	21.2
New York	19.3
Boston	10.2
San Francisco	6.1
Washington, D.C.	5.7
Zurich	4.4
Berlin	2.2
Sheffield	2.0
Tokyo	1.8

Table 19 The fund's largest unlisted real estate investments. Logistics by country as at 31 December 2019

Country	Percent
US	61.4
UK	11.7
France	6.4
Spain	4.5
Netherlands	4.1
Czech Republic	2.6
Poland	2.5
Italy	2.5
Germany	1.7
Hungary	1.4

Chart 13 Changes in the fund's market value by unlisted real estate investments in 2019. Billions of kroner

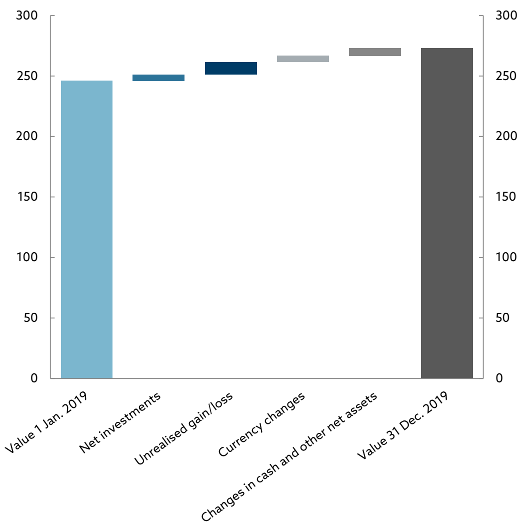


Chart 14 Annual investments in unlisted real estate. Completed transactions. Billions of kroner

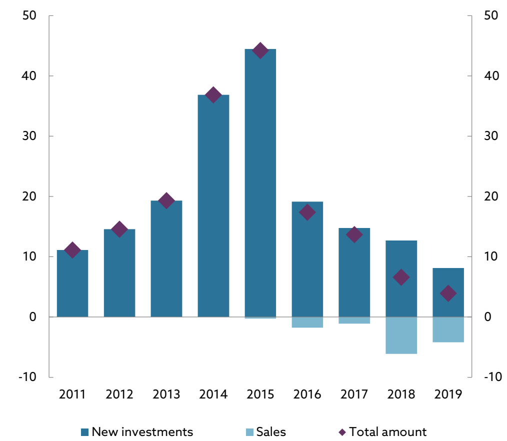


Table 20 Announced new investments and disposals in 2019

Address	City	Partner	Sector	Ownership Percent	Currency	Price Millions
New investments						
Six logistics properties in the US	Chicago, Nashville and Orlando	Prologis	Logistics	45	USD	87.7
Extension of the lease agreement in Hudson Square	New York	Trinity Wall Street	Office and retail	48	USD	97.9
Three logistics properties in the US	Orange County	Prologis	Logistics	45	USD	55.6
Four logistics properties in Spain and the Netherlands	Barcelona, Madrid and Tilburg	Prologis	Logistics	50	EUR	69.1
Logistics property in the UK	Greenford	Prologis	Logistics	50	GBP	35.1
127 logistics properties in the US	Southern California, San Francisco area, Seattle and Dallas	Prologis	Logistics	45	USD	895.5
Disposal of assets						
An der Welle 3-7 and 2-10	Frankfurt	AXA France	Office	50	EUR	310.0
27 avenue du Général Leclerc	Boulogne-Billancourt, Paris	AXA France	Office	50	EUR	49.0
Two logistics properties in the US	Savannah	Prologis	Logistics	45	USD	31.5
West One Shopping Centre and 75 Davies Street	London		Office and retail	25	GBP	54.3
Sophienstrasse 26, Katharina-von-Bora-Strasse 1 and 3, Karlstrasse 23 and Luisenstrasse 14	Munich		Office	100	EUR	390.0


The unlisted and listed real estate investments amounted to 414 billion kroner at the end of 2019.

Listed real estate

Investments in listed real estate returned 20.9 percent in 2019 and had a market value of 141 billion kroner at the end of the year, equivalent to 1.4 percent of the fund and 34.1 percent of our total real estate investments.

The fund's investments in listed real estate companies have exposure to high-quality properties in attractive cities and sectors globally that would form a natural part of the unlisted real estate portfolio. The listed real estate portfolio is mainly invested into residential, office and retail. Geographically it is almost equally distributed between the US and Europe.

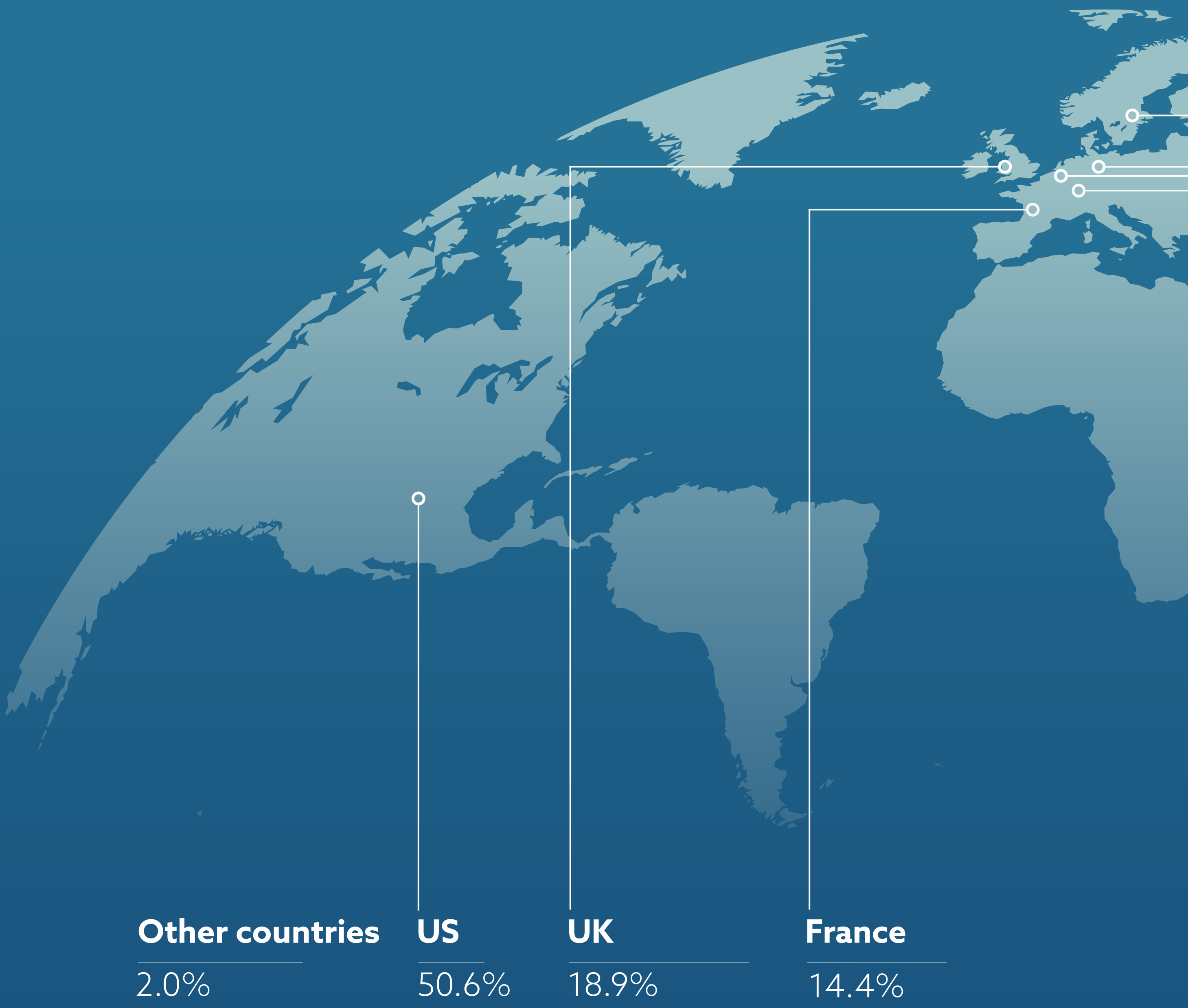
The fund's listed real estate investments consisted of 11 US companies, six UK companies, two German companies, two French companies, one Dutch company and one Swedish company. The fund's 25.9 percent stake in Shaftesbury PLC was one of three investments in the listed portfolio where the fund had a holding above 10 percent at the end of the year.

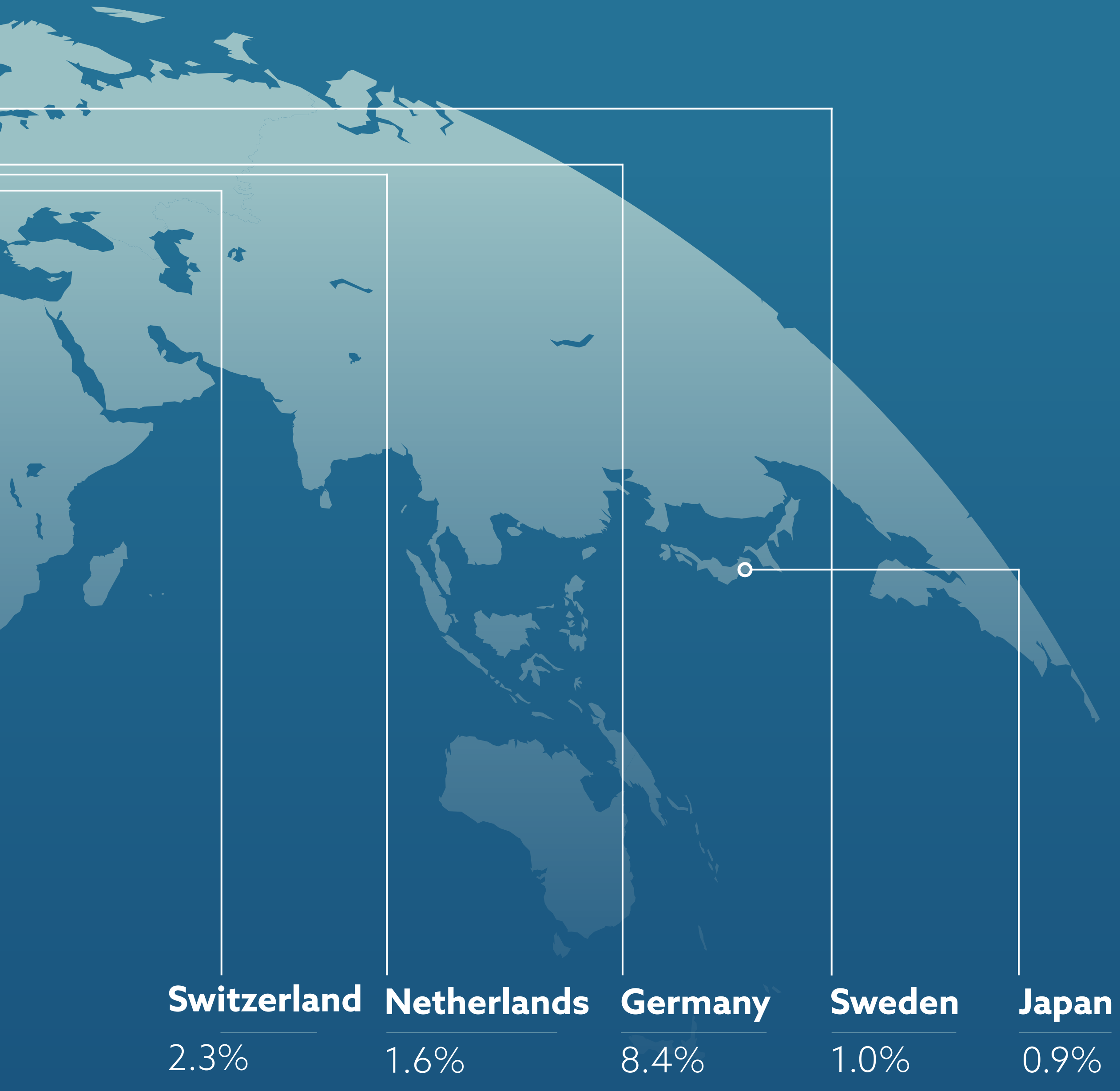
Table 21 The fund's ownership shares and holdings for the listed real estate investments as at 31 December 2019. Ownership shares in percent and holdings in million kroner

Company	Country	Ownership	Holding
Shaftesbury PLC	UK	25.9	8,765
Capital & Counties Properties PLC	UK	11.2	2,916
Great Portland Estates PLC	UK	10.8	2,733
JBG SMITH Properties	US	9.8	4,597
Vornado Realty Trust	US	9.4	10,535
Gecina SA	France	9.4	11,246
Deutsche Wohnen SE	Germany	9.1	11,790
Paramount Group Inc	US	8.7	2,432
Vonovia SE	Germany	8.7	22,400
Boston Properties Inc	US	8.4	15,736
Federal Realty Investment Trust	US	8.2	6,998
Kilroy Realty Corp	US	8.2	6,380
Land Securities Group PLC	UK	7.5	6,449
Svenska Cellulosa AB SCA	Sweden	7.2	4,537
Equity Residential	US	6.4	16,889
Derwent London PLC	UK	6.3	3,264
Regency Centers Corp	US	6.0	5,611
Alexandria Real Estate Equities Inc	US	5.7	9,346
British Land Co PLC/The	UK	5.2	3,591
Unibail-Rodamco-Westfield	Netherlands	4.4	8,461
Klepierre SA	France	3.1	3,170
Essex Property Trust Inc	US	2.4	4,265
AvalonBay Communities Inc	US	2.0	5,244

Real estate investments

Share of market value




Switzerland
2.3%
Netherlands
1.6%
Germany
8.4%
Sweden
1.0%
Japan
0.9%

Positive fixed-income returns

The fund's fixed-income investments returned 7.6 percent in a year that saw falling interest rates in most markets.

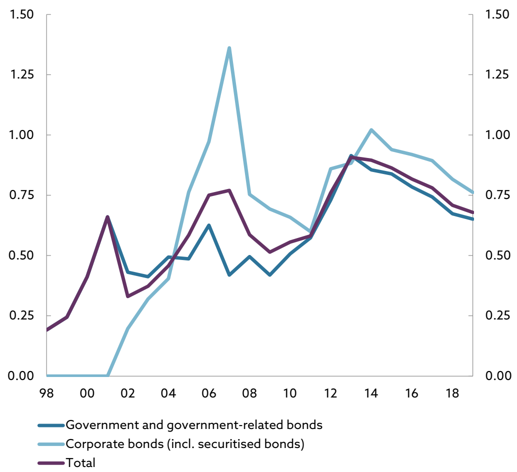
Fixed-income investments accounted for 26.5 percent of the fund at the end of the year. These investments were mainly in bonds, with the remainder in short-term securities and bank deposits. After a quiet start to the year, ten-year US Treasury yields began to soften in March 2019. Over the next six months it fell from 2.75 to 1.45 percent. The sharp drop in US yields pulled down those elsewhere and was one of the main reasons for positive returns on almost all fixed-income securities in 2019.

Strongest return on UK gilts

The fund's government bond holdings made up 57.2 percent of its fixed-income investments and returned 7.0 percent in 2019. Government bonds in developed markets, which made up 48.6 percent of fixed-income investments, returned 5.8 percent.

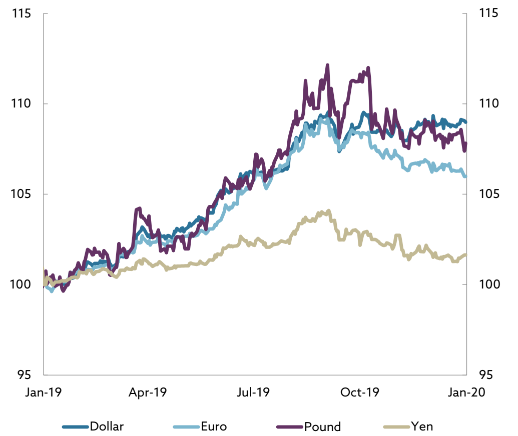
US Treasuries returned 7.3 percent in local currency and 7.1 percent measured in the fund's currency basket, and accounted for 22.4 percent of fixed-income investments, making them the fund's largest holding of government debt from a single issuer. The Federal Reserve changed its plans to continue raising its policy rate in the first quarter of 2019 and followed this up with three 25 basis point cuts in the second half of the year.

