



# GOVERNMENT PENSION FUND GLOBAL

**ANNUAL REPORT  
/2017**





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

# 2017 in figures

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# 13.7%

## 1,028 billion kroner

The Government Pension Fund Global returned **13.7** percent, or **1,028** billion kroner, in 2017.



**EQUITY  
INVESTMENTS**

19.4%



**UNLISTED REAL ESTATE  
INVESTMENTS**

7.5%



**FIXED-INCOME  
INVESTMENTS**

3.3%

Equity investments returned **19.4** percent.  
Investments in unlisted real estate returned **7.5** percent.  
Fixed-income investments returned **3.3** percent.



# 8,488

billion kroner

The fund's market value was **8,488** billion kroner at the end of 2017, up from **7,510** billion kroner a year earlier.

The market value of equity investments was **5,653** billion kroner, while the unlisted real estate investments had a market value of **219** billion kroner. The market value of fixed-income investments was **2,616** billion kroner.

**6,430,738,694,662 NOK**  
2014

**5,037,734,265,965 NOK**  
2013

**3,815,769,355,329 NOK**  
2012

**8,488,454,661,933 NOK**

2017

**7,510,494,110,324 NOK**

2016

**7,475,153,025,361 NOK**

2015



66.6%

**EQUITY  
INVESTMENTS**



2.6%

**UNLISTED REAL ESTATE  
INVESTMENTS**



30.8%

**FIXED-INCOME  
INVESTMENTS**

The fund's asset allocation was  
**66.6** percent equities,  
**2.6** percent unlisted real estate and  
**30.8** percent fixed income.

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**Øystein Olsen**

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Chairman of  
the Executive Board

# The Executive Board's assessment of the results

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**The investments in the Government Pension Fund Global returned 13.7 percent in 2017. The Executive Board is satisfied that the return both in 2017 and over a longer period has been good and higher than the return on the benchmark index, against which the returns are measured.**

The Government Pension Fund Global had a market value of 8,488 billion kroner at the end of 2017. The fund's return before management costs was 13.7 percent measured in the fund's currency basket. Equities returned 19.4 percent, bonds 3.3 percent and unlisted real estate 7.5 percent. Management costs amounted to 0.06 percent of the fund's capital.

The return in 2017 was equivalent to 1,028 billion kroner. It was the third-highest annual return in percentage terms, and the highest in kroner terms, since the fund's inception. The Executive Board notes that the annual return has been 9.9 percent over the past six years. With an allocation to equities gradually rising towards 70 percent, one have to be prepared for substantial fluctuations in the value of the fund from year to year.

In the 20 years since Norges Bank Investment Management was formed at the beginning of 1998, the annual return on the fund has been 6.1 percent. The net real return, after management costs and inflation, was 4.2 percent.

Norges Bank manages the fund with a view to the highest possible long-term return within the constraints laid down by the Ministry of Finance. To achieve this, the bank has developed various investment strategies to exploit the fund's special characteristics and strengths. For the period 2013-2017, these strategies can be grouped into fund allocation, security selection and asset management. The strategies complement each other, and the aim is that they combined and over time will yield a higher return than the benchmark index.

In 2017, the fund's return before management costs was all of 0.7 percentage point higher than that on the benchmark index. Fund allocation, security selection and asset management all contributed positively to this excess return. Viewed over the five-year

period from 2013 to 2017, fund allocation made a negative contribution to the excess return, while security selection and asset management made positive contributions. Taken together, these strategies produced an annual excess return before management costs of 0.29 percentage point in the period 2013-2017.

The excess return over the past five years is on a par with that for the full period 1998-2017. The size of the fund may, however, make it more challenging to deliver excess returns at these percentage levels in the future.

Norges Bank has gradually built up a portfolio of real estate investments since 2010. From 2017, unlisted real estate is no longer part of the fund's benchmark index, and decisions on investments in real estate have been delegated to Norges Bank. The bank invests in real estate within the limits for deviation from the fund's benchmark index laid down in the mandate from the Ministry of Finance. Real estate investments are funded by selling equities and bonds, and the results are reported as a sub-strategy of fund allocation. In 2017, the return on unlisted real estate investments was higher than that on the equities and bonds sold to finance them. Norges Bank invests in real estate to improve diversification. The impact of real estate investments on the fund's overall risk and return needs to be assessed over a long period.

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. The excess return in 2017 was achieved with only limited use of this limit for relative risk. Relative volatility was 0.33 percentage point at the end of 2017.

The measurement of relative volatility is affected to some extent by volatility in the broad financial markets. The moderate market volatility in recent years is therefore part of the reason why measured relative volatility was not higher.

Analysis of the risk associated with the different strategies reveals that the fund's overall relative volatility was substantially lower than the sum of the relative volatilities measured for each strategy. This is an indication that the use of multiple strategies has helped diversify the fund's relative risk.

Norges Bank reports a number of analyses of the relationship between return and risk in its management of the fund. The mandate from the Ministry of Finance sets out an objective of the highest possible return on the one hand, and various risk limits on the other, one key metric being relative volatility. The relationship between these two quantities is therefore a natural starting point for a comparison of excess return and risk in the management of the fund. In the period 2013-2017, the relative return per unit of risk, as measured by the information ratio, was 0.73. This ratio between excess return and relative risk cannot be expected to be maintained over time. The Executive Board is satisfied with an information ratio of 0.42 for the full period since 1998.

The Executive Board attaches importance to cost-effective management to support the objective of the highest possible return after costs. In the period 2013-2017, annual management costs were 0.06 percent of the fund's value. Fund allocation, real estate and asset management strategies accounted for more than half of management costs during the period.

The Executive Board pays considerable attention to developments in the fund's management costs.

Viewed over a longer period, management costs have risen more slowly than assets under management. At the same time, the management of the fund has become more complex. This illustrates that Norges Bank has realised economies of scale.

Norges Bank will be a global leader in responsible investment. By aiming to promote the long-term economic performance of the companies the fund invests in, and a reduction in these companies' financial risks from social and environmental issues, this work supports the objective of the highest possible return.

The Executive Board excluded 11 companies during the year, placed six under observation, and re-admitted one.

An important part of Norges Bank's role as manager is to advise on the further development of the fund's management. Over the past year, the Executive Board has issued advice to reduce the number of currencies and market segments in the benchmark index for bonds. The Executive Board has also issued advice recommending the removal of oil and gas stocks from the benchmark index for equities in consideration of the composition of the Norwegian government's total wealth. The Executive Board has also recommended permitting investments in unlisted equities and provided input to the Ministry of Finance's work on reviewing the management of the fund.

Norges Bank attaches importance to communicating openly, reliably and consistently. Reporting on the management of the fund has been expanded over the years.

The Executive Board  
Oslo, 27 February 2018



**Øystein Olsen**  
Chairman of  
the Executive Board



**Jon Nicolaisen**  
First Deputy Chair



**Egil Matsen**  
Second Deputy Chair



**Kristine Ryssdal**  
Board member



**Kjetil Storesletten**  
Board member



**Karen Helene Ulltveit-Moe**  
Board member



**Kathryn Moore Baker**  
Board member



**Steinar Juel**  
Board member

# Unusually strong markets

**The fund returned 13.7 percent in a year with strong equity markets. Positive results were achieved in all asset classes and all main markets.**

Global growth accelerated in 2017, and it was a good year for global financial markets. Equity markets were strongest in Asia and some emerging markets. Inflation and interest rates were low. The fund's equity investments returned 19.4 percent, unlisted real estate investments 7.5 percent, and fixed-income investments 3.3 percent. The excess return was 0.70 percentage point in 2017.

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We reached important milestones in 2017. The fund's market value passed 8,000 billion kroner on 26 April, and the historic milestone of 1 trillion dollars on 19 September. This fund size was not envisaged when Norges Bank Investment Management was formed 20 years ago. The market value of the fund increased by 978 billion kroner to 8,488 billion kroner in 2017. The return for the year was 1,028 billion kroner. This is the highest krone return ever. The cumulative return since inception was 4,151 billion kroner at the end of 2017. This exceeds the total inflow to the fund. Three out of four kroner of return has been generated over the last five years, and one out of four in 2017 alone. The 2017 krone return was at par with the return generated in the fund's first 15 years.

In 2017, it was decided to increase the strategic allocation to equities to 70 percent. The actual equity share at the end of the year was 66.6 percent. A new funding model for real estate was introduced in 2017. We also made the first unlisted real estate investment in Asia with the acquisition of five properties in Tokyo. In April we published our expectations towards companies on tax and transparency.

We work to safeguard the financial wealth of our future generations in a secure, efficient, responsible and transparent way. In addition to this annual report, we publish extended reports on return and risk, real estate and responsible investment. We hope the reports may contribute to increased knowledge about how we work long term with the mission entrusted to us.

Oslo, 27 February 2018



**Yngve Slyngstad**

CEO of Norges Bank Investment Management



**Yngve Slyngstad**

CEO of Norges Bank  
Investment Management

# Positive results in all asset classes

**The Government Pension Fund Global recorded positive results in all four quarters. Buoyant equity markets throughout the year helped the fund return 13.7 percent in 2017.**

Equity investments returned 19.4 percent, fixed-income investments 3.3 percent and unlisted real estate investments 7.5 percent.

#### **RETURN OF 1,028 BILLION KRONER**

The Norwegian government first transferred capital to the fund in May 1996. By the end of 2017, the fund had received 3,337 billion kroner net and amassed a cumulative return of 4,151 billion kroner. 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 an annual return of 6.1 percent. After management costs and inflation, the annual return has been 4.2 percent.