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



Source: Bloomberg Barclays Indices, Norges Bank Investment Management

Chart 16 Price developments for bonds issued in dollars, euros, pounds and yen. Measured in local currencies. Indexed total return 31.12.2018 = 100



Source: Bloomberg Barclays Indices

Ten-year yields dropped further than the policy rate and fell by slightly more than three quarters of a point over the year as a whole.

Euro-denominated government bonds returned 6.5 percent in local currency and 4.4 percent in the fund's currency basket, and made up 12.0 percent of fixed-income investments. The ECB decided against tightening monetary policy in the first quarter as previously signalled. In September, it announced a new stimulus package which included a 10 basis point cut in its deposit rate and a new programme of quantitative easing. The risk premium on Italian government bonds narrowed considerably during the year, boosting returns.

UK gilts accounted for 2.3 percent of the fund's fixed-income investments and returned 7.7 percent in local currency and 11.7 percent in the fund's currency basket. The market was dominated by uncertainty around Brexit. The pound was weak at the beginning of the year but then rallied, leading to a very strong return on UK gilts measured in the fund's currency basket despite the Bank of England making no changes to its policy rate during the year.

Japanese government bonds accounted for 8.9 percent of fixed-income holdings and returned 0.4 percent in local currency and 1.1 percent in the fund's currency basket. The Bank of Japan kept ten-year yields close to zero during the year as part of its monetary policy, resulting in a less pronounced decline in yields in this market.

Government bonds in emerging markets, which made up 8.6 percent of fixed-income investments, returned 13.9 percent. An absence of inflationary pressures allowed almost all central banks in these markets to cut interest rates.

Table 22 Return on the fund's largest bond holdings by currency in 2019. Percent

Currency	Return in international currency	Return in local currency	Share of fixed-income investments
US dollar	9.4	9.6	45.6
Euro	3.2	5.3	27.5
Japanese yen	1.1	0.4	9.8
British pound	11.7	7.6	4.4
Canadian dollar	12.1	6.7	3.6
South Korean won	-0.5	3.4	2.2
Australian dollar	6.9	7.3	2.1
Mexican peso	26.3	21.4	1.6
Indonesian rupiah	19.3	15.4	0.9
Swiss franc	5.7	4.1	0.8

Inflation-linked bonds, all of which are issued by governments, returned 6.7 percent and amounted to 6.5 percent of fixed-income investments. Inflation expectations decreased somewhat during the year and are generally below central banks' inflation targets.

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 5.4 percent and accounted for 11.9 percent of the fund's fixed-income investments at the end of the year.

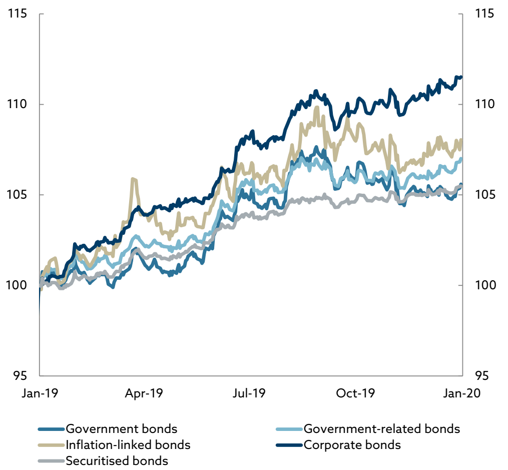
Corporate bonds returned 11.1 percent and represented 23.6 percent of fixed-income investments at the end of the year. The credit premium decreased substantially during the year, boosting returns.

Securitised bonds, consisting mainly of covered bonds denominated in euros, returned 0.8 percent and made up 5.6 percent of fixed-income holdings. The lower return than in most other bond segments was mainly a result of the euro weakening against the fund's currency basket.

Changes in fixed-income holdings

The largest increases in market value among the fund's fixed-income investments were in government bonds from the US, France and the UK, while the largest decreases were in government bonds from Germany, Brazil and Poland. 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 31.12.2018 = 100



Source: Bloomberg Barclays Indices

Chart 18 Price developments for 10-year government bonds issued in emerging market currencies. Measured in US dollars. Indexed total return 31.12.2018 = 100

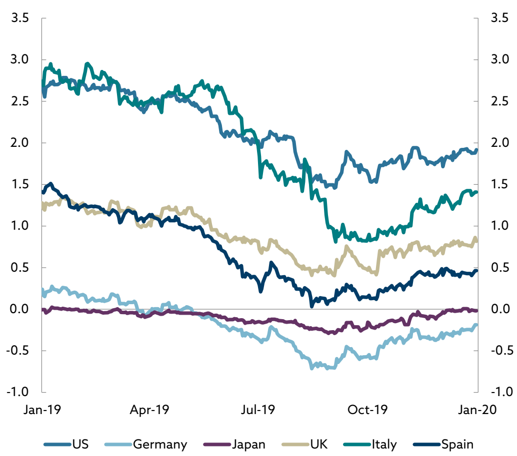
Source: Bloomberg Barclays Indices

Table 23 Return on the fund's fixed-income investments in 2019 by sector. International currency. Percent

Sector	Return	Share of fixed-income investments[1]
Government bonds[2]	7.0	57.2
Government-related bonds[2]	5.4	11.9
Inflation-linked bonds[2]	6.7	6.5
Corporate bonds	11.1	23.6
Securitised bonds	0.8	5.6

[1] Does not sum up to 100 percent because cash and derivatives are not included.
[2] Governments may issue different types of bonds, and the fund's investments in these bonds are grouped accordingly. Bonds issued by a country's government in the country's own currency are categorised as government bonds. Bonds issued by a country's government in another country's currency are government-related bonds. Inflation-linked bonds issued by governments are grouped with inflation-linked bonds.

Chart 19 10-year government bond yields. Percent



Source: Bloomberg

Table 24 The fund's largest bond holdings as at 31 December 2019. Millions of kroner

Issuer	Country	Holding
United States of America	US	701,616
Japanese government	Japan	244,195
Federal Republic of Germany	Germany	98,548
French Republic	France	80,783
UK government	UK	72,793
Spanish government	Spain	51,554
South Korean government	South Korea	49,049
Mexican government	Mexico	43,360
Italian Republic	Italy	42,427
Government of Canada	Canada	30,640
Australian government	Australia	29,344
Kreditanstalt für Wiederaufbau	Germany	29,123
Canada Mortgage & Housing Corp	Canada	26,781
Government of Indonesia	Indonesia	26,532
Government of South Africa	South Africa	20,303
Government of Russian Federation	Russia	20,238
Indian government	India	18,986
Brazilian government	Brazil	18,161
Government of Belgium	Belgium	17,013
Government of Malaysia	Malaysia	16,984

Table 25 Currency composition of the fund's bond holdings

Currency	Millions of kroner[1]	Percent
US dollar	1,217,396	45.6
Euro	733,712	27.5
Japanese yen	261,578	9.8
British pund	116,730	4.4
Canadian dollar	95,235	3.6
South Korean won	57,639	2.2
Australian dollar	57,369	2.1
Mexican peso	41,689	1.6
Indonesian rupiah	25,263	0.9
Swiss franc	20,376	0.8
Russian rouble	20,238	0.8
Swedish krona	20,199	0.8
South African rand	19,988	0.7
Indian rupee	18,988	0.7
Brazilian real	18,161	0.7
Malaysian ringgit	16,984	0.6
Danish krone	15,197	0.6
Singapore dollar	11,166	0.4
Colombian peso	10,387	0.4
New Zealand dollar	8,999	0.3
Turkish lira	3,570	0.1
Philippine peso	3,569	0.1
Israelian shekel	1,018	0.0
Chilean peso	1,000	0.0
Czech koruna	135	0.0
Polish zloty	89	0.0

[1] 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 [1]	Percent
Government bonds	1,526,110	57.2
Government bonds	1,526,110	57.2
Government-related bonds	317,155	11.9
Bonds issued by federal agencies	155,619	5.8
Bonds issued by local authorities	104,104	3.9
Bonds issued by supranational bodies	49,790	1.9
Sovereign bonds	7,642	0.3
Inflation-linked bonds	174,406	6.5
Inflation-linked bonds	174,406	6.5
Corporate bonds	629,172	23.6
Bonds issued by industrial companies	325,659	12.2
Bonds issued by financial institutions	253,261	9.5
Bonds issued by utilities	50,253	1.9
Securitised bonds	149,833	5.6
Covered bonds	149,833	5.6

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

4 | Management

Higher 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 2019, the fund's return was 0.23 percentage point higher than the return on the benchmark index.

The return on the fund's investments is measured against the return on the fund's benchmark index from the Ministry of Finance, which is made up of global equity and bond indices. The equity portion of the benchmark index is based on the FTSE Global All Cap index, which comprised 8,420 listed companies at the end of 2019. The bond portion of the benchmark index is based on indices from Bloomberg Barclays Indices, comprising 14,516 bonds from 2,150 issuers.

At the end of 2019, the fund was invested in 9,202 listed companies (including listed real estate companies) and 4,608 bonds from 1,177 issuers. The fund also had investments in 739 unlisted properties. The fund's investments in real estate are 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 2019, the fund's return was 0.23 percentage point higher than the return on the benchmark index. The fund has outperformed the benchmark index by 0.25 percentage point since 1998, 0.24 percentage point over the past decade, and 0.23 percentage point over the past five years. Equity management and fixed-income management generated relative returns of 0.51 percentage point and 0.11 percentage point against their respective benchmark indices in 2019.

Equity and fixed-income reference portfolios
We seek to construct a reference portfolio that reflects the fund's special characteristics such as size, long-term horizon and limited liquidity requirements. 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 in the reference portfolio, and to improve returns through allocation to systematic factor strategies. Allocation to real estate also intends to provide a more diversified portfolio in the long term.

The reference portfolio for equity management returned 25.51 percent in 2019, 0.11 percentage point less than the equity portion of the benchmark index, contributing -0.07 percentage point to the fund's relative return. The reference portfolio weights companies more closely to their actual market capitalisation than the benchmark index does. This made a negative contribution in 2019, as did a higher weight of value stocks. Risk-based divestments implemented in the reference portfolio made a positive contribution.

The reference portfolio for fixed-income management returned 7.41 percent in 2019, 0.04 percentage point less than the bond portion of the benchmark index, and contributed -0.01 percentage point to the fund's relative return. The reference portfolio had a higher share of fixed-income securities with a short duration than the benchmark index, which contributed negatively to the relative return, while there was a positive contribution from an overweight in some emerging markets.

The relative results from the reference portfolio are classified under fund allocation.

Return relative to the reference portfolio
Equity management is measured against the equity portion of the reference portfolio and returned 0.62 percentage point more than the reference portfolio in 2019, contributing 0.40 percentage point to the fund's relative return. Investments in the financial and consumer goods sectors contributed most to the relative return. Of the countries the fund was invested in, US, UK and Chinese stocks made the greatest contributions to the relative return.

Fixed-income management is compared with the bond portion of the reference portfolio and returned 0.14 percentage point more than the reference portfolio in 2019, contributing 0.05 percentage point to the fund's relative return.

We invest in real estate to improve the fund's risk/return profile. The fund's overall strategy for real estate covers both unlisted and listed real estate investments. The relative return for real estate management is the difference between the return on the fund's total real estate investments and the return on the bonds and equities sold to buy them. Real estate management contributed -0.16 percentage point to the fund's relative return in 2019. Unlisted real estate investments made a negative contribution of -0.19 percentage point to the relative return, most of this coming from the fund's properties in the US, while listed real estate investments made a positive contribution of 0.04 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. Since 2017, unlisted real estate has been funded through sales of equities and bonds. The annual return on this benchmark from 2017 to 2019 was 5.7 percent, compared with 7.3 percent for the unlisted real estate investments.

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, among other things, a reference portfolio tailored more closely to the fund's special characteristics than the benchmark index, and contributed -0.12 percentage point to the fund's relative return in 2019. 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 0.16 percentage point to the fund's relative return. Asset management strategies consist of asset positioning, implementation of systematic strategies and securities lending, and contributed 0.19 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 had a relative return of 0.37 percentage point and contributed 0.24 percentage point to the fund's relative return, while fixed-income investments produced a relative return of 0.21 percentage point and added 0.06 percentage point to the fund's relative return. Unlisted real estate investments contributed -0.38 percentage point to the fund's relative return, and the allocation effect between asset classes was 0.31 percentage point.

The fund recognised a provision in 2019 for future tax obligations relating to capital gains in India. This reduced the relative result in 2019 by 471 million kroner.

Table 27 Relative return. Percentage points

	2019
Fund	0.23
Equity investments	0.37
Fixed-income investments	0.21

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

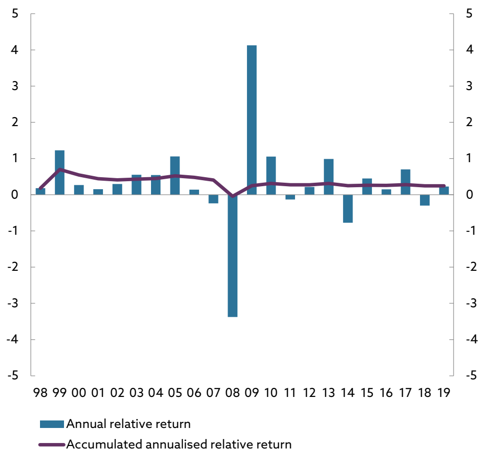


Table 28 Relative return on the fund's asset management. Percentage points

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

[1] Includes real estate management from 01.01.2017. The fund's relative return prior to 2017 is calculated on equity and fixed-income management only.
[2] Measured against actual funding from 01.01.2017. The relative return on equity and fixed-income management before 2017 is measured against the respective Ministry of Finance asset class indices.

The fund's investments spanned 74 countries and 50 currencies at the end of 2019.

Table 29 Contributions to the fund's relative return from investment strategies in 2019. Percentage points

	Equity management	Fixed-income management	Real estate management	Allocation	Total
Fund allocation	0.02	0.00	-0.16	0.02	-0.12
Reference portfolio	-0.07	-0.01		0.01	-0.08
of which systematic factors	-0.11				-0.11
Real estate			-0.16		-0.16
Unlisted real estate			-0.19		-0.19
Listed real estate			0.04		0.04
Allocations	0.09	0.01	0.00	0.01	0.11
of which environment-related mandates	0.08	0.00			0.08
Security selection	0.19	-0.03			0.16
Internal security selection	0.16	-0.03			0.13
External security selection	0.03				0.03
Asset management	0.13	0.06		0.00	0.19
Asset positioning	0.08	0.05		0.00	0.13
Systematic factors	0.00				0.00
Securities lending	0.05	0.01			0.06
Total	**0.33**	**0.03**	**-0.16**	**0.02**	**0.23**

Table 30 Contributions to the fund's relative return from investment strategies for 2013-2019. Annualised. Percentage points

	Equity management	Fixed-income management	Real estate management	Allocation	Total
Fund allocation	-0.06	-0.08	0.01	0.02	-0.10
Reference portfolio	-0.02	-0.08		0.00	-0.10
of which systematic factors	-0.01				-0.01
Real estate			0.01		0.01
Unlisted real estate			0.02		0.02
Listed real estate			0.00		0.00
Allocations	-0.04	0.00	0.00	0.02	-0.01
of which environment-related mandates	0.01	0.00			0.01
Security selection	0.11	0.00			0.11
Internal security selection	0.02	0.00			0.02
External security selection	0.09				0.09
Asset management	0.10	0.07		0.00	0.18
Asset positioning	0.06	0.07		0.00	0.13
Systematic factors	-0.01	0.00			-0.01
Securities lending	0.05	0.01			0.06
Total	**0.15**	**-0.01**	**0.01**	**0.03**	**0.19**

Strong increase in market value

The value of the fund can fluctuate widely. In 2019, it ranged from a low of 8,256 billion kroner on 3 January to a high of 10,251 billion kroner on 27 November.

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 elevated 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 investments can normally be expected to fluctuate. Expected absolute volatility was 7.7 percent at the end of the year, or about 780 billion kroner, compared with 8.6 percent a year earlier. The decrease was due mainly to lower market volatility over the past three years than at the end of 2018. With around 70 percent equity share and a large fund, one must be prepared for potentially large fluctuations in the fund's return and market value.