#### **RETURNS IN INTERNATIONAL CURRENCY**

The fund is invested in international securities. Returns are generally measured in international currency – a weighted combination of the currencies in the fund's benchmark index for equities and bonds. The fund's currency basket consisted of 34 currencies at the end of 2017. Unless otherwise stated in the text, results are measured in this currency basket.

#### **MARKET VALUE MORE THAN 8,000 BILLION KRONER**

The fund's market value climbed 978 billion kroner to 8,488 billion kroner in 2017. The market value is affected by investment returns, capital inflows and withdrawals, and exchange rate movements. The fund returned 1,028 billion kroner in 2017, while there was a net outflow to the government of 61 billion kroner. The krone weakened against many of the currencies the fund is invested in, which in isolation increased its market value by 15 billion kroner, but this has no bearing on the fund's international purchasing power. The fund's asset allocation at the end of the year was 66.6 percent equities, 30.8 percent fixed income and 2.6 percent unlisted real estate.





**Table 1** Return figures. Percent

	2017	2016	2015	2014	2013
<b>Returns in international currency</b>					
Equity investments	19.44	8.72	3.83	7.90	26.28
Unlisted real estate investments <sup>1</sup>	7.52	0.78	9.99	10.42	11.79
Fixed-income investments	3.31	4.32	0.33	6.88	0.10
Return on fund	13.66	6.92	2.74	7.58	15.95
Relative return on fund (percentage points) <sup>2</sup>	0.70	0.15	0.45	-0.77	0.99
Management costs	0.06	0.05	0.06	0.06	0.07
Return on fund after management costs	13.60	6.87	2.68	7.52	15.88
<b>Returns in kroner</b>					
Equity investments	19.74	3.67	16.77	24.61	36.26
Unlisted real estate investments <sup>1</sup>	7.80	-3.91	23.71	27.51	20.62
Fixed-income investments	3.57	-0.53	12.83	23.43	8.01
Return on fund	13.95	1.95	15.54	24.23	25.11

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

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

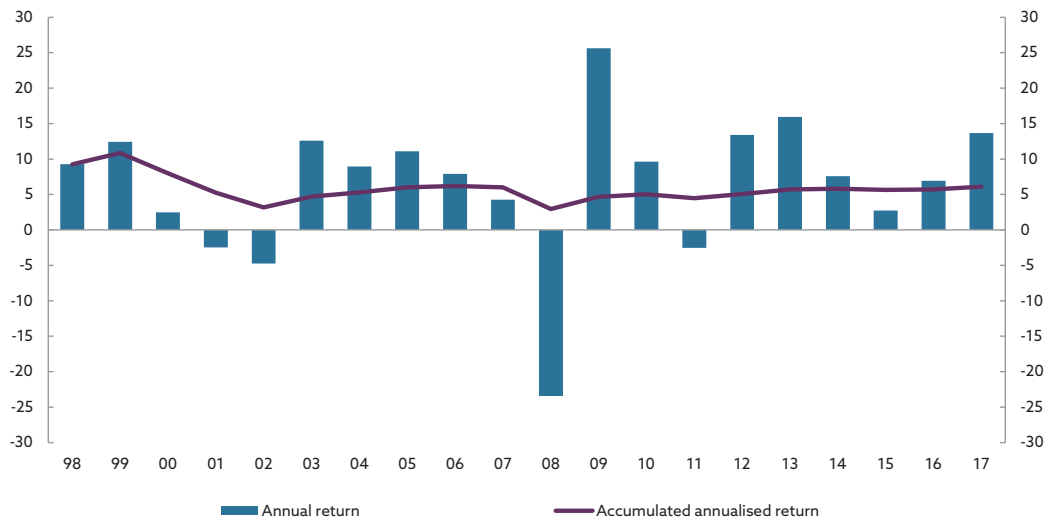
**Table 2** Historical key figures as at 31 December 2017. Annualised data, measured in the fund's currency basket

	Since 01.01.1998	Last 10 years	Last 5 years	Last 3 years	Last 12 months
<b>Fund return (percent)</b>	<b>6.09</b>	<b>6.16</b>	<b>9.26</b>	<b>7.68</b>	<b>13.66</b>
Annual price inflation (percent)	1.77	1.65	1.30	1.39	1.83
Annual management costs (percent)	0.09	0.08	0.06	0.06	0.06
Net real return on fund (percent)	4.16	4.36	7.81	6.15	11.55
The fund's actual standard deviation (percent)	7.33	9.02	5.90	6.22	2.05
Relative return on fund (percentage points) <sup>1</sup>	0.28	0.15	0.29	0.43	0.70
The fund's tracking error (percentage points) <sup>1</sup>	0.69	0.89	0.38	0.33	0.26
The fund's information ratio (IR) <sup>1,2</sup>	0.42	0.22	0.73	1.22	2.35

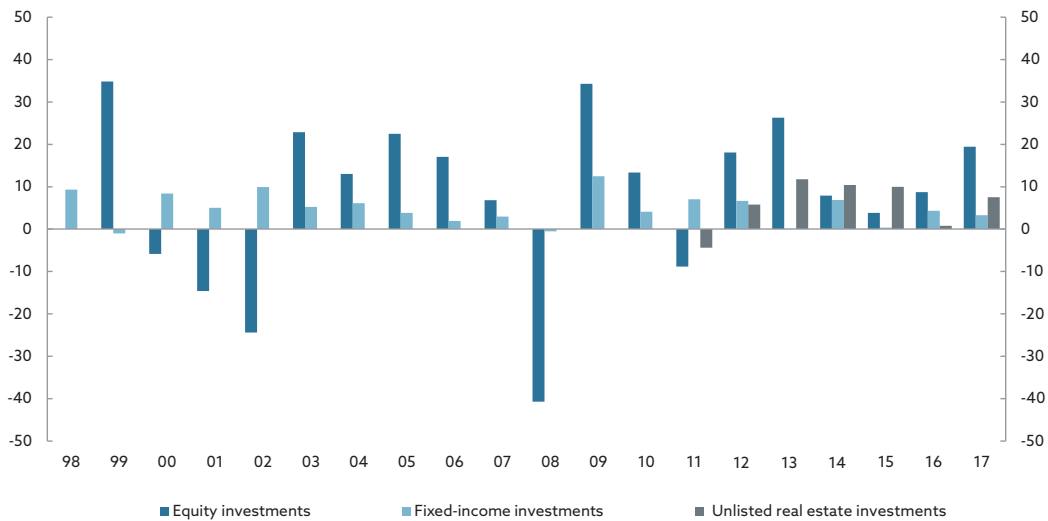
<sup>1</sup> Based on aggregated equity and fixed-income investments until end of 2016.

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

**Chart 1** The fund's annual return and accumulated annualised return. Percent



**Chart 2** Historical returns on the fund's investments. Percent



**Table 3** Return on the fund as at 31 December 2017, measured in various currencies. Percent

	Since 01.01.1998 Annualised figures	2017	2016	2015	2014	2013
US dollar	6.45	19.92	4.83	-2.13	0.52	14.77
Euro <sup>1</sup>	5.98	5.33	7.97	9.02	14.47	9.81
British pound	7.54	9.54	25.05	3.54	6.78	12.63
Norwegian krone	7.05	13.95	1.95	15.54	24.23	25.11
Currency basket	6.09	13.66	6.92	2.74	7.58	15.95

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

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

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

<sup>1</sup> Includes listed real estate investments from 1 November 2014 to the end of 2016.

<sup>2</sup> Unlisted real estate investments from 31 March 2011.



At the end of 2017, 24.5 percent of the fund's equity investments was in the financial sector.

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

	2017	2016	2015	2014	2013
<b>Market value</b>					
Equity investments	5,653	4,692	4,572	3,940	3,107
Unlisted real estate investments <sup>1</sup>	219	242	235	141	52
Fixed-income investments	2,616	2,577	2,668	2,350	1,879
<b>Market value of fund<sup>2</sup></b>	<b>8,488</b>	<b>7,510</b>	<b>7,475</b>	<b>6,431</b>	<b>5,038</b>
Accrued, not paid, management fees <sup>2</sup>	-5	-4	-4	-3	-3
Owner's capital <sup>2</sup>	8,484	7,507	7,471	6,428	5,035
<b>Inflow/withdrawal of capital<sup>3</sup></b>	<b>-61</b>	<b>-101</b>	<b>46</b>	<b>150</b>	<b>241</b>
Paid management fees <sup>3</sup>	-4	-4	-3	-3	-2
Return on fund	1,028	447	334	544	692
Changes due to fluctuations in krone	15	-306	668	702	291
<b>Total change in market value</b>	<b>978</b>	<b>35</b>	<b>1,044</b>	<b>1,393</b>	<b>1,222</b>
<b>Changes in value since first capital inflow in 1996</b>					
Total inflow of capital <sup>4</sup>	3,337	3,397	3,499	3,452	3,302
Return on equity investments	3,062	2,129	1,786	1,567	1,242
Return on unlisted real estate investments <sup>1</sup>	53	38	31	14	5
Return on fixed-income investments	1,037	955	859	761	551
Management fees <sup>5</sup>	-39	-35	-31	-27	-24
Changes due to fluctuations in krone	1,040	1,025	1,331	663	-39
<b>Market value of fund</b>	<b>8,488</b>	<b>7,510</b>	<b>7,475</b>	<b>6,431</b>	<b>5,038</b>
<b>Return on fund</b>	<b>4,151</b>	<b>3,123</b>	<b>2,676</b>	<b>2,343</b>	<b>1,799</b>
<b>Return after management costs</b>	<b>4,111</b>	<b>3,088</b>	<b>2,645</b>	<b>2,316</b>	<b>1,775</b>

<sup>1</sup> Includes listed real estate investments from 1 November 2014 to the end of 2016.