We invest in real estate to create a more diversified portfolio. We expect real estate investments to have a different return profile to equities and bonds in both the short and the longer term. The relative risk that this entails will impact on calculations of the fund's expected relative volatility. As daily pricing is not available

Chart 21 Expected relative volatility of the fund. Basis points

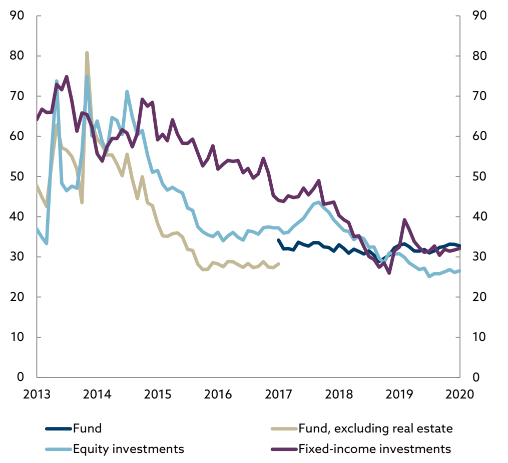
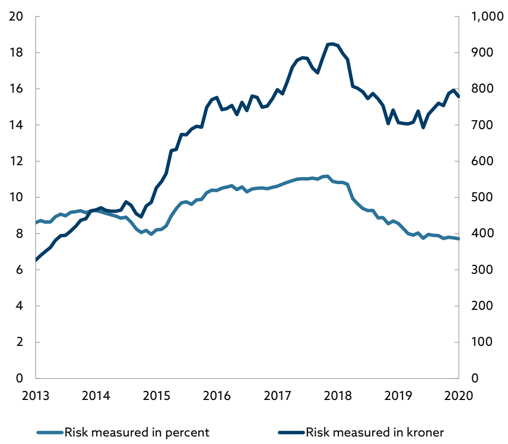


Chart 22 Expected absolute volatility of the fund. Percent (left-hand axis) and billions of kroner (right-hand axis)



for our unlisted real estate investments, we use a model from MSCI to calculate the risk for these 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. The management mandate requires all of the fund's investments to be included in the calculation of expected relative volatility and measured against the fund's benchmark index, which consists solely of global equity and bond indices. The limit for expected relative volatility for the fund is 1.25 percentage points. The actual level at the end of the year was 0.33 percentage point.

The Executive Board has also set a limit for expected shortfall for the relative return between the fund and the benchmark index. The fund is to be managed in such a way that the expected negative relative return in extreme situations does not exceed 3.75 percentage points. The actual figure at the end of 2019 was 1.50 percentage points.

Relative exposures

The fund is invested differently to its benchmark index along various dimensions, including currencies, sectors, countries, regions, individual stocks and individual bond issuers. At the end of 2019, the fund had a higher weight of stocks of greater volatility than the average in the benchmark, and a higher weight of small companies and value stocks than the benchmark. The equity portfolio also had an overweight of Chinese shares relative to the benchmark, and an allocation to countries outside the benchmark's universe. Furthermore, the equity portfolio deviated from the benchmark index as a result of risk-based divestments. The fixed-income portfolio had

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

	Limits set by the Ministry of Finance	31.12.2019
Allocation	Equity portfolio 60–80 percent of fund's market value [1]	70.7
	Unlisted real estate no more than 7 percent of the fund's market value	2.7
	Fixed-income portfolio 20–40 percent of fund's market value [1]	27.7
	Unlisted renewable energy infrastructure no more than 2 percent of the fund's market value	0.0
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-	1.8
Emerging markets	Maximum 5 percent of fixed-income investments may be in emerging markets [2]	9.9
Ownership	Maximum 10 percent of voting shares in a listed company in the equity portfolio [3]	9.6

[1] Derivatives are represented with their underlying economic exposure.
[2] The Ministry of Finance has decided on a transition plan for the phasing-out of bonds issued by emerging market countries and companies from the strategic benchmark index. The limit of 5 percent of the bond portfolio for these bonds may be deviated from until the completion of the transition plan.
[3] Investments in listed and unlisted real estate companies are exempt from this restriction.

relative exposure to emerging-market currencies but less exposure to credit risk than the benchmark index.

The fund had 273 billion kroner invested in unlisted real estate and an allocation to listed real estate investments of 141 billion kroner at the end of the year. These real estate investments were funded through the sale of equities and bonds in the same currency. All of the fund's investments, including those in real estate, are measured against the fund's benchmark index 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 and value stocks than the benchmark index was at the end of 2019. Around 40 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 2019. The model's explanatory power was around 15 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 for equity management. Coefficients

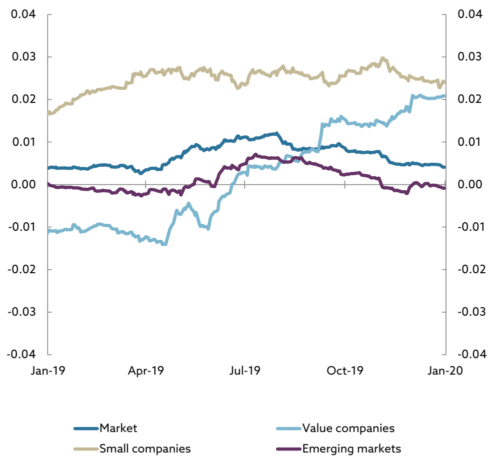


Chart 24 Factor exposures for fixed-income management. Coefficients

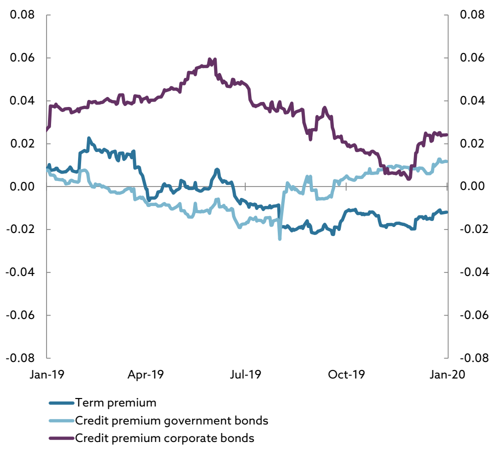


Table 32 Expected relative volatility of investment strategies as at 31 December 2019. Each strategy measured stand-alone with the other strategies positioned in line with the benchmarks. All numbers measured at fund level. Basis points

	Equity management	Fixed-income management	Real estate management	Allocation	Total
Fund allocation	10	7	27	0	31
Reference portfolio	9	7		0	12
of which systematic factors	9				9
Real estate			27		27
Unlisted real estate			17		17
Listed real estate			13		13
Allocations	3	0		0	3
of which environment-related mandates	2	0			2
Security selection	9	2			9
Internal security selection	7	2			7
External security selection	5				5
Asset management	5	2		0	6
Asset positioning	5	2		0	6
Systematic factors	1				1
Total	**16**	**8**	**27**	**0**	**33**

Table 33 The fund's fixed-income investments as at 31 December 2019 based on credit ratings. Percentage of bond holdings

	AAA	AA	A	BBB	Lower rating	Total
Government bonds	28.0	7.8	13.1	4.1	1.5	54.6
Government-related bonds	4.6	4.7	1.5	0.5	0.0	11.3
Inflation-linked bonds	4.6	1.1	0.3	0.3	0.0	6.2
Corporate bonds	0.2	1.4	9.3	11.4	0.2	22.5
Securitised bonds	4.4	0.9	0.1	0.0	0.0	5.4
Total	**41.7**	**15.9**	**24.3**	**16.3**	**1.8**	**100.0**

Further information on return and risk

An extended report on return and risk in 2019 will be available on our website www.nbim.no from 26 March.

The future value of the fund depends on sustainable growth, well-functioning markets and value creation in the companies we own.

Long-term and responsible

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

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 companies' environmental and social behaviour. We therefore assess governance and sustainability issues that could impact on the fund's return over time and integrate this into our work on establishing principles, exercising ownership and investing responsibly.

Establishing principles

Our goal is to contribute to well-functioning markets and good corporate governance. 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 2019, we participated in 16 public consultations relating to responsible investment and were in regular contact with international organisations, regulators and other standard setters. These consultations covered issues that are important to us, such as standards for extended reporting on risks, appropriate management incentives, and tax transparency. We had meetings with the OECD, the UN Global Compact, the European Commission and the International Accounting Standards Board as well as national standard setters in France, Germany, Japan, Singapore, South Korea, Sweden, Switzerland and the UK. We used these meetings to raise priority issues such as board composition, good voting processes, executive remuneration, extended reporting on risks, and tax transparency.

Since 2008, we have formulated clear expectations of the companies we invest in. These expectations build on international standards and principles. 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 reviewed all of our expectation documents in 2019. Their structure was simplified, and minor changes were made to some of the documents to reflect developments in principles and practices.

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 2019, 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 holdings in 9,202 companies all around the world. We voted on 116,777 items at 11,518 shareholder meetings in 2019. We voted in line with the board's recommendation in 94.8 percent of cases, which was on a par with our voting in 2018.

Director elections account for nearly half of the resolutions we vote on. Who sits on the board is the most important decision we make. As a minority investor in thousands of companies, we leave most decisions to the board. We expect the board to set strategy, supervise management and act in shareholders' interests. We voted against the board's recommendation in 5.9 percent of director elections in 2019, compared with 5.4 percent in 2018. The main reasons for voting against board candidates were a lack of independence on the board, combination of the roles of CEO and chairperson, and directors being overcommitted. We have set out our expectations when it comes to the chairperson's independence and board members' time commitments in public position papers which we have shared with companies.

We have seen an increase in the number of shareholder resolutions on environmental and social issues. Some of these resolutions have helped improve risk management at companies, while others have diverted attention away from core business. The proposers of these resolutions may be long-term investors such as the fund, or activists with special interests. We support well-founded resolutions that are aligned with our own priorities, especially in areas covered by our expectation documents. We voted in favour of 39.9 percent of shareholder resolutions on sustainability in 2019, compared with 52.0 percent in 2018.

We held a total of 3,412 meetings with 1,474 companies during the year. The size of our investments gives us access to board members, senior management and specialists at companies. We are interested in understanding how companies are governed and how they address key sustainability issues.

We followed up our seven expectation documents in 2019 by engaging with selected companies, assessing companies' sustainability reporting, and supporting various industry initiatives. We also embarked on new dialogues on carbon emissions from cement and concrete production, climate risks in the shipping industry, responsible business practices in the apparel industry, plastic waste from packaging, child labour and deforestation in cocoa production, forced labour in hardware producers' supply chains, money-laundering risks at financial institutions, and agency agreements in the energy sector.

We conducted a total of 3,941 assessments of companies' reporting against our published expectations during the year. We assessed the reporting of 1,500 companies on climate change, 500 on children's rights, 500 on human rights, 493 on water management, 250 on anti-corruption, 249 on deforestation, 249 on ocean sustainability and 200 on tax. The companies assessed accounted for 76.2 percent of the equity portfolio's market value at the end of the year.

We contact companies with weak or limited disclosure and encourage them to improve it, for example by participating in established reporting initiatives. We sent letters to 134 companies during the year about their reporting on areas covered by our expectation documents. We saw only limited improvements in 2019 at the companies we contacted about weak reporting on climate and deforestation risks in 2018, while 52 percent of companies contacted about water management and 31 percent contacted about children's rights improved their reporting. Owing to changes in both the methodology and the sample, it is not appropriate to draw direct comparisons with the results for 2018.

We support initiatives that bring companies together to find joint standards for sustainable business conduct. These initiatives work best when numerous companies in a particular industry or value chain face the same challenges. The starting point for our expectations of companies is that boards should establish suitable strategies, control functions and reporting procedures. At the same time, many companies face practical challenges in doing so. The need for standardisation and more universal approaches is considerable. The initiatives we support look at challenges such as supply chain management and reporting.

Investing responsibly

Investing responsibly is an integral part of the fund's investment strategy. In order to assess companies, we need them to move from words to numbers. This gives us a better understanding of the risks and opportunities in our investments.

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 carbon emissions from companies in our portfolio and various climate scenarios for the fund. Based on our percentage share of ownership, companies in the equity portfolio emitted 108 million tonnes of CO_2-equivalents.

Our environmental equity mandates returned 35.8 percent in 2019, compared with 25.7 percent for the benchmark index for equities. These mandates are now managed entirely in-house. We had 62.3 billion kroner invested in our environmental equity mandates at the end of the year. We also had 17.1 billion kroner invested in green bonds, which returned 3.0 percent.

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

Table 34 Return on the environment-related equity mandates, funding and other return series. Annualised data, measured in the fund's currency basket. Percent

	Since 01.01.2010	Last 5 years	Last 3 years	2019
Return on the environment-related equity mandates	7.3	11.5	14.9	35.8
Return on the funding of the environment-related equity mandates [1]	4.4	7.5	8.7	21.1
Return on the FTSE Environmental Technology 50 index	5.6	8.8	12.7	33.0
Return on the FTSE Environmental Opportunities All-Share index	11.4	11.2	13.5	31.2
Return on the MSCI Global Environment index	8.9	9.3	12.1	24.3
Return on the benchmark index for equities	9.6	8.7	10.8	25.7

[1] The funding of the environment-related equity mandates includes dedicated allocation to environment-related equity mandates in the reference portfolio.


Corporate governance, the environment and social conditions can affect the value of the companies we are invested in. We work to identify, measure and manage risks and opportunities that may affect the value of the fund.

The Ministry of Finance has issued ethically motivated guidelines for observation and exclusion of companies from the fund. These guidelines set out criteria for exclusion based either on companies' products or on their conduct. The fund must not be invested in companies that produce certain types of weapon, base their operations on coal, or produce tobacco. Nor may the fund be invested in companies whose conduct contributes to violations of fundamental ethical norms. Norges Bank's Executive Board excluded five companies and revoked the exclusion of seven companies in 2019. The Executive Board's decisions were based on recommendations from the Council on Ethics.

We integrate analysis of environmental, social and governance issues into our risk management. This may result in divestment from companies where we see particularly high long-term risks. We wish to reduce our exposure to such companies over time and would rather invest in companies with more sustainable business models.

Responsible real estate investment

We integrate environmentally-friendly measures into the business plans for the fund's properties and work with other investors to develop tools for measuring climate risk in real estate markets.

We measure the environmental performance of the real estate portfolio annually against the Global Real Estate Sustainability Benchmark (GRESB). The portfolio scored 80 out of 100 in 2019, up from 76 in 2018. At the end of the year, 79 percent of the fund's portfolio of office and retail properties was environmentally certified, up from 66 percent a year earlier. In addition, 34 logistics properties had obtained green building certifications on the basis of their sustainable design and construction.

The fund's real estate investments are exposed to climate 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. In 2019, we obtained an external analysis of the exposure of our most vulnerable real estate investments in the US under various climate scenarios.

One common denominator in the markets in which we are invested is that the local authorities have developed long-term plans to cut carbon emissions that will impact on the real estate sector. In 2019, we teamed up with other investors to support the Carbon Risk Real Estate Monitor (CRREM), a research project developing risk management tools for the real estate market based on scenarios for environmentally friendly operation of buildings.

Further information on responsible investment

An extended report on responsible investment in 2019 will be available on our website www.nbim.no from 3 March 2020.

5 | Organisation

Organisation

Number of employees

Employees

540

Nationalities

38

New York

65


London
114
Oslo
307
Singapore
44
Shanghai
10

A global investment organisation

The management of the fund is an important and complex undertaking. Norges Bank Investment Management has spent more than 20 years building and developing an effective international investment organisation for that specific purpose.

We operate in global investment markets. Good results come from in-depth market knowledge combined with a result-oriented organisational culture. Our employees have the knowledge and experience needed to manage a fund that is invested across much of the world.

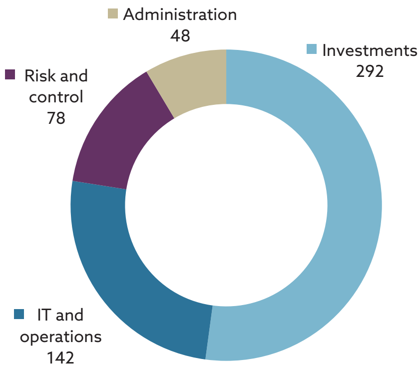
We work actively on further developing our international investment organisation and performance culture in order to realise the fund's objective of the highest possible return after costs. Proximity to the markets is important for safeguarding the fund's long-term return. To achieve our objective, we need an effective, flexible and cost-conscious investment organisation. We had 540 employees at the end of the year. The number of permanent employees fell by 61 in 2019, where 37 was transferred to Norges Bank Administration, after rising by 28 in 2018. There were also 20 employees at subsidiaries linked to the management of the real estate portfolio. A total of 43 percent of the workforce was based at our overseas offices in London, New York, Shanghai and Singapore at the end of the year, against 42 percent the year before.