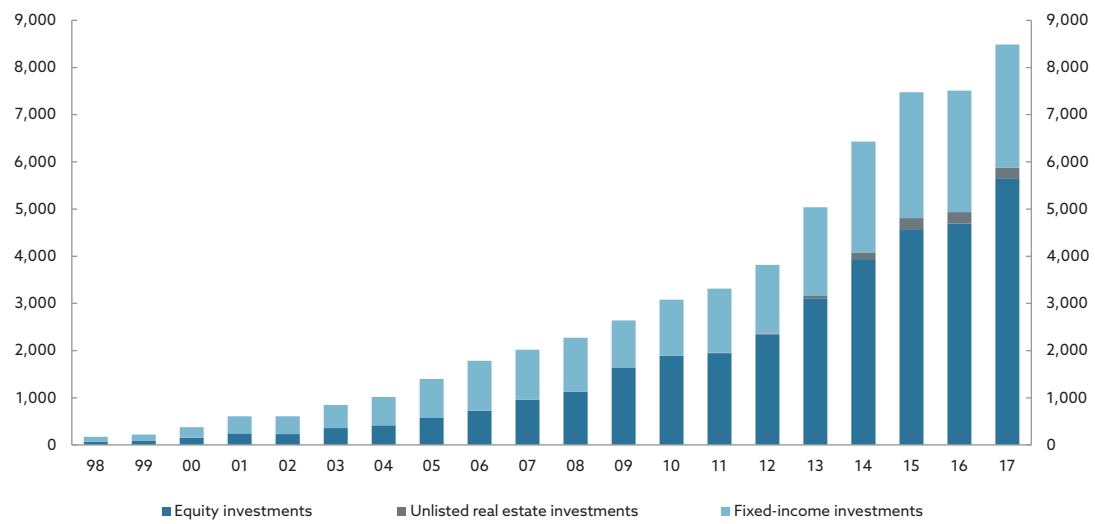
<sup>2</sup> The fund's market value shown in this table does not take into account the management fee. Owner's capital in the financial statements equals the fund's market value less accrued, not paid, management fees.

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

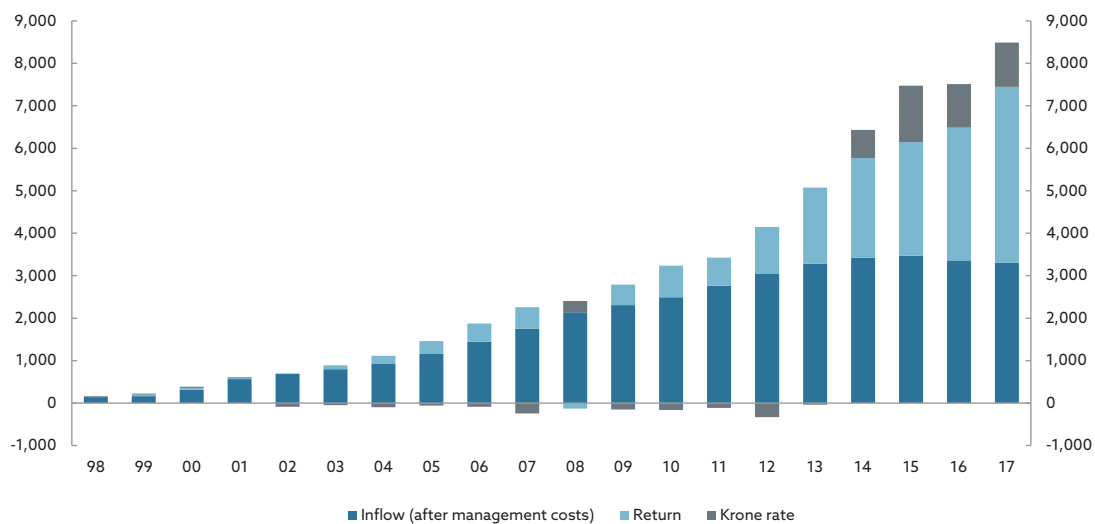
<sup>4</sup> Total inflow of capital shown in this table is adjusted for accrued, not paid, management fees.

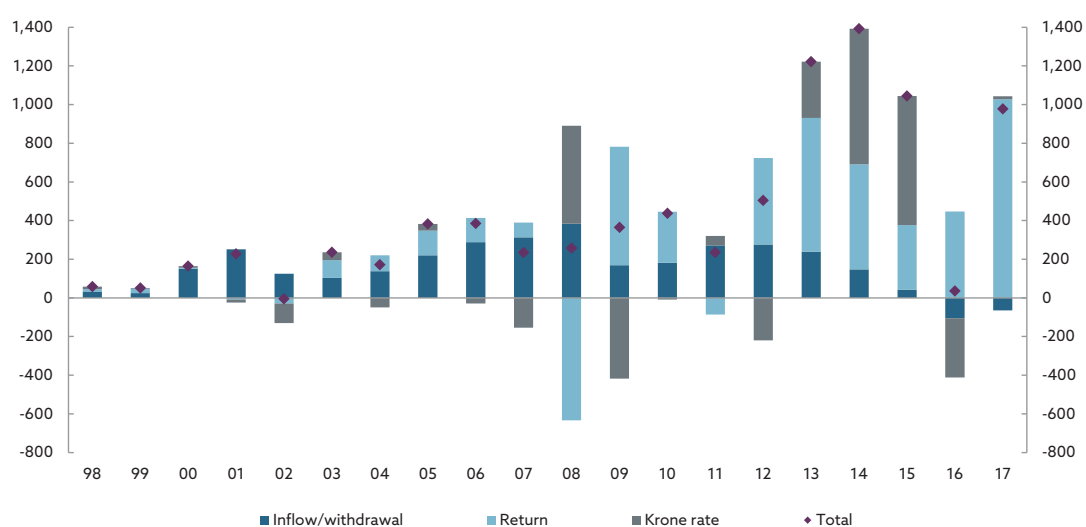
<sup>5</sup> Management costs in subsidiaries, see Table 11.2 in the financial reporting section, are not included in the management fees. Management costs in subsidiaries have been deducted from the fund's return before management fees.

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



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



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

Year	Total	Return	Inflow/ withdrawal	Krone rate
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

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

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

<sup>1</sup> Includes listed real estate investments from 1 November 2014 to the end of 2016.

## STORTINGET (Norwegian parliament)

Government Pension Fund Act



## MINISTRY OF FINANCE

Management mandate for the Government Pension Fund Global  
Guidelines for observation and exclusion



## NORGES BANK

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



## NORGES BANK INVESTMENT MANAGEMENT

Policies  
The CEO delegates investment mandates and job descriptions



## 2.1 MISSION

# Our mission

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**Our goal is to have a large number of diversified investments that distribute risk effectively and generate the highest possible return. The fund is invested exclusively outside Norway in order to protect the mainland economy.**

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

Our role is to manage the wealth in the fund for future generations. We seek to safeguard the fund's international purchasing power by generating a real return over time that exceeds growth in the global economy. The fund is to be invested in most markets, countries and currencies to achieve broad exposure to global economic growth. The investment mandate issued by the Ministry of Finance was amended with effect from 1 January 2017. Under the new model, it is up to Norges Bank to decide how much to invest in real estate and what types of property to invest in. Purchases are financed through the sale of equities and bonds, which means that the proportion of the fund invested

in equities and bonds will differ from the benchmark index. Unlisted and listed real estate investments are managed under a combined strategy for real estate. In February, the government further decided to increase the allocation to equities in the benchmark index from 62.5 to 70 percent.

Our investments are to produce a high long-term return. We aim to achieve this with an acceptable level of risk, as a responsible investor and through an efficient organisation.

Responsible investment is an integral part of our management task. We are an active owner, and our investment decisions take account of how we view companies' long-term financial, environmental and social risks.

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



Japan was the fund's third-largest single market and home to 8.7 percent of the fund's investments at the end of 2017.

## 2.2 MARKETS

# Strong global markets

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**2017 was a good year for global financial markets. Economic growth accelerated in most countries during the year, and further low inflation paved the way for expansionary monetary policies.**

Share prices in emerging markets made particular gains during the year. Prices in Japan also soared following the re-election of Shinzo Abe and his party. European equity markets underperformed the other regions. The technology sector and global cyclical stocks had another especially good year in 2017.

After a number of years in the doldrums, expectations for global economic growth picked up in 2017. Activity data in Europe in particular surprised on the upside after several years of low economic growth. Inflation in the euro area remained low nevertheless. Much of the political uncertainty that affected European markets in 2016 faded during the course of 2017, particularly in the wake of the elections in France and the Netherlands. This contributed to higher business investment.

In the US, economic data disappointed in the first half of the year, and markets were also less confident that the administration would manage to push through its economic reforms. In the second half, however, activity picked up significantly, and a major tax reform was approved at the end of the year. Inflation still fell from its levels at the beginning of the year.

In emerging markets, economic growth was moderate early in the year but then accelerated.

Stronger foreign trade, fuelled mainly by brisker demand from China, made a positive contribution. Chinese economic growth slowed somewhat towards the end of the year, however. Although various steps by the Chinese authorities have probably helped reduce economic imbalances, many market participants are still expressing concern about debt levels and housing prices. Political uncertainty increased in some of the other main emerging markets, including Brazil, Mexico, Turkey and South Africa. In India, various structural measures implemented during the year had positive effects.