In order to realise further administrative economies of scale and synergies, Norges Bank's Executive Board has decided to merge administrative services at Norges Bank Central Banking Operations and Norges Bank Investment Management in a new area called Norges Bank Administration. The Executive Board also approved a new real estate strategy for the fund in 2019, under which Norges Bank Real Estate Management is no longer a separate organisational unit.

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 2019, 25 percent of employees and 22 percent of senior managers were women.

Our organisation is built on trust, high ethical standards and diversity. We are dependent on sharing information across the investment organisation, which is home to 38 nationalities. Our working language is English.

Chart 25 Number of employees by area, including subsidiaries



Investment platform
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 operated together with 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.

In May 2019, we completed the migration of our system solutions to the cloud, a process that began in mid-2018. We have closed our data centres and terminated the associated operating agreement with the external supplier. Migration to the cloud ensures greater scalability of our technological infrastructure. Since operating processes are now more automated, we are seeing greater operational quality.

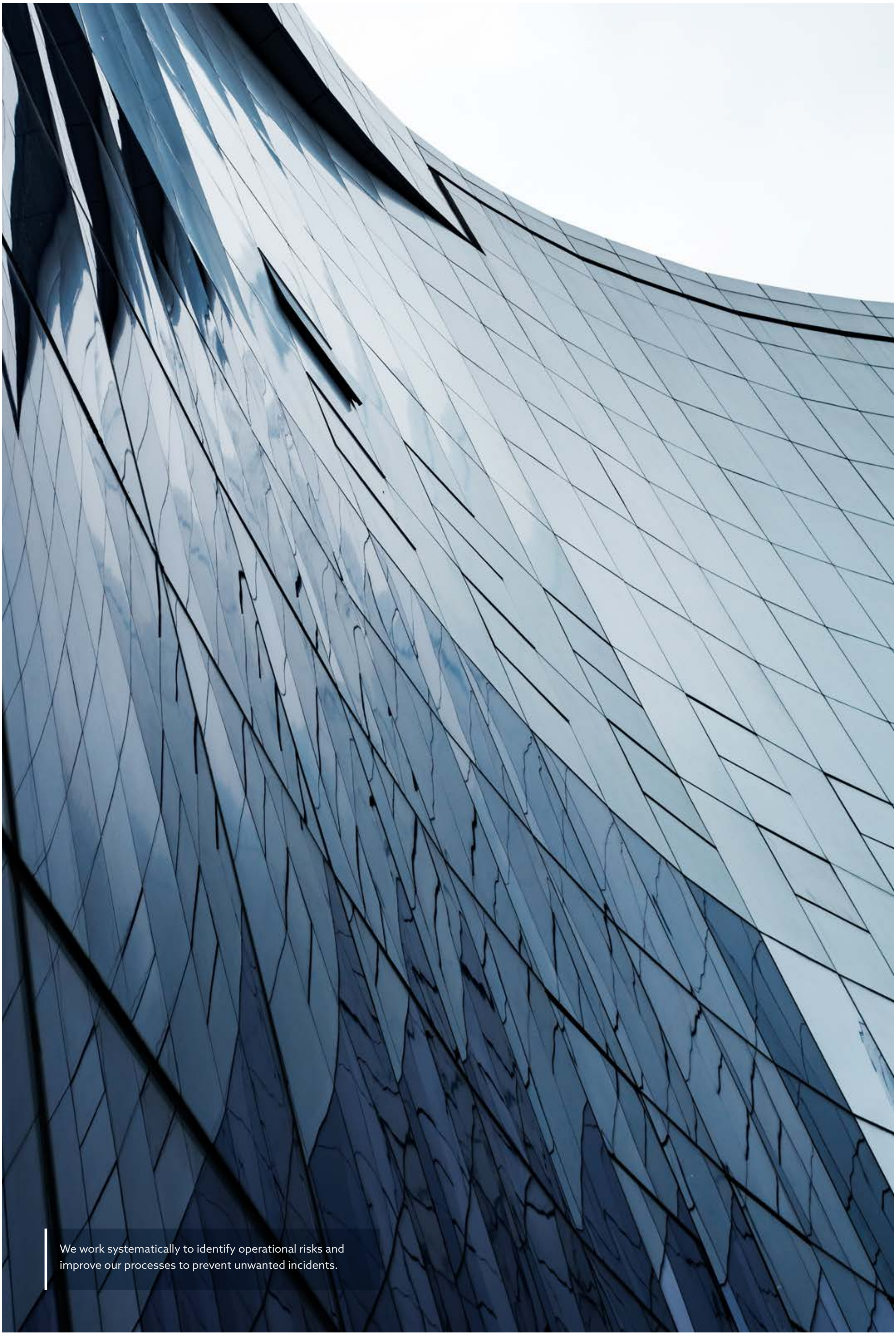
As in 2018, we insourced a number of areas to ensure a more efficient operating model and better data quality. We implemented and monitored 305,616 transactions in 2019. We have sound processes for developing and updating our systems as well as for managing and following up disruptions. We pay considerable attention to IT and information security. In 2019, for example, we implemented an operating agreement with an external supplier of IT security services to complement the activities of our in-house security team.

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. A new solution for identity and access control was implemented during the year.

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. Openness about our results and management also creates a result-oriented organisation. We strive constantly to increase knowledge about the fund and provide clear and relevant information on all aspects of its management.

We held four press seminars and two press conferences during the year where we presented our reports and results. We also responded to around 600 media requests, more than half of them from outside Norway. We hosted the Norwegian Finance Research Conference for the ninth time and published nine letters to the Ministry of Finance with advice and information on the fund's investment strategy. The leader group and other representatives of the fund gave presentations at more than 100 events in 2019.


We work systematically to identify operational risks and improve our processes to prevent unwanted incidents.

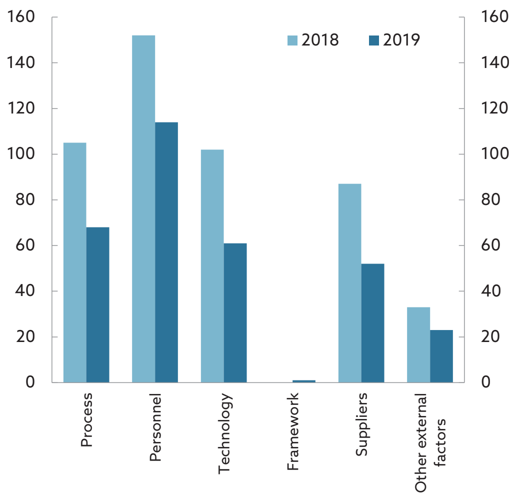
Limits for operational risk

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

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

Our estimated operational risk exposure was within this limit throughout 2019. We work systematically to identify operational risks and improve our processes to prevent unwanted incidents. Reporting and following up on these incidents is an important part of our efforts to improve operations and internal controls.

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



Unwanted incidents in 2019

We registered 319 unwanted incidents in 2019, down from 479 in 2018. Most had no financial consequences. Seven were considered significant, and one incident about the communication from Norges Bank about the change in real estate strategy and organisation was considered critical. Altogether, unwanted incidents had an estimated financial impact of 158.3 million kroner.

The seven significant incidents had direct financial consequences, together amounting to around 149.7 million kroner. Three concerned the handling of corporate actions, while the other four had to do with securities trading and data management.

Compliance with guidelines

The Ministry of Finance has issued guidelines for the fund's management. No significant breaches of these guidelines were registered in 2019, 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 cost effectiveness without compromising robust controls and good risk management.

Total management costs as a share of assets under management have fallen in recent years, despite the build-up of a portfolio of unlisted real estate investments and increased expectations and requirements related to responsible investment and reporting. The scope of the management mandate has increased over time, with a higher allocation to equities and investments in more markets and currencies. The fund's objective as set out in the mandate from the Ministry of Finance is to achieve the highest possible return after costs within the management framework.

Management costs measured as a share of assets under management are low 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 11-14 basis points lower than for the peer group since 2012. This comparison takes account of the fund's size and composition of different asset classes and is considered the best source of information on cost levels at comparable funds.

Management costs

Total management costs in Norges Bank fell from 4.5 billion kroner in 2018 to 4.3 billion kroner in 2019, mainly due to lower costs for external managers, partly offset by a slight increase due to currency effects and higher personnel costs, including performance-based pay. Personnel costs rose as a result of currency effects, higher performance-based pay following strong returns in 2019, and ordinary wage inflation.

Each year, the Ministry of Finance sets an upper limit for management costs as a share of assets under management. The limit for management costs in 2019 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 because they are expensed directly in the portfolio result. Norges Bank is also reimbursed for fees paid to external managers that relate to excess returns. Management costs measured against the upper limit totalled 4.1 billion kroner in 2019, consisting of 4.0 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 0.045 percent of assets under management, down from 0.047 percent in 2018.

Management costs incurred in subsidiaries established as part of the fund's unlisted real estate investments amounted to 111 million kroner in 2019, compared to 108 million kroner in 2018. The subsidiaries also incur other operating costs for maintaining, operating and developing properties and leases. These are costs for operating the underlying properties once they are acquired, and are not defined as management costs.

Fixed and variable fees to external managers accounted for 21 percent of management costs in 2019. External managers are largely used in segments and markets where it is not appropriate to build up internal expertise. We use external managers mainly in emerging markets and for investments in small- and mid-cap companies.

Some costs for external management vary with the excess return generated over a specific benchmark index. Agreements with external managers for performance-based fees are structured in such a way that the bulk of the positive excess return is retained by the fund, and include caps on the fees that can be paid. Performance-based fees to external managers are thus expected to be more than offset by excess returns for the fund, and will increase with excess returns.

Performance-based fees to external managers were lower than in 2018, due to lower excess returns from external management. Base fees paid to external managers were also somewhat lower, due to lower capital being managed externally for parts of the year, and slightly lower average base fees following the termination of the external environmental mandates.

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 10 percent of management costs in 2019.

The fund's reporting currency is Norwegian kroner. Exchange rate fluctuations can have a significant accounting impact even if actual

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

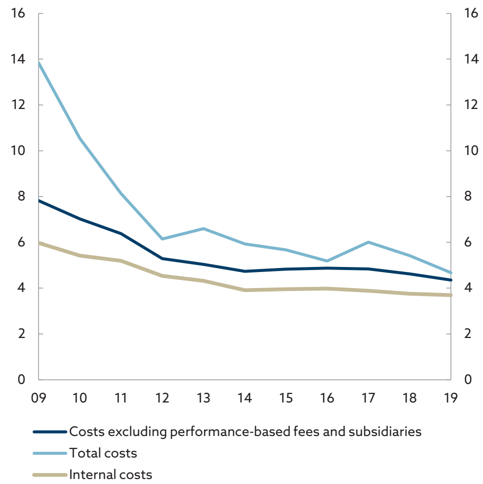
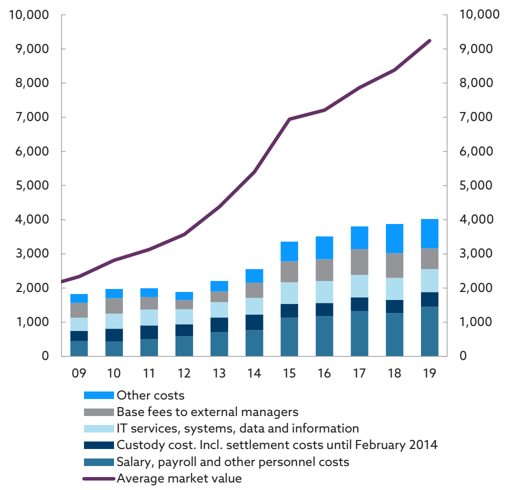


Chart 28 Development of individual cost components. Costs[1] (millions of kroner, left-hand axis) and average market value (billions of kroner, right-hand axis)



[1] Excluding performance-based fees and subsidiaries

costs in foreign currency are unchanged. Around 70 percent of costs are invoiced and paid in foreign currency. This means, for example, that a 20 percent change in the krone exchange rate against other currencies will increase or decrease operating costs by around 580 million kroner. The weakening of the Norwegian krone against other currencies in recent years has resulted in a substantial increase in costs measured in kroner.

Transaction costs
Transaction costs are defined as all costs directly attributable to completed transactions. For equities and bonds, these normally consist of commission fees, transaction taxes and stamp duty. For unlisted real estate, these are one-off costs incurred in buying and 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 these costs in our investment strategies and minimising the number of transactions. There may therefore be less activity in markets with high commissions or taxes than in markets with lower fixed transaction costs. We also choose counterparties that can execute our investment decisions most cost-effectively. Transaction costs are expensed directly in the portfolio result and are not included in management costs. Transaction costs amounted to 2.4 billion kroner in 2019, compared to 3.0 billion kroner in 2018. The 2019 figure includes 0.2 billion kroner related to unlisted real estate transactions and 2.2 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 in line with actual costs or using allocation keys based on factors such as number of employees or volumes.

Management costs for unlisted real estate were equivalent to 0.15 percent of assets under management in 2019. Management costs for external management during the same period amounted to 0.29 percent of assets under management, compared to 0.05 percent for internal security selection. Management costs for asset management amounted to 0.03 percent of assets under management.

Remuneration system
Norges Bank's Executive Board establishes the principles for the remuneration system at Norges Bank Investment Management. Members of the leader group receive only a fixed salary. New members of the leader group 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 group are set by the Executive Board. Salary paid to the CEO totalled 6.7 million kroner in 2019.

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

Table 35 Management costs per investment strategy in 2019. 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	0.7	
of which unlisted real estate	0.4	15.3
Security selection	1.8	10.2
Internal security selection	0.7	5.2
External security selection [1]	1.1	29.3
Asset management	2.2	2.8
Total	**4.7**	

[1] Includes all externally managed capital.

Table 36 Management costs per investment strategy 2013-2019. 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	0.3	
Security selection	2.5	15.7
Internal security selection	0.7	5.9
External security selection [1]	1.8	44.0
Asset management	2.3	2.9
Unlisted real estate [2]	0.5	23.1
Total	**5.6**	

[1] Includes all externally managed capital.
[2] Unlisted real estate is part of the fund allocation strategy from 2017.

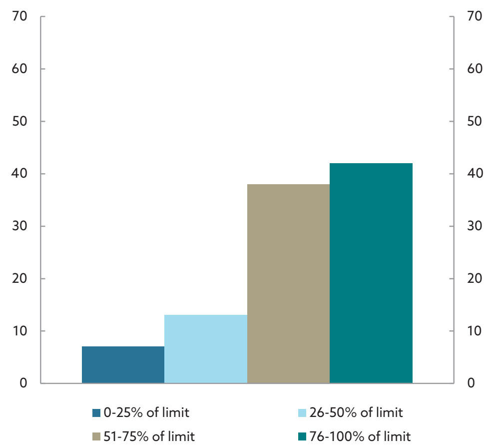
Table 37 Remuneration to senior management, employees with performance-based pay and other employees paid in 2019. Million kroner[1]

	Number of employees	Fixed remuneration	Variable remuneration	Total remuneration
Senior management[2]	18	61.8	1.7	63.5
Employees with performance pay[3]	262	413.3	190.5	603.8
Other employees[4]	368	370.0	-	370.0

[1] Remuneration paid in foreign currency is converted to Norwegian kroner.
[2] Senior managers receive only a fixed salary. Senior managers who were previously in receipt of performance-based pay will, however, still receive any such pay that has been held back. The amounts reported in the table are performance-based pay disbursed during the financial year, but accrued and expensed in earlier periods.
[3] Of which 12 were employees in subsidiaries.
[4] Of which 11 were employees in subsidiaries.

paid over the following three years. The amount held back is adjusted in line with the return on the fund. Where employees accrue more than 100 percent of fixed salary, 40 percent is paid the year after the performance-based pay is accrued, and the remaining 60 percent is held back and paid over the following three years. 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 200 percent. On average, employees eligible for performance-based pay accrued 55 percent of the limit for 2019 based on multi-year performance.

Chart 29 Performance-based pay relative to upper limit in 2019. Percentage of workforce



A total of 237 employees were entitled to performance-based pay at the end of 2019, of which 12 were employed in subsidiaries. The upper limit for performance-based pay for these employees was 393 million kroner.

The remuneration system is reviewed annually. Norges Bank's Internal Audit unit also issues an independent statement on compliance with rules and guidelines on remuneration. The review in 2019 confirmed that the remuneration system was operated in line with applicable rules in 2018. The system was aligned with new regulations in 2019 as required by the mandate from the Ministry of Finance. There were no other significant changes during the year.

Table 38 Remuneration to senior management in 2019. Kroner

Position	Name	Paid salary	Performance-based pay	Value of other benefits	Pension benefit earned	Employee loan
Chief Executive Officer	Yngve Slyngstad	6,721,094	-	9,597	590,683	-
Deputy Chief Executive Officer	Trond Grande	4,713,889	-	7,069	357,573	-
Chief Compliance and Control Officer	Stephen A. Hirsch	4,207,019	-	18,330	296,401	-
Chief Corporate Governance Officer	Carine Smith Ihenacho [1, 2]	3,598,737	57,633	77,587	359,874	-
Chief Financial Officer	Hege Gjerde [1]	2,818,339	202,876	8,120	299,642	1,356,964
Chief Investment Officer Allocation Strategies	Ole Christian Bech-Moen	4,480,911	-	13,363	252,412	-
Chief Investment Officer Asset Strategies	Geir Øivind Nygård [1]	4,554,383	564,447	18,722	211,953	500,000
Chief Investment Officer Equity Strategies	Petter Johnsen [2]	7,867,369	-	85,884	786,737	-
Chief Investment Officer Real Estate	Karsten Kallevig [3]	5,322,133	-	15,308	331,247	-
Chief Operating Officer	Age Bakker	3,801,524	-	16,384	391,432	-
Chief People and Operations Officer	Nina Kathrine Hammerstad [4]	3,041,218	-	12,544	290,160	-
Chief Risk Officer	Dag Huse	4,581,515	-	6,960	587,080	-
Former senior executives						
Chief Human Resources Officer	Sirine Fodstad [5]	1,617,561	-	4,431	177,454	-
Chief Administrative Officer	Mie Caroline Holstad [6]	887,022	-	4,098	94,067	-
Chief Compliance and Control Officer	Jan Thomsen [7]	861,678	-	2,232	95,025	-
Chief Investment Officer Europe	Romain Veber [1, 2, 7]	1,253,108	818,562	16,832	125,311	-
Chief Investment Officer US	Per Løken [1, 7]	650,000	62,373	2,426	58,006	-
Chief Risk Officer	Lars Oswald Dahl [7]	850,000	-	1,740	96,784	-

[1] Members of the Norges Bank Investment Management leader group only receive a fixed salary. Members of the leader group that previously were entitled to performance-based pay are no longer a part of this arrangement, but will over the coming years receive accrued performance-based pay that has been held back.
[2] Receives salary in GBP. The reported amount is converted to NOK and includes the currency effect. The figures reported are paid out in the fiscal year, but are earned in previous fiscal years.
[3] Started as CIO on 1.04.2019. Former Senior Manager in Norges Bank Real Estate Management. Remuneration is shown for the full year 2019.
[4] Started as CPOO on 1.06.2019. Former Senior Manager in Norges Bank Real Estate Management. Remuneration is shown for the full year 2019.
[5] Left the position on 31.05.2019. Remuneration is shown until resignation date.
[6] Former Senior Manager in Norges Bank Real Estate Management. Remuneration is shown until 31.05.2019.
[7] Former Senior Manager in Norges Bank Real Estate Management. Remuneration is shown until 31.03.2019.

6 | Financial statements

Financial reporting

Financial statements

Notes to the financial reporting

Auditor

Income statement

Amounts in NOK million	Note	2019	2018
Profit/loss on the portfolio before foreign exchange gain/loss			
Income/expense from:			
– Equities	4	1 486 909	-517 214
– Bonds	4	192 820	14 568
– Unlisted real estate	6	16 175	16 421
– Financial derivatives	4	353	2 819
– Secured lending	12	4 529	4 733
– Secured borrowing	12	-1 926	-1 466
Tax expense	9	-6 827	-5 050
Interest income/expense		77	10
Other income/expense		-8	-13
Profit/loss on the portfolio before foreign exchange gain/loss		**1 692 103**	**-485 192**
Foreign exchange gain/loss	10	126 679	223 611
Profit/loss on the portfolio		**1 818 782**	**-261 581**
Management fee	11	-4 312	-4 544
Profit/loss and total comprehensive income		**1 814 470**	**-266 126**

Balance sheet

Amounts in NOK million	Note	31.12.2019	31.12.2018
Assets			
Deposits in banks		14 476	11 561
Secured lending	12,13	222 946	216 768
Cash collateral posted	13	1 090	1 806
Unsettled trades		3 169	13 767
Equities	5	6 714 195	5 048 647
Equities lent	5,12	426 623	437 651
Bonds	5	2 316 823	1 996 929
Bonds lent	5,12	479 852	662 920
Financial derivatives	5,13	3 335	3 576
Unlisted real estate	6	264 538	243 818
Other assets		3 737	3 448
Total assets		**10 450 786**	**8 640 892**
Liabilities and owner's capital			
Secured borrowing	12,13	338 266	360 105
Cash collateral received	13	6 754	5 017
Unsettled trades		13 894	15 565
Financial derivatives	5,13	3 294	4 222
Other liabilities		495	37
Management fee payable	11	4 312	4 544
Total liabilities		**367 015**	**389 491**
Owner's capital		10 083 771	8 251 401
Total liabilities and owner's capital		**10 450 786**	**8 640 892**

Accounting policy

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

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

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	2019	2018
Operating activities			
Receipts of dividend from equities		172 591	146 082
Receipts of interest from bonds		67 751	70 360
Receipts of interest and dividend from unlisted real estate	6	5 865	5 822
Net receipts of interest and fee from secured lending and borrowing		2 711	3 330
Receipts of dividend, interest and fee from holdings of equities, bonds and unlisted real estate		*248 918*	*225 594*
Net cash flow from purchase and sale of equities		-256 760	-345 478
Net cash flow from purchase and sale of bonds		23 993	36 052
Net cash flow to/from investments in unlisted real estate	6	-5 300	-8 638
Net cash flow financial derivatives		-357	11 494
Net cash flow cash collateral related to derivative transactions		3 556	-1 685
Net cash flow secured lending and borrowing		-18 907	59 834
Net payment of taxes	9	-6 648	-4 343
Net cash flow related to interest on deposits in banks and bank overdraft		44	-14
Net cash flow related to other income/expense, other assets and other liabilities		22	263
Management fee paid to Norges Bank	11	-4 544	-4 728
Net cash inflow/outflow from operating activities		**-15 983**	**-31 650**
Financing activities			
Inflow from the Norwegian government		32 051	42 320
Withdrawal by the Norwegian government		-14 400	-9 799
Net cash inflow/outflow from financing activities		**17 651**	**32 520**
Net change deposits in banks			
Deposits in banks at 1 January		11 561	11 027
Net increase/decrease of cash in the period		1 668	870
Net foreign exchange gain/loss on cash		1 246	-336
Deposits in banks at end of period		**14 476**	**11 561**

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 2018	3 332 540	5 151 187	8 483 727
Profit/loss and total comprehensive income	-	-266 126	-266 126
Inflow during the period[1]	43 200	-	43 200
Withdrawal during the period[1]	-9 400	-	-9 400
31 December 2018	**3 366 340**	**4 885 061**	**8 251 401**
1 January 2019	3 366 340	4 885 061	8 251 401
Profit/loss and total comprehensive income	-	1 814 470	1 814 470
Inflow during the period[1]	32 300	-	32 300
Withdrawal during the period[1]	-14 400	-	-14 400
31 December 2019	**3 384 240**	**6 699 531**	**10 083 771**

[1] There was an inflow to the krone account of NOK 32.3 billion in 2019, while NOK 18.9 billion was withdrawn from the krone account. Of this, NOK 4.5 billion was used to pay the accrued management fee for 2018, and NOK 14.4 billion was transferred to the investment portfolio. There was an inflow of NOK 43.2 billion to the krone account in 2018, 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.

Notes to the financial reporting

Note 1 General information

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

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

The Ministry of Finance has placed funds for investment in the GPFG in the form of a Norwegian krone deposit with Norges Bank (the *krone account*). Norges Bank manages the krone account in its own name by investing the funds in an investment portfolio consisting of listed equities, bonds, real estate and infrastructure for renewable energy. 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 2019 were approved by the Executive Board on 5 February 2020 and adopted by the Supervisory Council on 26 February 2020.

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 additions and exemptions 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. Rounding differences may occur.

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

IFRS 16 *Leases* was implemented by Norges Bank on 1 January 2019. IFRS 16 regulates the recognition of lease agreements and related note disclosures and replaced IAS 17 *Leases*. The implementation of IFRS 16 had no impact on the financial reporting for the GPFG. Other changes in IFRS that became effective in 2019 also had no impact on the financial reporting.

3. New and amended standards and interpretations effective from 2020 or later

Issued IFRS standards, changes in existing standards and interpretations with effective dates from 2020 or later are expected to be immaterial or not applicable for the financial reporting for the GPFG at the time of implementation.

4. Accounting policies for the financial statements as a whole

4.1 Financial assets and liabilities

Recognition and derecognition

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

Financial assets are derecognised when the contractual rights to the cash flows expire, or when the financial assets and substantially all the risks and rewards of ownership are transferred. See note 12 *Secured lending and borrowing* for details of transferred assets that are not derecognised.

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

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

Classification and measurement

Financial assets are classified based on the business model used for managing the assets and their contractual cash flow characteristics. The investment portfolio of the GPFG is managed in accordance with the management mandate issued by the Ministry of Finance, the investment mandate issued by the Executive Board of Norges Bank and investment strategies issued by the management of Norges Bank Investment Management. These mandates and strategies, including the risk management strategies, entail that financial assets are managed and evaluated on a fair value basis. The GPFG's financial assets are therefore measured at fair value through profit or loss.

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.

4.2 Subsidiaries

Investments in unlisted real estate are made through subsidiaries of Norges Bank, which are exclusively established as part of the management of the fund. The subsidiaries are controlled by the GPFG. Control over an entity exists when the GPFG is exposed to, or has rights to, variable returns from its involvement in the entity and is able to influence those returns through its power over the entity. For further information, see note 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 4.1 above, and are presented in the balance sheet as *Unlisted real estate*. See note 6 *Unlisted real estate* for supplementary policies.

Consolidated subsidiaries

Subsidiaries that perform investment-related services, and which are not investment entities themselves, are consolidated. Consolidated subsidiaries do not own, 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.

Note 3 Returns

Table 3.1 Returns

	2019	2018
Returns measured in the fund's currency basket (percent)		
Return on equity investments	26.02	-9.49
Return on fixed-income investments	7.56	0.56
Return on unlisted real estate investments	6.84	7.53
Return on fund	19.95	-6.12
Relative return on fund (percentage points)	0.23	-0.30
Returns measured in Norwegian kroner (percent)		
Return on equity investments	28.20	-6.56
Return on fixed-income investments	9.41	3.82
Return on unlisted real estate investments	8.68	11.02
Return on fund	22.01	-3.07

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

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

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

Accounting policy

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

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

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

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

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

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

Table 4.1 Specification Income/expense from equities

Amounts in NOK million	2019	2018
Dividends	173 225	147 630
Realised gain/loss	104 429	190 643
Unrealised gain/loss	1 209 256	-855 488
Income/expense from equities before foreign exchange gain/loss	**1 486 909**	**-517 214**

Table 4.2 Specification Income/expense from bonds

Amounts in NOK million	2019	2018
Interest	67 097	69 505
Realised gain/loss	38 143	-17 918
Unrealised gain/loss	87 580	-37 020
Income/expense from bonds before foreign exchange gain/loss	**192 820**	**14 568**

Table 4.3 Specification Income/expense from financial derivatives

Amounts in NOK million	2019	2018
Interest	1 146	541
Realised gain/loss[1]	-57	2 187
Unrealised gain/loss	-735	91
Income/expense from financial derivatives before foreign exchange gain/loss	**353**	**2 819**

[1] Certain comparative amounts have been restated to conform to current period presentation.

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 in the balance sheet as *Deposits in banks*. Norges Bank does not engage in hedge accounting, therefore no financial instruments are designated as hedging instruments.

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

	31.12.2019		31.12.2018	
Amounts in NOK million	Fair value incl. accrued dividends	Accrued dividends	Fair value incl. accrued dividends	Accrued dividends
Equities	7 140 818	8 292	5 486 298	7 659
Total equities	**7 140 818**	**8 292**	**5 486 298**	**7 659**
Of which equities lent	*426 623*		*437 651*	

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

Table 5.2 Bonds

Amounts in NOK million	31.12.2019 Nominal value	31.12.2019 Fair value incl. accrued interest	31.12.2019 Accrued interest	31.12.2018 Nominal value	31.12.2018 Fair value incl. accrued interest	31.12.2018 Accrued interest
Government bonds						
Government bonds issued in the government's local currency	1 404 163	1 526 110	10 076	1 370 667	1 433 456	9 859
Total government bonds	**1 404 163**	**1 526 110**	**10 076**	**1 370 667**	**1 433 456**	**9 859**
Government-related bonds						
Sovereign bonds	7 099	7 642	94	9 221	9 443	116
Bonds issued by local authorities	94 219	104 104	629	103 401	110 036	671
Bonds issued by supranational bodies	47 506	49 790	285	55 770	57 409	349
Bonds issued by federal agencies	150 843	155 619	587	157 576	159 691	781
Total government-related bonds	**299 667**	**317 155**	**1 596**	**325 968**	**336 579**	**1 917**
Inflation-linked bonds						
Inflation-linked bonds issued by government authorities	157 821	174 406	424	135 717	139 396	398
Total inflation-linked bonds	**157 821**	**174 406**	**424**	**135 717**	**139 396**	**398**
Corporate bonds						
Bonds issued by utilities	45 768	50 253	532	42 717	43 401	513
Bonds issued by financial institutions	245 018	253 261	2 214	259 045	252 867	2 461
Bonds issued by industrial companies	304 445	325 659	2 801	314 502	313 046	3 057
Total corporate bonds	**595 230**	**629 172**	**5 547**	**616 264**	**609 314**	**6 031**
Securitised bonds						
Covered bonds	155 564	149 833	848	138 121	141 105	938
Total securitised bonds	**155 564**	**149 833**	**848**	**138 121**	**141 105**	**938**
Total bonds	**2 612 446**	**2 796 675**	**18 490**	**2 586 737**	**2 659 849**	**19 144**
Of which bonds lent		*479 852*			*662 920*	

Financial derivatives

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. Foreign exchange derivatives are also used in connection with liquidity management. Equity derivatives with an option component are often a result of corporate actions, and can be converted into equities or sold. The GPFG also uses equity swaps in combination with purchase and sale of equities.

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

Table 5.3 Financial derivatives

Amounts in NOK million	31.12.2019			31.12.2018		
	Notional amount	Fair value		Notional amount	Fair value	
		Asset	Liability		Asset	Liability
Foreign exchange derivatives[1]	330 125	2 884	2 740	225 766	3 022	3 863
Interest rate derivatives	21 605	291	554	25 693	504	358
Equity derivatives[2]	-	159	-	-	50	-
Exchange-traded futures contracts[3]	27 287	-	-	35 861	-	-
Total financial derivatives	**379 017**	**3 335**	**3 294**	**287 320**	**3 576**	**4 222**

[1] The method for calculating notional amount for foreign exchange derivatives was changed in 2019. The absolute value of the currency to be bought or sold under currency exchange contracts is now used as the basis for the notional value. The change in method is considered to provide more relevant information about the amount of foreign exchange currency traded under currency exchange contracts. Comparative amounts for notional value have been restated to conform with current period presentation.

[2] Notional amounts are not considered relevant for equity derivatives and are therefore not included in the table.

[3] Exchange-traded futures contracts are settled daily with margin payments. Fair value is therefore zero at the balance sheet date.

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, where 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 recognised in the balance sheet 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.

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.

Equity swaps in combination with purchase or sale of equities

Equity swaps are not recognised in the balance sheet. See the accounting policy in note 12 *Secured lending and borrowing* for further information. At the end of 2019, equities purchased in combination with offsetting short equity swaps amounted to NOK 67 billion (NOK 37 billion at the end of 2018). Equity sales in combination with offsetting long equity swaps amounted to NOK 47 billion (NOK 37 billion at the end of 2018). See also table 13.1 in note 13 *Collateral and offsetting*. The GPFG has virtually no net exposure from equity swaps in combination with purchase or sale of equities.