The Federal Reserve raised its policy rate three times in 2017 and also began to reduce its holdings of securities after several years of quantitative easing. In Europe, the European Central Bank (ECB) continued to purchase securities, but on a somewhat smaller scale than before, and announced plans at the end of the year to further scale down its quantitative easing programme. At the end of the year, the Bank of England raised its key rate for the first time since the financial crisis, while the Bank of Japan continued to increase its holdings of securities.

Long-term interest rates remained low despite the rate hikes in the US and the UK, quantitative tightening in the US, and signals of reduced asset purchases in the euro area. Volatility was also very low throughout the year in both equity and fixed-income markets, despite increased uncertainty due to geopolitical risks in North Korea and the Middle East, the UK's exit from the EU and the NAFTA renegotiations. Oil prices climbed in the second half of the year, buoyed by a combination of strong global demand and supply curbs by OPEC and Russia.

## 2.3 GLOBAL INVESTMENTS

# Invested widely outside Norway

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**The fund was invested in 72 countries and 9,146 companies at the end of 2017. The fund's average holding in the world's listed companies was 1.4 percent.**

At the end of 2017, 36.0 percent of the fund's investments were in Europe, unchanged from a year earlier. 41.0 percent were in North America, down from 42.3 percent, and 19.6 percent were in Asia and Oceania, up from 17.9 percent. Emerging markets accounted for 10.1 percent of the fund's investments at the end of the year, up from 10.0 percent.

### **HOLDINGS IN MORE THAN 9,000 COMPANIES**

The fund was invested in equities in 9,146 companies at the end of 2017, up from 8,985 a year earlier. It had stakes of more than 2 percent in 1,497 companies, and more than 5 percent in 29 companies.

The fund's average holding in the world's listed companies, measured as its share of the FTSE Global All Cap stock index, was 1.4 percent at the end of 2017, up from 1.3 percent a year earlier. Ownership was highest in Europe at 2.4 percent, up from 2.3 percent. Holdings in developed markets averaged 1.4 percent. In emerging markets (including frontier markets) the fund's holdings averaged 1.5 percent.

The fund's fixed-income investments consisted of 4,736 securities from 1,262 issuers at the end of 2017, compared to 4,781 securities from 1,250 issuers in 2016. These investments were spread across 32 currencies, against 34 a year earlier.

At the end of the year, 9.5 percent of fixed-income investments were in emerging markets, down from 12.4 a year earlier. Bonds denominated in dollars, euros, pounds and yen climbed from 79.6 percent to 82.0 percent of fixed-income investments.



### BROAD GEOGRAPHICAL EXPOSURE

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

The starting point for the fund's equity investments is the FTSE Global All Cap stock index. We have then chosen to add further countries in our internal reference portfolio. In this reference portfolio, we select securities,

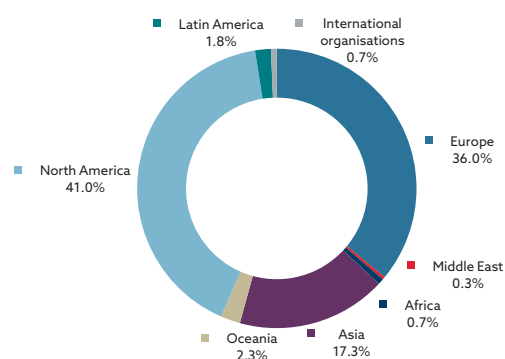
instruments and markets from a broader universe than used for the strategic benchmark index. We do this to capture a larger share of the global market and so a larger share of global growth. The number of countries approved as marketplaces for trading in equities rose from 68 to 69 during the year with the addition of Malta.

At the end of the year, we had 876 billion kroner invested in equities and fixed-income securities in emerging markets, compared to 775 billion a year earlier. Investments in equities in frontier markets amounted to 20.7 billion kroner, against 13.3 billion kroner at the end of 2016.

**Table 8** The fund's ten largest holdings by country as at 31 December 2017. Percent

Country	Total	Equity	Fixed income	Unlisted real estate
US	36.6	23.8	11.6	1.2
UK	8.8	6.4	1.8	0.6
Japan	8.7	6.0	2.6	0.0
Germany	6.8	4.0	2.7	0.1
France	5.3	3.4	1.5	0.4
Switzerland	3.6	3.0	0.5	0.1
Canada	3.0	1.5	1.5	-
China	2.5	2.4	0.2	-
Australia	2.3	1.4	0.8	-
South Korea	1.9	1.3	0.6	-

**Chart 6** The fund's investments as at 31 December 2017. Equities distributed by country and bonds by currency. Percent





217 BN.  
NOK

## CHINA

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The fund had **217** billion kroner invested in China at the end of 2017. These investments were spread across **566** companies and **45** bonds.



96 BN.  
NOK

## INDIA

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The fund had **96** billion kroner invested in India at the end of 2017. These investments were spread across **275** companies and **36** bonds.



28



76 BN.  
NOK

## BRAZIL

---

The fund had **76** billion kroner invested in Brazil at the end of 2017. These investments were spread across **134** companies and **18** bonds.

### INVESTMENTS IN EMERGING MARKETS

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

The fund had investments in 72 countries at the end of 2017. These investments were in a total of 49 currencies.

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

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

Country	2017
Vietnam	4,369
Lithuania <sup>2</sup>	3,369
Slovenia <sup>1,2</sup>	3,312
Slovakia	3,250
Bangladesh	1,999
Romania <sup>1,2</sup>	1,298
Latvia	1,198
Kenya	958
Morocco	847
Nigeria <sup>1</sup>	771
Sri Lanka	697
Croatia	495
Bahrain <sup>1</sup>	465
Cyprus	338
Oman	308
Tunisia	175
Malta	152
Estonia	116
Mauritius	68
Jordan	40
Ghana	14
<b>Total</b>	<b>24,240</b>

#### Countries not included in the FTSE index

Saudi Arabia <sup>3</sup>	6,801
Kuwait	1,065
Ukraine <sup>1</sup>	519
Tanzania <sup>1</sup>	2
<b>Total</b>	<b>8,388</b>

<sup>1</sup> Including investments in stocks listed on stock exchanges in other countries.

<sup>2</sup> Including bonds denominated in a currency other than the local currency.

<sup>3</sup> Participatory certificates.

# Global investments

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## **NORTH AMERICA**

**2,170** companies

**2,132** bonds from  
594 issuers

**356** properties



30

## **LATIN AMERICA**

**281** companies

**128** bonds from  
38 issuers





**EUROPE**

**1,900** companies  
**1,588** bonds from  
484 issuers  
**414** properties

**ASIA**

**4,067** companies  
**562** bonds from  
79 issuers  
**5** properties

**AFRICA**

**200** companies  
**15** bonds from  
2 issuers

**MIDDLE EAST**

**169** companies  
**26** bonds from  
9 issuers

**OCEANIA**

**359** companies  
**165** bonds from  
41 issuers

### 3.1 EQUITIES

# Strong return on equity investments

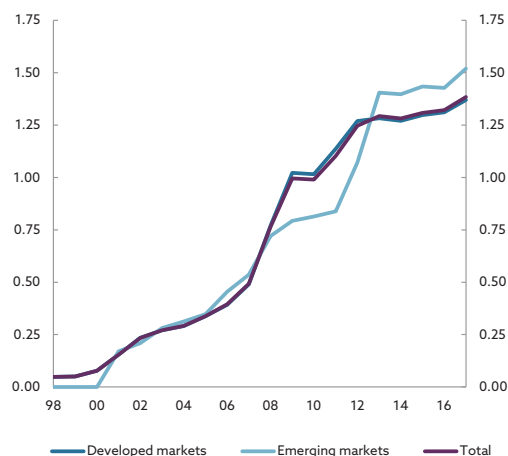
**The fund's equity investments returned 19.4 percent in 2017, driven by surging share prices across regions and sectors.**

2017 brought limited volatility in equity markets and more synchronised growth across regions. The fund's investments in developed markets returned 18.4 percent, while those in emerging markets returned 28.7 percent. The return was particularly strong in large Asian markets, most notably China and India. Emerging markets, including frontier markets, accounted for 11.0 percent of the fund's equity investments.

Investments in North America made up 38.4 percent of the fund's equity portfolio and returned 14.3 percent. US stocks returned 14.5 percent, or 20.8 percent in local currency, and accounted for 36.1 percent of the fund's equity holdings, making this the fund's single largest market.

European stocks returned 21.4 percent and amounted to 36.6 percent of the fund's equity investments. The UK was the fund's second-largest single market with 9.7 percent of its

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



Source: FTSE, Norges Bank Investment Management

equity investments and returned 18.0 percent, or 13.7 percent in local currency.

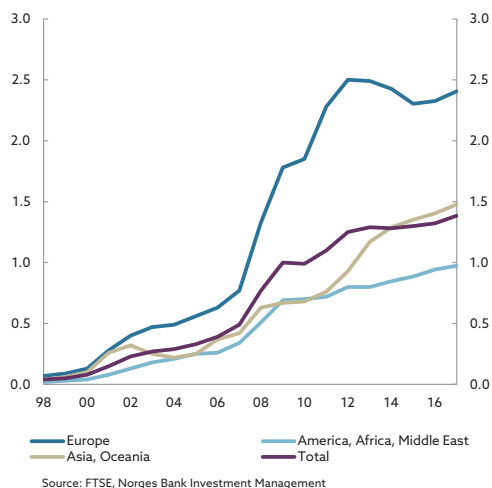
Investments in Asia and Oceania made up 22.9 percent of the fund's equity portfolio and returned 25.9 percent. Excluding Japan, the fund's third-largest single market, the region returned 30.1 percent. Japanese stocks returned 20.3 percent, or 22.5 percent in local currency, and made up 9.1 percent of the fund's equity holdings.