Note 6 Unlisted real estate

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

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

Dividends are recognised when the dividend is formally approved by the general meeting/equivalent decision-making body, or is paid out as a result 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 Income/expense from unlisted real estate

Amounts in NOK million	2019	2018
Payments of interest and dividend from unlisted real estate	5 865	5 822
Unrealised gain/loss	10 311	10 599
Income/expense from unlisted real estate before foreign exchange gain/loss	**16 175**	**16 421**

Table 6.2 Changes in carrying amounts unlisted real estate

Amounts in NOK million	31.12.2019	31.12.2018
Unlisted real estate at 1 January	**243 818**	**217 160**
Net cash flow to/from investments in unlisted real estate	5 300	8 638
Unrealised gain/loss	10 311	10 599
Foreign exchange gain/loss	5 109	7 421
Unlisted real estate, closing balance for the period	**264 538**	**243 818**

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

The GPFG makes cash contributions to subsidiaries in the form of equity and long-term loan financing, to fund investments in real estate assets, primarily properties. Net income in the underlying real estate companies can be distributed back to the GPFG in the form of interest and dividend as well as repayment of equity and long-term loan financing. Net income generated in the underlying real estate companies that is not distributed back to the GPFG, is reinvested in the underlying entities to finance for instance property development and repayment of external debt.

There are no significant restrictions on the distribution of interest and dividend from subsidiaries to the GPFG.

Tables 6.3 and 6.4 provide a specification of the cash flows between the GPFG and subsidiaries presented as *Unlisted real estate*, as presented in the statement of cash flows.

Net income in the underlying real estate companies which is distributed back to the GPFG in the form of interest and dividends is specified in table 6.3.

Table 6.3 Receipts of interest and dividend from unlisted real estate

Amounts in NOK million	2019	2018
Interest and dividend from ongoing operations	5 099	4 440
Interest and dividend from sales	766	1 381
Receipts of interest and dividend from unlisted real estate	**5 865**	**5 822**

Cash flows between the GPFG and subsidiaries in the form of equity and loan financing, as well as repayment of these, are presented in the statement of cash flows as *Net cash flows to/from investments in unlisted real estate*. These cash flows are further specified by transaction type in table 6.4. A net cash flow from the GPFG to subsidiaries will result in an increase in the balance sheet value of unlisted real estate, while a net cash flow from subsidiaries to the GPFG will result in a decrease.

Table 6.4 Cash flow to/from investments in unlisted real estate

Amounts in NOK million	2019	2018
Payments to new investments	-8 126	-12 710
Repayments from sales	3 429	4 717
Payments for property development	-1 419	-1 562
Repayments from ongoing operations	1 267	1 430
Net payments external debt	-451	-513
Net cash flow to/from investments in unlisted real estate	**-5 300**	**-8 638**

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 6.5 and 6.6. Table 6.5 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 6.6 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 6.5:

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 net income in the underlying real estate companies which is not distributed back to the GPFG, and will therefore not correspond to fair value changes for properties, debt and other assets and liabilities presented in table 6.5.

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

Table 6.5 Income from underlying real estate companies

Amounts in NOK million	2019	2018
Net rental income	10 478	9 312
External asset management - fixed fees	-576	-506
External asset management - variable fees	-91	-88
Internal asset management - fixed fees[1]	-63	-38
Management costs within the limit from the Ministry of Finance[2]	-70	-88
Other operating costs, not within the limit from the Ministry of Finance	-101	-94
Interest expense external debt	-525	-506
Tax expense	-290	-256
Net income from ongoing operations	*8 762*	*7 736*
Realised gain/loss - properties	1 114	1 212
Unrealised gain/loss - properties	6 677	7 807
Unrealised gain/loss - debt	-212	233
Unrealised gain/loss - other assets and liabilities	46	-176
Realised and unrealised gain/loss	*7 624*	*9 077*
Stamp duty and registration fees	-50	-147
Due diligence and insurance costs	-161	-244
Transaction costs purchases and sales	*-211*	*-391*
Net income underlying real estate companies	**16 175**	**16 421**

[1] Internal asset management is carried out on 100 percent owned properties by employees in a wholly-owned, consolidated subsidiary.

[2] See table 11.2 for specification of management costs that are measured against the upper limit from the Ministry of Finance.

Table 6.6 Assets and liabilities underlying real estate companies

Amounts in NOK million	31.12.2019	31.12.2018
Properties	283 191	262 364
External debt	-18 407	-18 361
Net other assets and liabilities[1]	-246	-185
Total assets and liabilities underlying real estate companies	**264 538**	**243 818**

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

Agreements for purchases and sales of real estate

When purchasing and selling property, there will normally be a time period between entering into the agreement and completion of the transaction. Properties are recognised or derecognised in the underlying real estate companies upon transfer of control. This will normally be the date the consideration is transferred and the transaction is completed. Transactions are normally announced when the agreement is entered into.

Table 6.7 provides an overview of announced agreements for purchases and sales of properties which are not completed at the balance sheet date.

Table 6.7 Announced agreements for purchases and sales of properties[1]

Type	Property address	City	Ownership percent	Currency	Price in stated currency (million)[2]	Quarter announced	Expected completion
Purchase	Schützenstrasse 26	Berlin	100.0	EUR	425	3Q 2017	1Q 2020
Purchase	Industrial Property Trust portfolio[3]	Multiple American cities	45.0	USD	896	4Q 2019	1Q 2020
Sale	Sophienstrasse 26, Katharina-von-Bora-Strasse 1 and 3, Karlstrasse 23 and Luisenstrasse 14	Munich	100.0	EUR	390	4Q 2019	1Q 2020

[1] Purchases and sales above USD 25 million are announced.
[2] The stated price is for the GPFG's share.
[3] The transaction was completed early January 2020.

In the second quarter of 2019, Norges Bank entered into agreements to acquire a 48 percent interest in two to-be-constructed buildings in New York at 561 Greenwich Street and 92 Avenue of the Americas, with expected completion in the second quarter of 2022 and the fourth quarter of 2023, respectively. The buildings will be purchased and the final purchase price determined upon completed construction.

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 or observable market inputs. If the market is not active, fair value is established using standard valuation techniques. Estimating fair value can be complex and 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 market inputs that are either directly or indirectly observable. Inputs are considered observable when they are developed using market data reflecting actual events and transactions.
- Assets classified as Level 3 are valued using models with significant use of unobservable inputs. Inputs are considered to be unobservable when market data is not available and the input is developed using the best available information on the assumptions that market participants would use when pricing the asset.

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

Significant estimate
Level 3 investments consist of instruments measured 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 Categorisation of the investment portfolio by level in the fair value hierarchy

	Level 1		Level 2		Level 3		Total	
Amounts in NOK million	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018	31.12.2019	31.12.2018
Equities	**7 093 963**	**5 450 137**	**46 039**	**35 808**	**816**	**353**	**7 140 818**	**5 486 298**
Government bonds	1 386 488	1 331 386	139 622	102 070	-	-	1 526 110	1 433 456
Government-related bonds	256 537	284 545	60 618	51 609	-	425	317 155	336 579
Inflation-linked bonds	162 582	131 271	11 824	8 125	-	-	174 406	139 396
Corporate bonds	546 322	519 829	82 834	89 457	16	28	629 172	609 314
Securitised bonds	119 821	126 377	30 012	14 728	-	-	149 833	141 105
Total bonds	**2 471 750**	**2 393 408**	**324 910**	**265 989**	**16**	**453**	**2 796 675**	**2 659 849**
Financial derivatives (assets)	140	20	3 192	3 544	3	12	3 335	3 576
Financial derivatives (liabilities)	-	-	-3 294	-4 222	-	-	-3 294	-4 222
Total financial derivatives	**140**	**20**	**-102**	**-678**	**3**	**12**	**41**	**-646**
Unlisted real estate	**-**	**-**	**-**	**-**	**264 538**	**243 818**	**264 538**	**243 818**
Other (assets)[1]	**-**	**-**	**245 418**	**247 351**	**-**	**-**	**245 418**	**247 351**
Other (liabilities)[2]	**-**	**-**	**-359 409**	**-380 724**	**-**	**-**	**-359 409**	**-380 724**
Total	**9 565 853**	**7 843 565**	**256 856**	**167 746**	**265 373**	**244 636**	**10 088 083**	**8 255 945**
Total (percent)	**94.8**	**95.0**	**2.6**	**2.0**	**2.6**	**3.0**	**100.0**	**100.0**

[1] *Other (assets)* consists of the balance sheet lines *Deposits in banks, Secured lending, Cash collateral posted, Unsettled trades (assets)* and *Other assets*.

[2] *Other (liabilities)* consists of the balance sheet lines *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 2019, 97.4 percent of the portfolio was classified as Level 1 or 2, which is a marginal increase compared to year-end 2018. 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 share 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 (88.38 percent) have observable, executable market quotes in active markets and are classified as Level 1. Bonds classified as Level 2 amount to 11.62 percent. These are securities that do not have a sufficient number of observable quotes or that are priced based on comparable liquid bonds. A negligible proportion of holdings that do not have observable quotes are classified as Level 3, since the valuation is based on significant use of unobservable inputs.

Unlisted real estate
All unlisted real estate investments are classified as Level 3, since models are used to value the underlying assets and liabilities with extensive use of unobservable market inputs. All unlisted real estate investments are measured at the value determined by external valuers. Exceptions to this policy are 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 share of equities classified as Level 1 is unchanged compared to year-end 2018.

The share of bonds classified as Level 1 has decreased by 1.60 percentage points compared to year-end 2018, with a corresponding increase in the share of Level 2 holdings. The main reason for the reclassifications from Level 1 to Level 2 is reduced liquidity at the end of 2019 for some government bonds in both developed and emerging markets, as well as corporate bonds denominated in US dollar.

In addition to reclassifications between levels, Level 2 holdings have increased in 2019 due to the purchase of several government bonds just prior to year-end that were classified as Level 2.

Table 7.2 Changes in Level 3 holdings

Amounts in NOK million	01.01.2019	Purchases	Sales	Settlements	Net gain/ loss	Transferred into Level 3	Transferred out of Level 3	Foreign exchange gain/loss	31.12.2019
Equities	353	696	-128	-2	-90	44	-60	3	816
Bonds	453	-	-425	-	-9	-	-3	-	16
Financial derivatives (assets)	12	-	-	-	-7	-	-2	-	3
Unlisted real estate[1]	243 818	5 300	-	-	10 311	-	-	5 109	264 538
Total	**244 636**	**5 996**	**-553**	**-2**	**10 205**	**44**	**-65**	**5 112**	**265 373**

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[1]	217 160	8 638	-	-	10 599	-	-	7 421	243 818
Total	**231 305**	**8 691**	**-497**	**-98**	**10 642**	**45**	**-12 920**	**7 468**	**244 636**

[1] *Purchases* represent the net cash flow in the period to investments in unlisted real estate. See table 6.4 in note 6 *Unlisted real estate*.

The relative share of holdings classified as Level 3 was 2.6 percent at the end of 2019, a decrease from 3.0 percent at year-end 2018. The GPFG's aggregate holdings in Level 3 was NOK 265 373 million at year-end 2019, an increase of NOK 20 737 million compared to year-end 2018. The increase is mainly due to investments in unlisted real estate, which are all classified as Level 3.

The relative share of equities classified as Level 3 was virtually unchanged compared to year-end 2018. Level 3 holdings have however increased in absolute value by NOK 463 million, mainly due to a new holding received through a corporate action and valued with significant use of unobservable inputs.

The relative share of bond holdings classified as Level 3 has marginally decreased compared to year-end 2018. The absolute value of Level 3 holdings at year-end 2019 was negligible, reduced by NOK 437 million compared to year-end 2018. The reduction is due to one bond, which previously accounted for the majority of Level 3 holdings, was called by the issuer during the last quarter of 2019.

All unlisted real estate investments are classified as Level 3, and the increase of NOK 20 720 million in 2019 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. Market activity and volume are monitored using several price sources which provide access to market prices, quotes and transactions at the measurement date.

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 primarily unobservable inputs and *Unlisted real estate* is therefore classified as Level 3 in the fair value hierarchy. Estimates used reflect recent comparable market transactions of properties with a similar location, condition and quality, 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.

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

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

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

Financial derivatives (Level 2 and Level 3)
Foreign exchange derivatives consist mainly of foreign exchange forward contracts, and are valued using industry standard models which predominantly use observable market data inputs such as forward rates.

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

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

Table 7.3 Additional specification Level 3 and sensitivities

Amounts in NOK million	Specification of Level 3 holdings 31.12.2019	Sensitivities 31.12.2019		Specification of Level 3 holdings 31.12.2018	Sensitivities 31.12.2018	
		Unfavourable changes	Favourable changes		Unfavourable changes	Favourable changes
Equities	**816**	**-238**	**238**	**353**	**-116**	**116**
Government-related bonds	-	-	-	425	-43	43
Corporate bonds	16	-16	2	28	-3	3
Total bonds	**16**	**-16**	**2**	**453**	**-45**	**45**
Financial derivatives (assets)	**3**	**-3**	**-**	**12**	**-1**	**1**
Unlisted real estate	**264 538**	**-16 563**	**14 359**	**243 818**	**-14 627**	**17 888**
Total	**265 373**	**-16 820**	**14 599**	**244 636**	**-14 790**	**18 050**

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

In an unfavourable outcome, an increase in the yield of 0.2 percentage point, and a reduction in future market rents of 2 percent would result in a decrease in value of the unlisted real estate portfolio of approximately NOK 16 563 million or 6.3 percent (6.0 percent at year-end 2018). In a favourable outcome, a reduction in the yield of 0.2 percentage point and an increase in future market rents of 2 percent would result in an increase in value of the unlisted real estate portfolio of approximately NOK 14 359 million or 5.4 percent (7.3 percent at year-end 2018).

For unlisted real estate, changes in yields are a more significant factor for valuation than changes in market rents. The isolated effects of changes in yields and future market rents for an unfavourable change are 4.5 and 1.8 percent, respectively. Similarly, the effects of changes in yields and future market rent for a favourable change are 3.7 and 1.7 percent, respectively.

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 decrease in relative sensitivity for the equity portfolio compared to 2018 is due to a new holding with 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 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 2019 in absolute terms is in line with the decrease in the holdings classified as Level 3.

Financial derivatives
The fair value of equity 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 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 the valuation represents fair value in accordance with IFRS. 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 3, second paragraph of the Government Pension Fund Act and the management mandate for the GPFG issued by the Ministry of Finance.

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

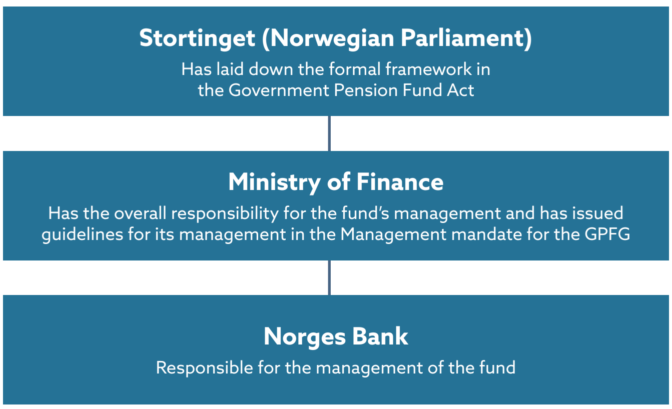
The benchmark index for equities is constructed based on the market capitalisation for equities in the countries included in the benchmark. The benchmark index for bonds specifies a defined allocation between government bonds and corporate bonds, with a weight of 70 percent to government bonds and 30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

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

The management mandate was updated at the end of 2019 to also open for investments in unlisted infrastructure for renewable energy of up to 2 percent of the investment portfolio.