Emerging markets produced a positive return in 2017. Chinese equities returned 43.4 percent, or 41.7 percent in local currency. China accounted for 3.6 percent of the fund's equity investments and was its single largest emerging market, followed by Taiwan at 1.6 percent and India at 1.2 percent. The fund's investments in these last two countries returned 25.1 and 38.8 percent respectively, or 21.8 and 37.7 percent in local currency.

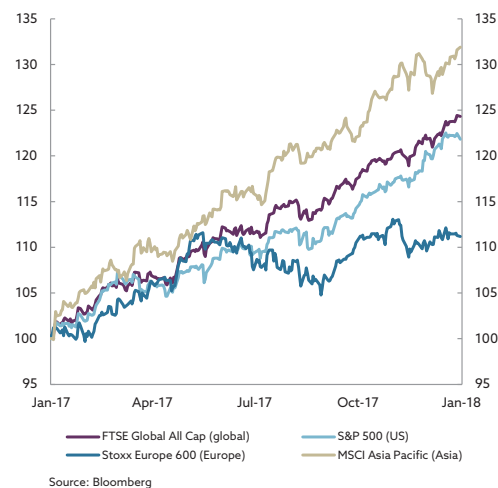
**Table 10** Return on the fund's largest equity investments in 2017 by country. Percent

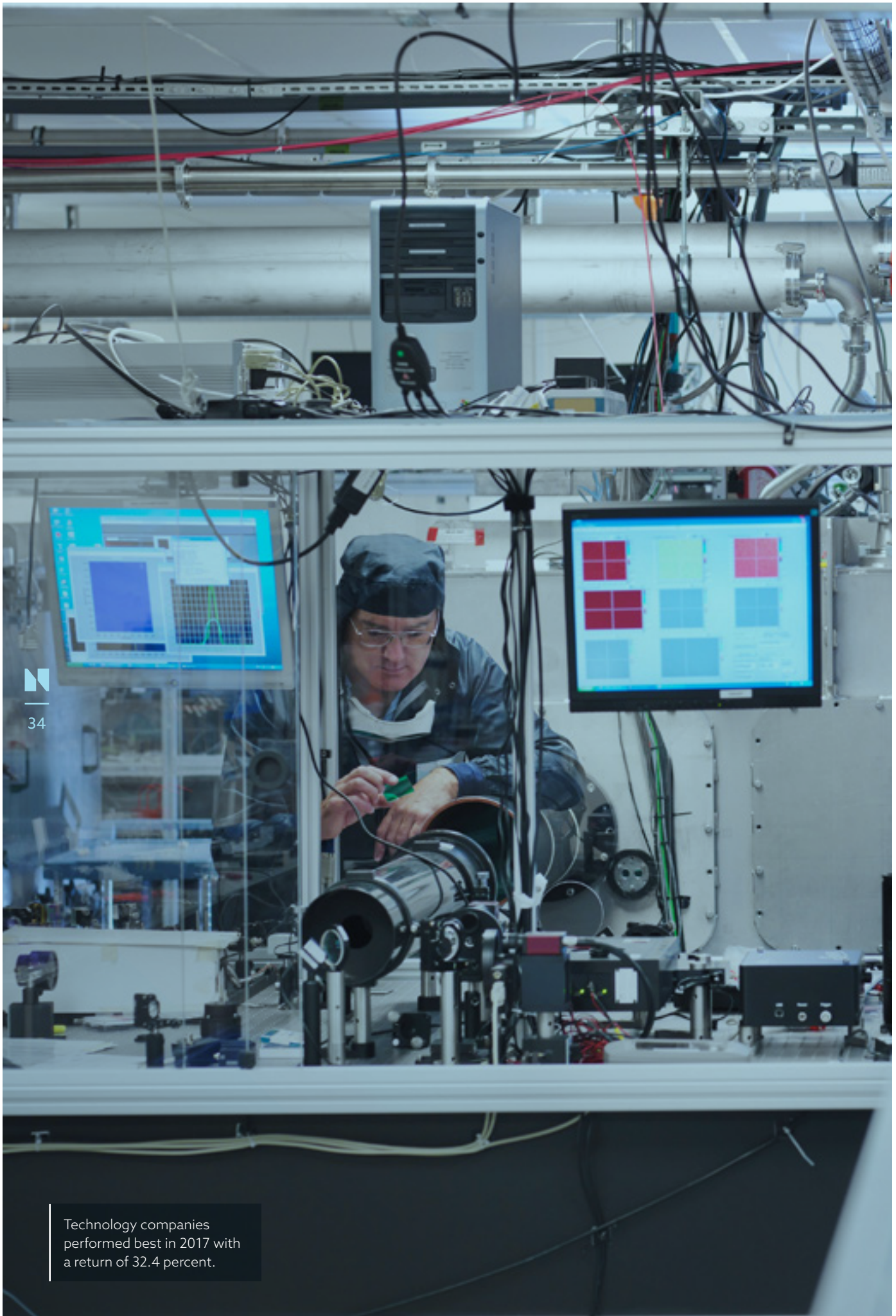
Country	Return in international currency	Return in local currency	Share of equity investments
US	14.5	20.8	36.1
UK	18.0	13.7	9.7
Japan	20.3	22.5	9.1
Germany	25.5	16.3	6.1
France	24.7	15.5	5.1
Switzerland	18.3	19.7	4.6
China	43.4	41.7	3.6
Canada	10.8	9.2	2.3
Australia	15.2	12.5	2.2
South Korea	36.0	27.2	2.0

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



**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 31.12.2016 = 100





Technology companies performed best in 2017 with a return of 32.4 percent.

**TECHNOLOGY STOCKS PERFORM BEST**

Technology companies performed best in 2017 with a return of 32.4 percent, earning more than expected from the transition to e-commerce, digital marketing and cloud services. There was also a better balance between supply and demand for component producers, including semiconductor and screen manufacturers.

Basic materials returned 27.1 percent, driven by higher prices for metals and many chemicals. The rise in prices was fuelled by solid demand combined with reduced production capacity in China. Mergers in the sector also contributed positively to the return.

Industrials returned 22.9 percent. After a number of weak years, producers of machinery and equipment for construction and mining saw an upswing in demand. Companies exposed to transport and logistics also benefited from stronger global economic growth, which boosted the sector.

Oil and gas companies performed worst in 2017 with a return of 4.1 percent due to lower long-term expectations for oil prices. US companies in particular, hit by a growing gap between US and international oil prices, made a negative contribution to the return.

**Table 11** Return on the fund's equity investments in 2017 by sector. International currency. Percent

Sector	Return	Share of equity investments <sup>1</sup>
Financials	19.3	24.5
Industrials	22.9	14.3
Consumer goods	21.5	13.5
Technology	32.4	11.2
Consumer services	14.8	10.1
Health care	16.1	9.8
Basic materials	27.1	6.0
Oil and gas	4.1	5.6
Telecommunications	4.1	2.8
Utilities	13.7	2.6

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

**Chart 10** Price developments in stock sectors in the FTSE Global All Cap Index. Measured in US dollars. Indexed total return 31.12.2016 = 100



Source: FTSE

**LARGEST INVESTMENTS**

The investment in US technology company Apple Inc contributed most to the fund's return in 2017, followed by Chinese technology company Tencent Holding Ltd and US technology company Microsoft Corp. The worst-performing investment was in US industrial company General Electric Co, followed by US oil and gas company Exxon Mobil Corp and Israeli health care company Teva Pharmaceutical Industries Ltd.

The largest investment in any one company was in Apple Inc. The fund's 0.9 percent stake had a market value of 66.0 billion kroner at the end of the year. Otherwise the fund's top ten equity holdings consisted of four technology companies, two pharmaceutical companies, a consumer goods company, an oil and gas company and a financial services company.

Excluding listed real estate companies, the largest percentage holding in any one company was in Irish packaging producer Smurfit Kappa Group Plc. The fund's 6.6 percent stake was worth almost 4.4 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 211 initial public offerings during the year. The largest of these were at financial services company Allied Irish Banks Plc, consumer goods company Pirelli & C SpA and industrial company Landis+Gyr Group AG. The offerings in which the fund invested most were at Pirelli & C SpA, financial services company BAWAG P.S.K. and Allied Irish Banks Plc.

**FACEBOOK**

Facebook is a US company founded in 2004. It operates a social network which had more than 2 billion monthly active users in 2017. Headquartered in Menlo Park, California, the company has a further 12 offices in the US and 42 in other countries. In 2017, Facebook had more than 23,000 employees. The company also owns the social media platforms Instagram and WhatsApp.



**Table 12** The fund's largest equity holdings as at 31 December 2017. Millions of kroner

Company	Country	Holding
Apple Inc	US	66,029
Nestlé SA	Switzerland	51,040
Royal Dutch Shell Plc	UK	50,258
Alphabet Inc	US	47,892
Microsoft Corp	US	47,549
Novartis AG	Switzerland	36,770
Amazon.com Inc	US	36,579
Roche Holding AG	Switzerland	35,151
Tencent Holdings Ltd	China	33,952
HSBC Holdings Plc	UK	30,777
Samsung Electronics Co Ltd	South Korea	30,402
Facebook Inc	US	29,759
Johnson & Johnson	US	27,365
Berkshire Hathaway Inc	US	26,740
JPMorgan Chase & Co	US	25,823
Bank of America Corp	US	25,546
Exxon Mobil Corp	US	25,266
BP Plc	UK	24,854
Linde AG	Germany	23,057
Taiwan Semiconductor Manufacturing Co Ltd	Taiwan	22,550

**Table 13** The fund's largest ownership shares in the equity markets as at 31 December 2017. Percent

Company <sup>1</sup>	Country	Ownership
Smurfit Kappa Group Plc	UK	6.6
Com Hem Holding AB	Sweden	6.5
Linde AG	Germany	6.5
Brenntag AG	Germany	6.4
Lamprell Plc	UK	6.1
Boliden AB	Sweden	5.8
Lear Corp	US	5.4
Tamura Corp	Japan	5.2
Maruwa Co Ltd/Aichi	Japan	5.2
Polypipe Group Plc	UK	5.2
AWE Ltd	Australia	5.2
Tesco Plc	UK	5.2
Alcoa Corp	US	5.1
Hyundai Corp	South Korea	5.1
Sato Holdings Corp	Japan	5.1
InterXion Holding NV	US	5.1
LANXESS AG	Germany	5.1
Credit Suisse Group AG	Switzerland	5.1
Bangkok Ranch PCL	Thailand	5.0
Tocalo Co Ltd	Japan	5.0

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

## VEOLIA

Veolia is a French company formed in 1853. It heads an international utilities group focusing on water, waste management and energy. The company has its headquarters in Paris and more than 160,000 employees worldwide. In 2017, it supplied drinking water to around 100 million people. Veolia forms part of the fund's environmental portfolio.



In December 2017, the fund made its first unlisted real estate investment in Asia. The fund bought a 70 percent share in five properties in Tokyo, Japan, in a joint venture with Tokyu Land Corporation. The properties comprise approximately 12,300 square meters of office and retail space.



## 3.2 REAL ESTATE

# Good return on the real estate portfolio

**The fund's investments in unlisted real estate returned 7.5 percent in 2017 and made up 2.6 percent of the fund at the end of the year. In December, the fund made its first unlisted real estate investment in Asia.**

The management mandate for the fund was amended with effect from 1 January 2017. The fund's unlisted real estate investments no longer form part of the strategic benchmark index, which now consists exclusively of equities and bonds. The fund may still invest in real estate, but it is up to Norges Bank to determine the scope and mix of real estate investments within the general limits in the mandate. The Ministry of Finance has in the mandate set an upper limit for unlisted real estate investments at 7 percent of the fund value. The changes to the mandate ensure a holistic approach to managing a portfolio that includes both listed and unlisted investments.

Investments in unlisted real estate returned 7.5 percent in 2017. We invested a total of 14.8 billion kroner in unlisted real estate during the year, down from 19.1 billion kroner in 2016. The investments had a market value of 219 billion kroner at the end of the year, accounting for 2.6 percent of the fund and 75 percent of the real estate investments.

The return on unlisted real estate investments depends on rental income, operating expenses, 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 expenses contributed 3.7 percentage points to the return, changes in the value of properties and debt 3.8 percentage points, transaction costs -0.2 percentage point, and currency movements 0.1 percentage point.

Rental income net of operating expenses is expected to be relatively stable over time, generating a steady cash flow for the fund. We conduct external valuations of properties and debt. These values may vary from year to year in line with the markets in which we are invested. Transaction costs will depend on investment activity.

**Table 14** Return on unlisted real estate investments

	Since inception <sup>1</sup>	2017	2016	2015	2014	2013
Rental income (percentage points)	4.0	3.7	3.7	4.1	4.4	4.6
Change in value (percentage points)	3.5	3.8	0.7	6.7	7.1	3.8
Transaction costs (percentage points)	-1.3	-0.2	-0.2	-0.2	-0.8	-0.4
Result of currency adjustments (percentage points)	0.0	0.1	-2.5	0.1	-1.0	3.8
<b>Total (percent)</b>	<b>6.2</b>	<b>7.5</b>	<b>1.7</b>	<b>10.8</b>	<b>9.6</b>	<b>11.8</b>

<sup>1</sup> From 31 March 2011

**REAL ESTATE MARKETS**

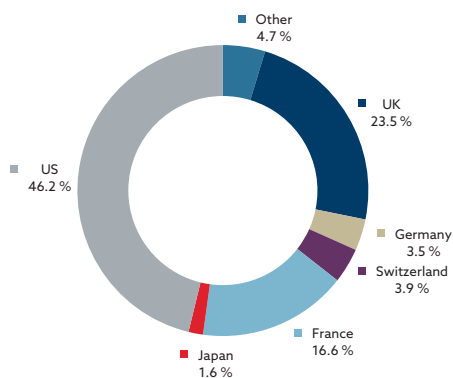
Real estate investments in Europe returned 8.6 percent in local currency and accounted for 52.0 percent of the fund’s unlisted real estate investments. The market varied from country to country in 2017. Office properties in Germany and France saw higher tenant activity, while there was some weakness in the UK. The most popular shopping streets were still attractive for retail. Logistics properties also enjoyed low vacancy due to increased demand in the largest markets.

Real estate investments in the US returned 6.2 percent in local currency and accounted for 46.2 percent of the fund’s unlisted real estate investments. Rents for US offices continued to

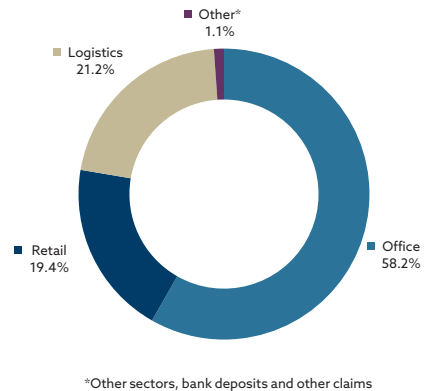
rise in 2017, and ended up slightly higher than in 2016. Investment activity in the office sector fell in New York and San Francisco, but remained stable in Boston. In Washington, D.C., investment activity was higher than in 2016.

In December the fund acquired a 70 percent share of five properties in Tokyo. This was the fund’s first unlisted real estate investment in Asia, making up 1.6 percent of the fund’s unlisted real estate investments by the end of the year. Japan is the largest investable developed real estate market in Asia. The market in Tokyo has seen declining vacancy rates for office and retail properties over the past five years, but rents have yet to fully reflect this positive trend.

**Chart 11** The fund’s unlisted real estate investments by country as at 31 December 2017. Percent



**Chart 12** The fund’s unlisted real estate investments by sector as at 31 December 2017. Percent



**Table 15** New investments in 2017

Address	City	Partner	Sector	Ownership Percent	Currency	Price Millions
10 Piccadilly	London	The Crown Estate	Office and retail	25	GBP	32.3
263-269 Oxford Street, 1-4 Princes Street	London	The Crown Estate	Office and retail	25	GBP	30.0
Axel-Springer-Strasse and Zimmerstrasse	Berlin	-	Office	100	EUR	425.0
6-8 boulevard Haussmann	Paris	-	Office	100	EUR	462.2
20 Air Street	London	The Crown Estate	Office and retail	25	GBP	112.5
375 Hudson Street	New York	Trinity Church Wall Street and Hines	Office and retail	48	USD	223.0
1101 New York Avenue, NW	Washington, D.C.	Oxford Properties Group	Office and retail	49	USD	190.8
900 16th Street, NW	Washington, D.C.	Oxford Properties Group	Office and retail	49	USD	74.0
Five assets in the Omotesando district	Tokyo	Tokyu Land Corporation	Office and retail	70	JPY	92 750.0

**Table 16** The fund's largest unlisted real estate investments in office and retail by city as at 31 December 2017

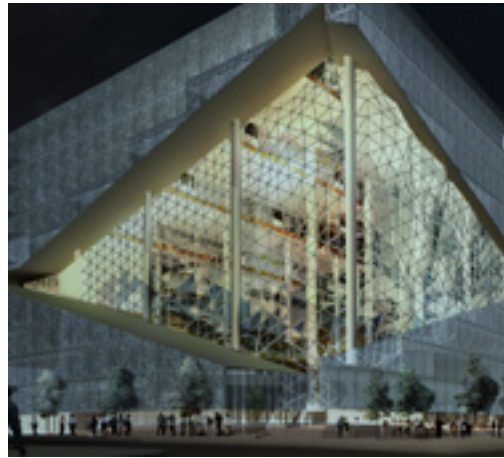
City	Percent
London	22.8
New York	21.5
Paris	19.1
Boston	8.9
Washington, D.C.	6.3
San Francisco	5.9
Zurich	4.9
Sheffield	3.5
Tokyo	2.0
Berlin	1.5

**Table 17** The fund's largest unlisted real estate investments in logistics by country as at 31 December 2017

Country	Percent
US	57.7
UK	12.7
France	7.4
Spain	4.4
Netherlands	4.0
Poland	4.0
Czech Republic	2.7
Italy	2.6
Germany	1.7
Hungary	1.5



5-3-2 Jingumae, Shibuya



Axel-Springer-Strasse and Zimmerstrasse, Berlin



1101 New York Avenue, NW, Washington, D.C.



6-8 boulevard Haussmann, Paris



**EXTENDED REPORT ON UNLISTED REAL ESTATE INVESTMENTS**

A separate report on the fund's unlisted real estate investments will be published in March 2018 on our website [www.nbim.no](http://www.nbim.no).

### LISTED REAL ESTATE

The fund's overall strategy for real estate consists of both listed and unlisted real estate investments, making up the fund's real estate management.

Investments in listed real estate returned 14.1 percent in 2017 and had a market value of 73 billion kroner at the end of the year, making up 0.9 percent of the fund and 25 percent of the real estate investments.