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

Chart 8.1 Management mandate for the GPFG



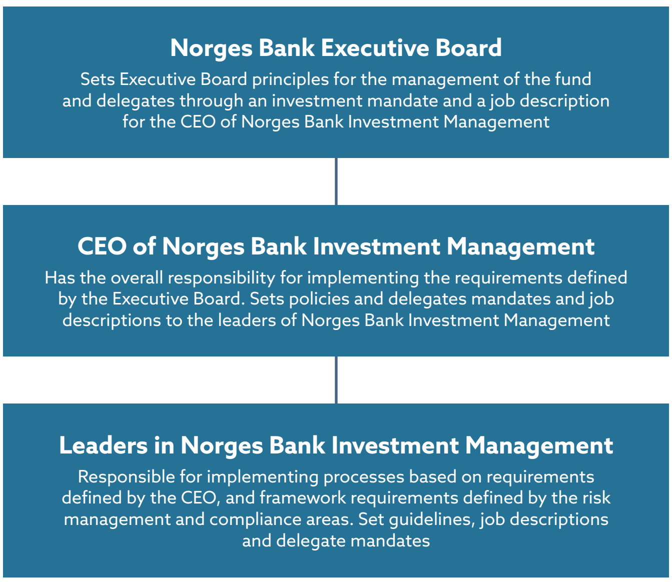
Norges Bank's governance structure

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.

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.

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

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 – Derivatives including FX contracts – Unsecured bank deposits and securities – 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 resulting from a bond issuer defaulting on their payment obligations. Credit risk is measured both in relation to single issuers, where the probability of default and loss given default are taken into account, and at portfolio level, where the correlation of credit losses between instruments and issuers is taken into account. Credit risk is actively taken to generate investment returns in line with the objectives of the investment mandates.

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

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

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	Market value in percent by country and currency[1] 31.12.2019	Market	31.12.2018	Market value in percent by asset class 31.12.2019	31.12.2018	Assets minus liabilities excluding management fee 31.12.2019	31.12.2018
Equities	**Developed**	**88.6**	**Developed**	**89.0**				
	US	39.7	US	38.4				
	UK	8.8	UK	9.4				
	Japan	8.4	Japan	8.8				
	France	5.2	France	5.1				
	Germany	4.8	Germany	4.9				
	Total other	21.7	Total other	22.5				
	Emerging	**11.4**	**Emerging**	**11.0**				
	China	4.3	China	3.6				
	Taiwan	1.8	Taiwan	1.7				
	India	1.2	India	1.2				
	Brazil	1.0	Brazil	1.0				
	South Africa	0.6	South Africa	0.7				
	Total other	2.6	Total other	2.8				
Total equities					**70.83**	**66.34**	**7 145 463**	**5 477 159**
Fixed income	**Developed**	**92.0**	**Developed**	**91.8**				
	US dollar	45.9	US dollar	44.6				
	Euro	26.9	Euro	26.1				
	Japanese yen	7.5	Japanese yen	7.7				
	British pound	4.3	British pound	4.2				
	Canadian dollar	3.1	Canadian dollar	3.3				
	Total other	4.4	Total other	5.9				
	Emerging	**8.0**	**Emerging**	**8.2**				
	Mexican peso	1.6	Mexican peso	1.7				
	South Korean won	1.1	South Korean won	1.3				
	Indonesian rupiah	1.0	Indonesian rupiah	1.1				
	Indian rupee	0.7	Indian rupee	0.7				
	Brazilian real	0.7	Malaysian ringgit	0.6				
	Total other	2.9	Total other	2.9				
Total fixed income					**26.46**	**30.68**	**2 669 606**	**2 532 774**
Unlisted real estate	US	48.5	US	47.8				
	UK	21.2	UK	23.0				
	France	17.9	France	16.5				
	Switzerland	3.5	Switzerland	3.7				
	Germany	3.4	Germany	3.5				
	Total other	5.6	Total other	5.5				
Total unlisted real estate					**2.71**	**2.98**	**273 014**	**246 013**

[1] *Market value in percent per country and currency* includes derivatives and cash.

At the end of 2019, the equity portfolio's share of the fund was 70.8 percent, up from 66.3 percent at year-end 2018. The bond portfolio's share of the fund was 26.5 percent, down from 30.7 percent at year-end 2018. The unlisted real estate portfolio's share of the fund was 2.7 percent, compared with 3.0 percent at year-end 2018.

For equity investments, concentration in the portfolio is further measured by sector. Table 8.3 shows the composition of the equity asset class by sector.

Table 8.3 Allocation of equity investments by sector[1], percent

Sector	31.12.2019	31.12.2018
Financials	23.6	23.7
Technology	14.6	12.6
Industrials	13.4	12.9
Consumer goods	11.5	11.9
Health care	11.3	11.4
Consumer services	10.7	10.8
Oil and gas	5.0	5.9
Basic materials	4.4	5.0
Utilities	2.8	2.8
Telecommunications	2.7	3.0

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

The GPFG has substantial investments in government-issued bonds. Table 8.4 shows the largest holdings in bonds issued by governments. These include government bonds issued in local and foreign currency and inflation-linked bonds issued in local currency.

Table 8.4 Largest holdings within the segment government bonds

Amounts in NOK million	Market value 31.12.2019
US	701 616
Japan	244 195
Germany	98 548
France	80 783
UK	72 793
Spain	51 554
South Korea	49 049
Mexico	43 360
Italy	42 427
Canada	30 640

Amounts in NOK million	Market value 31.12.2018
US	638 715
Japan	237 179
Germany	106 116
UK	64 844
France	47 998
South Korea	43 366
Mexico	42 594
Spain	41 388
Italy	36 517
Australia	36 399

The portfolio is also invested in companies which issue both equities and bonds. Table 8.5 shows the portfolio's largest holdings of non-government issuers, including both bond and equity holdings. Covered bonds issued by financial institutions and debt issued by other underlying companies are included in the bonds column.

Table 8.5 Largest holdings excluding sovereigns, both bonds and equities

Amounts in NOK million, 31.12.2019	Sector	Equities	Bonds	Total
Apple Inc	Technology	116 967	7 711	124 677
Microsoft Corp	Technology	104 640	1 258	105 897
Alphabet Inc	Technology	77 831	529	78 360
Nestlé SA	Consumer goods	71 686	1 900	73 585
Amazon.com Inc	Consumer services	68 631	3 716	72 347
Roche Holding AG	Health care	55 297	360	55 657
Alibaba Group Holding Ltd	Consumer services	51 992	1 073	53 065
Royal Dutch Shell Plc	Oil and gas	52 193	496	52 689
Novartis AG	Health care	44 604	3 679	48 283
Facebook Inc	Technology	46 241	0	46 241

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

Table 8.6 shows the composition of the unlisted real estate asset class by sector.

Table 8.6 Distribution of unlisted real estate investments by sector, percent

Sector	31.12.2019	31.12.2018
Office	56.5	59.3
Retail	18.2	18.0
Logistics	21.9	21.6
Other	3.4	1.2
Total	**100.0**	**100.0**

Volatility and correlation risk

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

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

The Barra Private Real Estate 2 (PRE2) model from MSCI is used to calculate 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 share 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 8.7 and 8.8 present risk both in terms of the portfolio's absolute risk and the relative risk.

Table 8.7 Portfolio risk, expected volatility, percent

	Expected volatility, actual portfolio							
	31.12.2019	Min 2019	Max 2019	Average 2019	31.12.2018	Min 2018	Max 2018	Average 2018
Portfolio	7.7	7.7	8.6	7.9	8.6	8.5	11.0	9.5
Equities	9.9	9.9	11.5	10.2	11.6	11.4	13.7	12.4
Fixed income	7.0	6.7	7.2	6.9	7.0	6.8	9.4	7.8
Unlisted real estate	8.7	8.7	9.4	9.0	9.3	9.2	11.9	10.4

Table 8.8 Relative risk measured against the fund's benchmark index, expected relative volatility, basis points

	Expected relative volatility							
	31.12.2019	Min 2019	Max 2019	Average 2019	31.12.2018	Min 2018	Max 2018	Average 2018
Portfolio	33	31	34	32	33	29	37	31

Risk measured as expected volatility indicates an expected annual value fluctuation in the fund of 7.7 percent, or approximately NOK 780 billion at the end of 2019, compared to 8.6 percent at year-end 2018. Expected volatility for the equity portfolio was 9.9 percent at year-end, down from 11.6 percent at year-end 2018, while expected volatility for the bond portfolio was 7.0 percent, unchanged from year-end 2018. The decrease in expected volatility for the fund in 2019 is mainly due to decreased price volatility in the equity markets for the last three years than was the case at the end of 2018.

The management mandate for the GPFG specifies that expected relative volatility for the fund shall not exceed 1.25 percentage points. The measurement of risk and follow-up of the limit is performed based on the risk model described above. The fund's expected relative volatility was 33 basis points at the end of the year, which was the same level as at year-end 2018.

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

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

The Executive Board has determined that the fund shall be managed in such a way that the annual expected shortfall measured against the benchmark index does not exceed 3.75 percentage points. Expected shortfall is measured and monitored based on the risk model described above. At the end of the year, expected shortfall was 1.50 percentage points, compared to 1.37 percentage points at year-end 2018.

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 a normal distribution.

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

Verification of models

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

Credit risk

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

Table 8.9 Bond portfolio specified by credit rating

Amounts in NOK million, 31.12.2019	AAA	AA	A	BBB	Lower rating	Total
Government bonds	784 270	219 428	367 235	113 426	41 750	1 526 110
Government-related bonds	127 462	131 904	42 359	14 164	1 265	317 155
Inflation-linked bonds	127 523	29 901	7 433	9 549	-	174 406
Corporate bonds	5 567	39 019	260 796	317 812	5 978	629 172
Securitised bonds	122 767	24 524	1 583	526	433	149 833
Total bonds	**1 167 588**	**444 778**	**679 406**	**455 478**	**49 425**	**2 796 675**

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
Total bonds	**1 119 606**	**400 939**	**638 532**	**442 341**	**58 431**	**2 659 849**

The share of holdings in government-related bonds was reduced during the year, to 11.3 percent of the bond portfolio at year-end 2019, from 12.7 percent at year-end 2018. Corporate bonds were also reduced to 22.5 percent of the bond portfolio at year-end 2019, from 22.9 percent at year-end 2018. Government bonds, including inflation-linked bonds, amounted to 60.8 percent of the bond portfolio, compared to 59.1 percent at year-end 2018.

The share of bonds with credit rating AA increased by 0.8 percentage point to 15.9 percent of the total bond portfolio at year-end. This increase was mainly due to an increase in the holdings in government bonds, including inflation-linked bonds. The share of the bond portfolio with credit rating AAA decreased by 0.4 percentage point to 41.7 percent of the total bond portfolio at year-end 2019. This was mainly due to a decrease in the holdings of government-related bonds during the year. The share of the bond portfolio with credit rating BBB was reduced by 0.3 percentage point compared to year-end 2018, to 16.3 percent of the bond portfolio at year-end 2019. The decrease is due to a reduction in corporate bond holdings mainly issued in US dollars.

The share of bonds grouped under *Lower rating* was reduced to 1.8 percent of the bond portfolio at year-end 2019, from 2.2 percent at year-end 2018. This is mainly due to reduced holdings of emerging market government bonds within this category. Defaulted bonds had a market value of NOK 129 million at year-end 2019, compared to NOK 44 million at year-end 2018. Defaulted bonds are grouped under *Lower rating*. The overall credit quality of the bond portfolio improved slightly during the year.

Table 8.10 Bond portfolio by credit rating and currency, percent

31.12.2019	AAA	AA	A	BBB	Lower rating	Total
US dollar	26.1	2.1	6.8	8.4	0.2	43.5
Euro	9.1	7.3	5.3	4.5	0.1	26.2
Japanese yen	-	-	9.4	-	-	9.4
British pound	0.3	2.8	0.5	0.6	-	4.2
Canadian dollar	2.4	0.8	0.1	-	-	3.4
Other currencies	3.9	2.9	2.2	2.8	1.5	13.3
Total	**41.7**	**15.9**	**24.3**	**16.3**	**1.8**	**100.0**

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
Total	**42.1**	**15.1**	**24.0**	**16.6**	**2.2**	**100.0**

There were no credit derivatives in the portfolio at year-end 2019.

In addition to credit ratings from credit rating agencies, measurement of credit risk is complemented by two credit risk models, of which one is based on credit ratings and the other is based on observable credit premiums. Both of these methods also take into account the correlation and expected value of bonds in a bankruptcy situation. The models 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 bank deposits 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 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 by the CRO. In 2019, 11 transactions were approved by the CRO through this process, compared to 18 transactions in 2018.

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

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

Exposure to counterparty risk is related to counterparties in the settlement and custody systems, both for currency trades and for the purchase and sale of securities. Settlement risk 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. For some currencies, Norges Bank is exposed to settlement risk when the sold currency is delivered to the counterparty before the receipt of currency is confirmed. This type of exposure is included on the line *Settlement risk towards brokers and long settlement transactions* in table 8.11.

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

In table 8.11, exposure is broken down by type of activity/instrument associated with counterparty risk.

Total counterparty risk was reduced to NOK 116.4 billion at year-end 2019, from NOK 122.5 billion at year-end 2018. The reduction in risk exposure is mainly due to lower risk exposure from securities lending, unsecured securities and settlement risk towards brokers related to foreign exchange contracts. The risk exposure from derivatives including foreign exchange contracts has increased. Both equities and bonds are lent through the securities lending programme. The risk exposure for the programme decreased to NOK 58.5 billion at year-end 2019, from NOK 67.1 billion at year-end 2018. Counterparty risk exposure from securities lending amounted to 50 percent of the fund's total counterparty risk exposure at year-end 2019, compared to 55 percent at year-end 2018.

Table 8.11 Counterparty risk by type of position

	Risk exposure	
Amounts in NOK million	31.12.2019	31.12.2018
Securities lending	58 488	67 110
Derivatives including foreign exchange contracts	32 611	22 529
Unsecured bank deposits[1] and securities	18 501	23 619
Repurchase and reverse repurchase agreements[2]	6 535	4 780
Settlement risk towards brokers and long settlement transactions	266	4 437
Total	**116 401**	**122 475**

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

[2] Comparable amounts have been restated to reflect a correction in the underlying data used in the calculation.

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

Table 8.12 shows approved counterparties classified by credit rating category. The table also includes brokers that are used when purchasing and selling securities.

Table 8.12 Counterparties by credit rating[1]

	Norges Bank's counterparties (excluding brokers)		Brokers	
	31.12.2019	31.12.2018	31.12.2019	31.12.2018
AAA	1	1	1	-
AA	34	33	35	33
A	61	61	79	76
BBB	10	8	32	28
BB	2	2	19	17
B	-	-	7	7
Total	**108**	**105**	**173**	**161**

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

The number of counterparties and brokers has increased during the year. There were 108 counterparties at year-end 2019, compared to 105 at year-end 2018. The number of brokers increased to 173 at year-end 2019, from 161 at year-end 2018. The change is mainly due to an increase of new approved brokers for bond trading. The overall credit quality of brokers and counterparties remained unchanged from year-end 2018.

Leverage

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

The GPFG's leverage was 1.1 percent for the aggregated equity and bond portfolio at the end of 2019, compared to 1.5 percent at the end of 2018. 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 6.1 percent at the end of 2019, compared to 6.7 percent at the end of 2018.

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 2019.

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, tax on fee income from secured lending and taxes in consolidated subsidiaries. The majority of these taxes are collected at source.

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

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 withholding tax refunds, are assessed each reporting period. The best estimate of the probable reimbursement 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, 2019	Gross income before taxes	Income tax on dividends, interest and fees	Capital gains tax	Other	Tax expense	Net income after taxes
Income/expense from:						
Equities	1 486 909	-6 214	-472	-	-6 685	1 480 224
Bonds	192 820	-22	-38	-	-60	192 760
Secured lending	4 529	-73	-	-	-73	4 456
Other	-	-	-	-9	-9	-
Tax expense		**-6 308**	**-510**	**-9**	**-6 827**	

Amounts in NOK million, 2018	Gross income before taxes	Income tax on dividends, interest and fees	Capital gains tax	Other	Tax expense	Net income after taxes
Income/expense from:						
Equities	-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	-
Tax expense		**-4 969**	**-67**	**-13**	**-5 050**	

Table 9.2 shows receivables and liabilities recognised in the balance sheet related to income tax.

Table 9.2 Specification of balance sheet items related to income tax

Amounts in NOK million	2019	2018
Included in *Other assets*:		
Withholding tax receivable	2 163	1 895
Included in *Other liabilities*:		
Tax payable	9	12
Deferred tax	450	-

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	2019	2018
Receipt of refunded withholding tax	5 201	4 469
Payment of taxes	-11 848	-8 812
Net payment of taxes	**-6 648**	**-4 343**

Note 10 Foreign exchange gains/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 or infrastructure located in Norway. The fund's returns are measured primarily in the fund's currency basket, which is a weighted combination of the currencies in the fund's benchmark index for equities and bonds. The fund's market value in Norwegian kroner is affected by changes in exchange rates, but this has no bearing on the fund's international purchasing power.