The investment strategy for listed real estate shall contribute to the fund's overall objective of a high long-term return by taking advantage of the fund's size, long-term investment horizon and limited liquidity requirements. The investments in listed real estate companies have exposure to the best real estate in the most attractive cities and sectors globally that could be seen as a natural part of the unlisted real estate portfolio.

The listed portfolio is therefore mainly composed of companies with significant underlying exposure to the same global cities and sectors as the unlisted portfolio. Office properties represent around half of the total.

In December, we announced an increase in our stake in the property company Shaftesbury Plc to 12.6 percent, up from 9.2 percent at the end of 2016. This is the only company in the portfolio where our ownership exceeds 10 percent. Additionally, the fund's top ten listed real estate investments consisted of three British, two American, two German, one French and one Swedish company.

**Table 18** Ownership shares for the listed real estate investments as at 31 December 2017. Percent

Company	Country	Ownership
Shaftesbury Plc	UK	12.6
Great Portland Estates Plc	UK	9.5
Gecina SA	France	9.1
Capital & Counties Properties Plc	UK	7.8
Vonovia SE	Germany	7.4
Svenska Cellulosa AB SCA	Sweden	7.2
Deutsche Wohnen SE	Germany	7.0
Land Securities Group Plc	UK	6.9
Vornado Realty Trust	US	6.5
Paramount Group Inc	US	5.9
Derwent London Plc	UK	5.5
JBG SMITH Properties	US	5.0
Boston Properties Inc	US	4.7
British Land Co Plc/The	UK	4.6
Kilroy Realty Corp	US	4.5
Federal Realty Investment Trust	US	4.1
GGP Inc	US	3.1

**Table 19** Value of real estate investments as at 31 December 2017. Millions of kroner

	Value <sup>1</sup>
Unlisted real estate investments	218,643
Listed real estate investments	72,613
Aggregated real estate investments	291,256

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

# Unlisted real estate investments

## Share of market value

**US**  
46.2%

4.7 percent is invested in other countries

**UK**  
23.5%

**FRANCE**  
16.6%

**JAPAN**  
1.6%

**GERMANY**  
3.5%

**SWITZERLAND**  
3.9%



# Healthy return on quiet markets

**The fund's fixed-income investments returned 3.3 percent in 2017. There were small fluctuations in interest rates in the main markets during the year.**

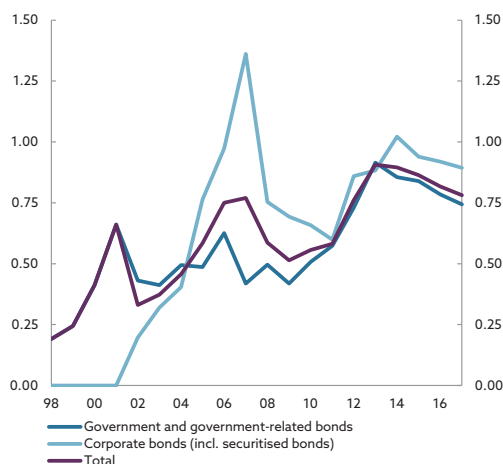
Fixed-income investments accounted for 30.8 percent of the fund at the end of the year. These investments were mainly in bonds, with the remainder in short-term securities and bank deposits.

**LITTLE VOLATILITY IN THE MAIN MARKETS**

The fund's government bond holdings made up 55.8 percent of its fixed-income investments and returned 3.1 percent in 2017. Developed markets accounted for 45.2 percent of the portfolio and returned 1.6 percent.

US Treasuries returned -2.4 percent, or 3.0 percent in local currency, and amounted to 19.7 percent of fixed-income investments, making them the fund's largest holding of government debt from a single issuer. The Federal Reserve raised its policy rate three times in 2017 to 1.5 percent, which was in line with market expectations. It also began to reduce its balance sheet after a long period of quantitative easing and signalled further rate hikes in the coming years.

**Chart 13** 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



Euro-denominated government bonds returned 8.5 percent, or 0.5 percent in local currency, and accounted for 12.2 percent of fixed-income investments. Economic growth in the euro area was stronger than expected at the beginning of the year. The ECB kept its policy rate at the same level throughout the year and continued its asset purchases, but on a smaller scale than before. In the fourth quarter, the ECB announced further tapering of its quantitative easing. The euro strengthened considerably during the year, resulting in a strong return on fixed-income investments in the euro area measured in the fund's currency basket.

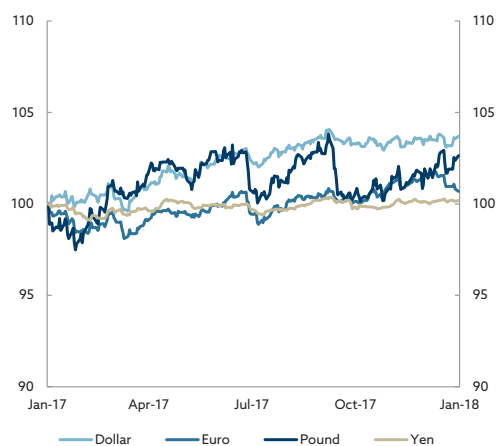
UK gilts accounted for 2.7 percent of the fund's fixed-income investments and returned 6.9 percent, or 3.0 percent in local currency. The Bank of England raised its policy rate in November for the first time since the financial crisis.

Japanese government bonds returned -1.8 percent, or 0.1 percent in local currency, and accounted for 7.2 percent of fixed-income holdings. The Bank of Japan continued to make substantial asset purchases during the year in a bid to keep long-term interest rates stable around zero.

**GOOD RETURN IN EMERGING MARKETS**

Government bonds in emerging markets, which made up 10.6 percent of the fixed-income investments, returned 8.5 percent. Poland performed especially well with a return of 19.4 percent, or 4.9 percent in local currency. South African government bonds also delivered a strong return of 15.2 percent, or 10.0 percent in local currency. The country's credit rating was downgraded in November, and these bonds dropped out of the Ministry of Finance's benchmark index from 1 December.

**Chart 14** Price developments for bonds issued in dollars, euros, pounds and yen. Measured in local currencies. Indexed total return 31.12.2016 = 100



Source: Bloomberg Barclays Indices

**Table 20** Return on the fund's largest bond holdings by currency in 2017. Percent

Currency	Return in international currency	Return in local currency	Share of fixed-income investments
US dollar	-1.4	4.1	43.5
Euro	8.8	0.8	26.4
Japanese yen	-1.8	0.1	7.8
British pound	7.2	3.3	4.6
Canadian dollar	3.6	2.1	3.8
Australian dollar	6.0	3.5	2.3
South Korean won	7.1	0.1	1.7
Mexican peso	6.3	6.5	1.7
Indian rupi	5.3	4.5	1.1
Brazilian real	8.2	16.3	1.0

Inflation-linked bonds, which are issued by governments, returned -0.1 percent and amounted to 5.0 percent of fixed-income investments. Only minor changes to inflation expectations were priced into the main markets during the year.

The fund also held bonds from government-related institutions such as the Kreditanstalt für Wiederaufbau, European Investment Bank and Canada Housing Trust. These returned 4.4 percent and accounted for 12.1 percent of the fund's fixed-income investments at the end of the year.

Corporate bonds returned 2.8 percent and represented 24.2 percent of fixed-income investments at the end of the year. Falling credit premiums boosted the return, while a high

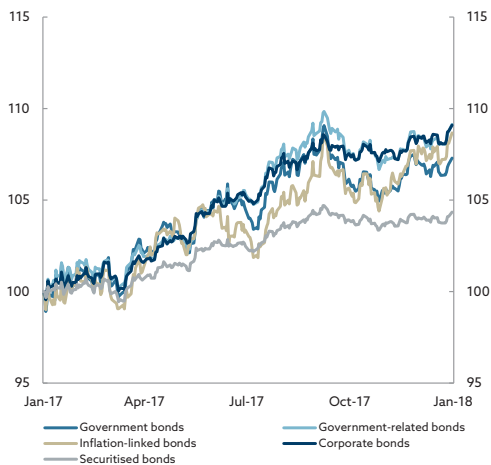
share of dollar-denominated bonds made a negative contribution to the return.

Securitised bonds, consisting mainly of covered bonds denominated in euros, returned 5.4 percent and made up 5.1 percent of fixed-income holdings.