Accounting judgement

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

Accounting policy

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

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

Foreign exchange element
Unrealised gain/loss due to changes in foreign exchange rates 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 fund's market value 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	2019	2018
Foreign exchange gain/loss - USD/NOK	44 005	163 983
Foreign exchange gain/loss - GBP/NOK	33 334	-1 329
Foreign exchange gain/loss - JPY/NOK	15 693	50 721
Foreign exchange gain/loss - EUR/NOK	-5 461	14 654
Foreign exchange gain/loss - other	39 108	-4 418
Foreign exchange gain/loss	**126 679**	**223 611**

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	31.12.2019	31.12.2018
US dollar	4 325 398	3 418 802
Euro	1 999 881	1 678 501
Japanese yen	807 056	682 120
British pound	758 899	631 180
Other currencies	2 196 849	1 845 342
Market value investment portfolio	**10 088 083**	**8 255 945**

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

	31.12.2019	31.12.2018	Percent change
US dollar	8.79	8.66	1.5
Euro	9.86	9.90	-0.4
Japanese yen	0.08	0.08	2.5
British pound	11.64	11.03	5.6

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 that are 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	2019	2019 Basis points	2018	2018 Basis points
Salary, social security and other personnel-related costs	1 448		1 262	
Custody costs	431		385	
IT services, systems, data and information	671		651	
Research, consulting and legal fees	258		282	
Other costs	428		400	
Allocated costs Norges Bank	174		167	
Base fees to external managers	611		724	
Management fee excluding performance-based fees	**4 021**	**4.4**	**3 872**	**4.6**
Performance-based fees to external managers	291		673	
Management fee	**4 312**	**4.7**	**4 544**	**5.4**

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, unlisted real estate subsidiaries

Amounts in NOK million	2019	2019 Basis points	2018	2018 Basis points
Salary, social security and other personnel-related costs	34		25	
IT services, systems, data and information	19		41	
Research, consulting and legal fees	36		30	
Other costs	22		13	
Total management costs, unlisted real estate subsidiaries	**111**	**0.1**	**108**	**0.1**
Of which management costs non-consolidated subsidiaries	*70*		*88*	
Of which management costs consolidated subsidiaries	*41*		*20*	

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 2019, 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. This is the same as the equivalent limit for 2018. 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 4 132 million in 2019. This consisted of management costs in Norges Bank, excluding performance-based fees to external managers, of NOK 4 021 million and management costs in subsidiaries of NOK 111 million. This corresponds to 4.5 basis points of assets under management.

Total management costs including performance-based fees to external managers amounted to NOK 4 423 million in 2019. This corresponds to 4.8 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 subsidiaries are presented in the income statement line *Income/expense from unlisted real estate*. See table 6.5 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 consists of 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, repurchase and reverse repurchase agreements and equity swaps in combination with purchases or sales of equities.

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

Accounting policy

Income and expense from secured lending and borrowing

Income and expense mainly consists 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 Income/expense from secured lending and borrowing

Amounts in NOK million	2019	2018
Income/expense from secured lending	4 529	4 733
Income/expense from secured borrowing	-1 926	-1 466
Net income/expense from secured lending and borrowing	**2 603**	**3 267**

Accounting policy

Transferred financial assets

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

When an equity is sold in combination with 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 virtually no exposure to the equity or the derivative and neither the equity nor the derivative are recognised in the balance sheet.

Secured lending

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

Secured borrowing

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

Collateral received in the form of securities

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

Table 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	31.12.2019	31.12.2018
Secured lending	222 946	216 768
Total secured lending	**222 946**	**216 768**
Associated collateral in the form of securities (off balance sheet)		
Equities received as collateral	68 147	38 018
Bonds received as collateral	155 990	182 703
Total collateral received in the form of securities related to secured lending	**224 137**	**220 721**

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	31.12.2019	31.12.2018
Transferred financial assets		
Equities lent	426 623	437 651
Bonds lent	479 852	662 920
Total transferred financial assets	**906 475**	**1 100 571**
Associated cash collateral, recognised as liability		
Secured borrowing	338 266	360 105
Total secured borrowing	**338 266**	**360 105**
Associated collateral in the form of securities or guarantees (off balance sheet)		
Equities received as collateral	436 482	486 470
Bonds received as collateral	178 250	309 951
Guarantees	8 548	10 696
Total collateral received in the form of securities or guarantees related to transferred financial assets	**623 280**	**807 117**

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

Amounts in NOK million, 31.12.2019	Gross financial assets recognised in the balance sheet	Assets not subject to enforceable netting agreements[1]	Amounts subject to enforceable master netting agreements				
Description			Assets in the balance sheet subject to netting	Financial liabilities related to same counterparty	Cash collateral received (recognised as liability)	Security collateral received (not recognised)	Assets after netting and collateral
Assets							
Secured lending	222 946	80 807	142 140	-	90 773	51 367	**-**
Cash collateral posted	1 090	-	1 090	984	-	-	**107**
Financial derivatives	3 335	159	3 176	2 441	598	-	**136**
Total	**227 372**	**80 966**	**146 406**	**3 425**	**91 371**	**51 367**	**243**

Amounts in NOK million, 31.12.2019	Gross financial liabilities recognised in the balance sheet	Liabilities not subject to enforceable netting agreements[2]	Amounts subject to enforceable master netting agreements				
Description			Liabilities in the balance sheet subject to netting	Financial assets related to same counterparty	Cash collateral posted- (recognised as asset)	Security collateral posted (not derecognised)	Liabilities after netting and collateral
Liabilities							
Secured borrowing	338 266	71 979	266 287	-	100 734	164 663	**890**
Cash collateral received	6 754	-	6 754	920	-	-	**5 834**
Financial derivatives	3 294	-	3 294	2 441	570	-	**283**
Total	**348 314**	**71 979**	**276 335**	**3 362**	**101 304**	**164 663**	**7 006**

Amounts in NOK million, 31.12.2018			Amounts subject to enforceable master netting agreements				
Description	Gross financial assets recognised in the balance sheet	Assets not subject to enforceable netting agreements[1]	Assets in the balance sheet subject to netting	Financial liabilities related to same counterparty	Cash collateral received (recognised as liability)	Security collateral received (not recognised)	Assets after netting and collateral
Assets							
Secured lending	216 768	58 238	158 530	-	106 432	52 098	**-**
Cash collateral posted	1 806	-	1 806	1 685	-	-	**121**
Financial derivatives	3 576	50	3 526	2 593	908	-	**25**
Total	**222 150**	**58 288**	**163 862**	**4 278**	**107 340**	**52 098**	**146**

Amounts in NOK million, 31.12.2018			Amounts subject to enforceable master netting agreements				
Description	Gross financial liabilities recognised in the balance sheet	Liabilities not subject to enforceable netting agreements[2]	Liabilities in the balance sheet subject to netting	Financial assets related to same counterparty	Cash collateral posted (recognised as asset)	Security collateral posted (not derecognised)	Liabilities after netting and collateral
Liabilities							
Secured borrowing	360 105	51 746	308 358	-	106 432	200 752	**1 174**
Cash collateral received	5 017	-	5 017	1 488	-	-	**3 529**
Financial derivatives	4 222	-	4 222	2 593	1 176	-	**452**
Total	**369 344**	**51 746**	**317 597**	**4 081**	**107 608**	**200 752**	**5 155**

[1] *Secured lending* includes amounts related to shares purchased in combination with equity swaps. In 2019, this amounted to NOK 67 billion (NOK 37 billion in 2018). See note 12 *Secured lending and borrowing* for further information.

[2] *Secured borrowing* includes amounts related to shares sold in combination with equity swaps. In 2019, this amounted to NOK 47 billion (NOK 37 billion in 2018). See note 12 *Secured lending and borrowing* for further information.

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 2019, NOK 4.5 billion was deducted from the krone account to pay the accrued management fee for 2018 to Norges Bank, compared to NOK 4.7 billion in 2018.

Internal trades in the form of money market lending or borrowing between the GPFG and Norges Bank's foreign exchange reserves are presented as a net balance between the two portfolios in the balance sheet lines *Other assets* and *Other liabilities*. At the end of 2019, the net balance between the portfolios represented a receivable for the GPFG of NOK 195 million, compared to a receivable of NOK 154 million at the end of 2018. 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 GPFG. 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
Non-consolidated companies					
United Kingdom					
NBIM George Partners LP[1]	London	London	100.00	25.00	2011
MSC Property Intermediate Holdings Limited	London	Sheffield	50.00	50.00	2012
NBIM Charlotte Partners LP	London	London	100.00	57.75	2014
NBIM Edward Partners LP	London	London	100.00	100.00	2014
NBIM Caroline Partners LP	London	London	100.00	100.00	2015
NBIM Henry Partners LP	London	London	100.00	100.00	2016
NBIM Elizabeth Partners LP	London	London	100.00	100.00	2016
NBIM Eleanor Partners LP	London	London	100.00	100.00	2018
WOSC Partners LP	London	London	75.00	75.00	2019
Luxembourg					
NBIM S.à r.l.	Luxembourg	N/A	100.00	N/A	2011
France					
NBIM Louis SAS	Paris	Paris	100.00	50.00	2011
SCI 16 Matignon	Paris	Paris	50.00	50.00	2011
Champs Elysées Rond-Point SCI	Paris	Paris	50.00	50.00	2011
SCI PB 12	Paris	Paris	50.00	50.00	2011
SCI Malesherbes	Paris	Paris	50.00	50.00	2012
SCI 15 Scribe	Paris	Paris	50.00	50.00	2012
SAS 100 CE	Paris	Paris	50.00	50.00	2012
SCI Daumesnil	Paris	Paris	50.00	50.00	2012
SCI 9 Messine	Paris	Paris	50.00	50.00	2012
SCI Pasquier	Paris	Paris	50.00	50.00	2013
NBIM Marcel SCI	Paris	Paris	100.00	100.00	2014
NBIM Victor SCI	Paris	Paris	100.00	100.00	2016
NBIM Eugene SCI	Paris	Paris	100.00	100.00	2017
NBIM Beatrice SCI	Paris	Paris	100.00	100.00	2018
NBIM Jeanne SCI	Paris	Paris	100.00	100.00	2019

Company	Business address	Property address	Ownership share and voting right in percent	Effective ownership share of underlying properties in percent	Recognised from
Germany					
NKE Neues Kranzler Eck Berlin Immobilien GmbH & Co. KG	Cologne	Berlin	50.00	50.00	2012
STEG LBG 2 S.C.S	Luxembourg	Munich	100.00	100.00	2014
STEG LBG 3 S.C.S	Luxembourg	Munich	100.00	100.00	2014
Switzerland					
NBIM Antoine CHF S.à r.l.	Luxembourg	Zürich	100.00	100.00	2012
Europe					
Prologis European Logistics Partners S.à r.l.	Luxembourg	Multiple European cities	50.00	50.00	2013
United States					
T-C 1101 Pennsylvania Venture LLC	Wilmington, DE	Washington	49.90	49.90	2013
T-C Franklin Square Venture LLC	Wilmington, DE	Washington	49.90	49.90	2013
T-C 33 Arch Street Venture LLC	Wilmington, DE	Boston	49.90	49.90	2013
T-C 475 Fifth Avenue Venture LLC	Wilmington, DE	New York	49.90	49.90	2013
No. 1 Times Square Development LLC	Wilmington, DE	New York	45.00	45.00	2013
OFC Boston LLC	Wilmington, DE	Boston	47.50	47.50	2013
425 MKT LLC	Wilmington, DE	San Francisco	47.50	47.50	2013
555 12th LLC	Wilmington, DE	Washington	47.50	47.50	2013
Prologis U.S. Logistics Venture LLC	Wilmington, DE	Multiple American cities	46.30	44.96	2014
OBS Boston LLC	Wilmington, DE	Boston	47.50	47.50	2014
100 Federal JV LLC	Wilmington, DE	Boston	45.00	45.00	2014
Atlantic Wharf JV LLC	Wilmington, DE	Boston	45.00	45.00	2014
BP/CGCenter MM LLC	Wilmington, DE	New York	45.00	45.00	2014
T-C 2 Herald Square Venture LLC	Wilmington, DE	New York	49.90	49.90	2014
T-C 800 17th Street Venture NW LLC	Wilmington, DE	Washington	49.90	49.90	2014
T-C Foundry Sq II Venture LLC	Wilmington, DE	San Francisco	49.90	49.90	2014
T-C Hall of States Venture LLC	Wilmington, DE	Washington	49.90	49.90	2014
SJP TS JV LLC	Wilmington, DE	New York	45.00	45.00	2015
T-C Republic Square Venture LLC	Wilmington, DE	Washington	49.90	49.90	2015

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
Japan					
TMK Tokyo TN1	Tokyo	Tokyo	70.00	70.00	2017
Consolidated subsidiaries					
Japan					
NBRE Management Japan Advisors K.K.	Tokyo	N/A	100.00	N/A	2015
United Kingdom					
NBRE Management Europe Limited	London	N/A	100.00	N/A	2016

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

Activity in the consolidated subsidiaries consists of providing investment-related services to the GPFG. 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 2019, 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 give a true and fair view of the financial position for the investment portfolio of the Government Pension Fund Global as at 31 December 2019, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by EU.

Basis for Opinion

We conducted our audit in accordance with 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 reporting 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 2019. These matters were addressed in the context of our audit of the financial reporting as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Management of the equity and fixed-income portfolio

Key audit matter	How the matter was addressed in our audit
Processes and control activities in the equity and fixed-income management related to amongst others trading, secured lending and borrowing, interest income and dividends, valuation, calculation of gains and losses, foreign currency translation and performance- and risk measurement are largely automated. Deviations in the automated investment management processes are analysed and followed up. Norges Bank's IT systems are mainly standard systems adapted to Norges Bank's needs. The IT solutions are operated in cooperation with various third parties, and during the year central IT systems for asset management were transferred to a cloud-based platform. There is often increased operational risk involved in this type of change process. 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 2019. The IT systems used in the investment management are absolutely central for accounting and reporting. Effective internal controls in the automated investment management processes as well as in handling deviations and in the transition to a cloud-based solution are of significant importance to form the basis for ensuring accurate, complete and reliable financial reporting and this is therefore a key audit matter.	Norges Bank has established overall governance models and control activities for evaluation of the equity and fixed-income management. We assessed those elements of the overall governance models that are relevant to financial reporting. 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. This also included controls related to the transition to a cloud-based platform. We assessed whether selected valuation and calculation methods, including the method for currency conversion, were in accordance with IFRS. 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. 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. 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. We used our own IT specialists to understand the overall governance model for IT and in the assessment and testing of the control activities related to IT.

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

Key audit matter	How the matter was addressed in the audit
Fair value of the majority of assets and liabilities in the Government Pension Fund Global is based on official closing prices and observable market prices. Investments in unlisted real estate and some securities are, however, valued using models with significant use of unobservable inputs, and these type of assets are classified as Level 3 in the fair value hierarchy. A considerable degree of judgement is applied in determining the assumptions that market participants would use when pricing the asset or liability, when observable market data is not available. The valuation of Level 3 investments is therefore subject to considerable uncertainty. The recognised value of assets classified as level 3 is NOK 265.4 billion at 31 December 2019. Of this, investments in unlisted real estate amount to NOK 264.5 billion. The valuation of unlisted real estate investments is complex and requires judgement. Valuation is based on information about each individual property type and location, as well as a number of assumptions and estimates. The assumptions and estimates are essential for the valuation, and the valuation of unlisted real estate is therefore a key audit matter.	Norges Bank has established various control activities for monitoring the valuations conducted by external valuation specialists. We have assessed and tested the design of selected control activities related to key assumptions and estimates, including future cashflows and applicable discount rates. For a sample of properties, we tested that these control activities had operated effectively in the reporting period. For a sample of properties, 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 selected unobservable inputs used in determining future market rent and discount rates against external sources. We assessed the valuer's independence, qualifications and experience. We used our own experts in the review of the valuation reports. We reconciled the fair value in the financial reporting with the valuation reports. We assessed whether the disclosures in notes 6 and 7 regarding valuation of unlisted real estate was adequate.

Returns disclosures

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

Other information
Management is responsible for the other information. The other information comprises information in the annual report, except the financial statements 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 represents 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, 5 February 2020
Deloitte AS

Henrik Woxholt
State Authorised Public Accountant

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