**CHANGES IN FIXED-INCOME HOLDINGS**

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

**Chart 15** Price developments in fixed-income sectors. Measured in US dollars. Indexed total return 31.12.2016 = 100



Source: Bloomberg Barclays Indices

**Chart 16** Price developments for government bonds issued in a selection of emerging market currencies. Measured in US dollars. Indexed total return 31.12.2016 = 100



Source: Bloomberg Barclays Indices

**Table 21** Return on the fund's fixed-income investments in 2017 by sector. International currency. Percent

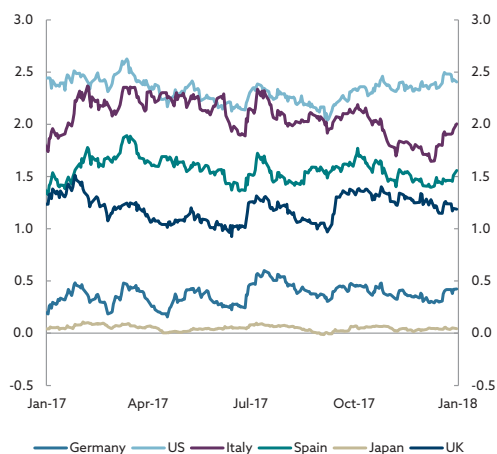
Sector	Return	Share of fixed-income investments <sup>1</sup>
Government bonds <sup>2</sup>	3.1	55.8
Government-related bonds <sup>2</sup>	4.4	12.1
Inflation-linked bonds <sup>2</sup>	-0.1	5.0
Corporate bonds	2.8	24.2
Securitised bonds	5.4	5.1

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

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

**Table 22** The fund's largest bond holdings as at 31 December 2017. Millions of kroner

Issuer	Country	Holding
United States of America	US	607,651
Japanese government	Japan	190,956
Federal Republic of Germany	Germany	119,591
UK government	UK	70,061
French Republic	France	63,517
Spanish government	Spain	48,221
Mexican government	Mexico	46,036
South Korean government	South Korea	45,425
Italian Republic	Italy	42,150
Australian government	Australia	34,860
Kreditanstalt für Wiederaufbau	Germany	28,703
Indian government	India	27,826
Brazilian government	Brazil	25,334
Government of Canada	Canada	25,008
Canada Mortgage & Housing Corp	Canada	23,399
Government of Indonesia	Indonesia	22,817
European Investment Bank	International organisation	19,421
Government of Russian Federation	Russia	18,385
Bank of America Corp	US	17,002
AT&T Inc	US	16,526

**Chart 17** 10-year government bond yields. Percent

Source: Bloomberg

## 4.1 INVESTMENT STRATEGIES

# Strong relative return

---

**We aim to leverage the fund's long-term investment horizon and considerable size to generate high returns with acceptable risk. In 2017, the fund's total return was 0.7 percentage point higher than the return on the benchmark index.**

The management mandate issued by the Ministry of Finance was amended with effect from 1 January 2017. The investment returns on all of the fund's investments, including real estate, are now measured against the fund's benchmark index consisting of global equity and bond indices. This benchmark index comprises an equity index based on FTSE Group's Global All Cap stock index and a bond index based on various bond indices from Bloomberg Barclays Indices.

Since 1 January 2017, the fund's allocation to real estate has been funded with a combination of local-market equity and fixed-income holdings, and tailored to the currency of the specific real estate investments. The equity and fixed-income asset class benchmarks are subsequently adjusted for the actual funding tailored to the real estate investments. This enables accurate measurement of the relative return for all three asset classes.

### INVESTMENT STRATEGIES

Our investment strategies aim to exploit the fund's characteristics as a large, global investor with limited short-term liquidity requirements in order to achieve a high return with acceptable risk. The fund's investment strategies fall into three main strategies: fund allocation, security selection and asset management.

#### Fund allocation strategy

Our fund allocation strategies aim to improve the fund's market and risk exposure in the long term through a reference portfolio more adapted to the fund than the benchmark index.

The reference portfolio serves as the starting point for the fund's investments. The objective of the reference portfolio is to obtain the best possible long-term risk and return profile for the fund, within the opportunity set defined in our management mandate. We seek to improve diversification by including additional markets and market segments, to enhance returns through allocation to systematic factor strategies.

We invest in unlisted and listed real estate with the objective of improving the trade-off between return and risk in the fund. Investments in real estate are funded by selling a tailored mix of equities and fixed-income investments in the same currency. Fund allocation manages these funding decisions. Certainty about the availability of funding is one of the fund's comparative advantages when we invest in real estate.

Market movements result in a portfolio that deviates from the reference portfolio's strategic exposures to equity, duration and currency risk. Allocation decisions are made to balance transaction costs, risk and valuation when rebalancing the portfolio back to the strategic exposures. Within emerging markets, allocation decisions are made to refine the reference portfolio to avoid high transaction costs, manage risk and capture a changing opportunity set. This entails allocation to frontier markets and emerging market debt, as well as the use of tailored benchmarks for external managers.

### Security selection strategy

The aim of our security selection strategies is to achieve excess return compared to relevant benchmarks. This applies both to the internal and external security selection strategies.

The aim of internal security selection activities is to enhance returns and help ensure that the fund's role as a responsible and active owner has a robust foundation. For a long-term investor, developments over time in individual companies and industries ultimately play a large role in determining the return that can be achieved. In the short run, returns in capital markets are affected by a number of factors. As a result, realised returns may or may not be closely related to underlying developments in the companies. As the investment horizon increases, however, developments in the companies' profit and cash flow become increasingly important.

Investments are made based on a strong understanding of individual companies and their long-term prospects. We put considerable resources into researching large companies, the markets in which they operate, and the issues they face. The knowledge created through security selection activities also supports understanding of risks in the overall portfolio. We have meetings with the companies we invest in, typically with senior management. This dialogue improves our understanding of the companies, builds strong relationships and supports our ownership work.

We also invest in emerging market equities through locally based external managers. We select managers who are proficient both in assessing the return potential of individual companies, and in understanding the companies' environmental, social and governance risks. Market-specific knowledge is

required, since public transparency and corporate governance standards vary considerably across these markets. We monitor our investments continuously, visit our external managers frequently and are able to make swift changes if necessary.

### Asset management strategy

Our asset management strategies aim to generate good return over time through asset positioning and securities lending, and lowering transaction costs.

We manage factor exposure dynamically, combining a diverse set of systematic strategies across a number of investment horizons in a turnover-controlled manner.

Securities lending is an integrated part of our asset management strategies. We use both direct internal lending and external agency lending through our custodian. We seek to optimise the risk/reward trade-off from lending activities by offering lending terms and structures that are attractive.

We aim to minimise and control the transaction costs of implementing the fund's investment strategies. We try to be patient in our portfolio rebalancing decisions, utilising natural liquidity and capital market events to implement longer-term exposure targets when we can, and avoiding the weaknesses of stricter, mechanical benchmark replication. Benchmark replication often leads to higher friction costs, particularly for large, global funds. Where possible, we try to benefit from the liquidity need of other, more constrained market participants.

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

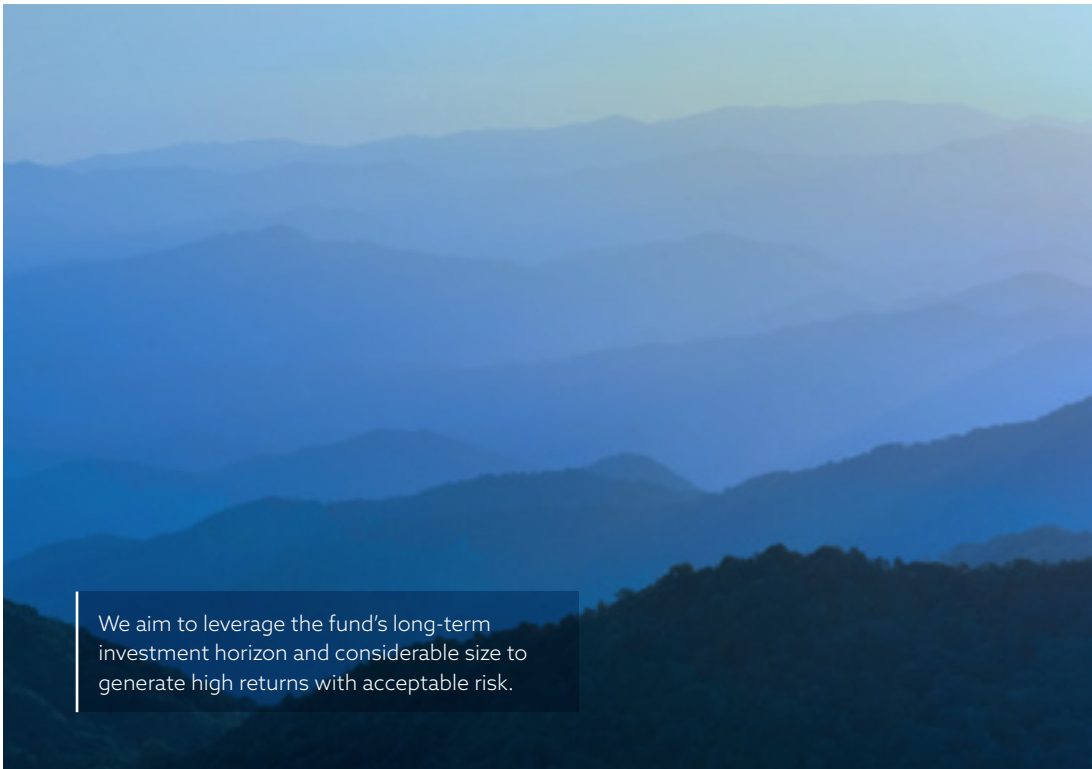
### RELATIVE RETURN

The return on the fund is measured against a benchmark index which consists of an index for equities and an index for bonds. The fund also invests in real estate. When we buy real estate, we sell bonds and equities at a ratio that keeps currency risk unchanged. The relative return on real estate management is the difference between the return on the fund's unlisted and listed real estate investments and the return on the bonds and equities sold to buy them. Similarly, we report the relative return on equity and fixed-income management against benchmark indices that are adjusted to reflect how we chose to finance the fund's unlisted and listed real estate investments. This ensures a comprehensive approach to risk management for the fund.

The overall return on the fund was 0.7 percentage point higher than the return on the benchmark index in 2017. All investment strategies contributed to the fund's positive relative return.

The overall excess return can be broken down on investment strategies as follows: fund allocation 0.22 percentage point, security selection 0.40 percentage point, and asset management 0.08 percentage point.

The fund has outperformed the benchmark index by 0.28 percentage point since 1998 and by 0.15 percentage point over the past decade.



We aim to leverage the fund's long-term investment horizon and considerable size to generate high returns with acceptable risk.

**Table 23** Relative return on the fund’s asset management. Percentage points

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

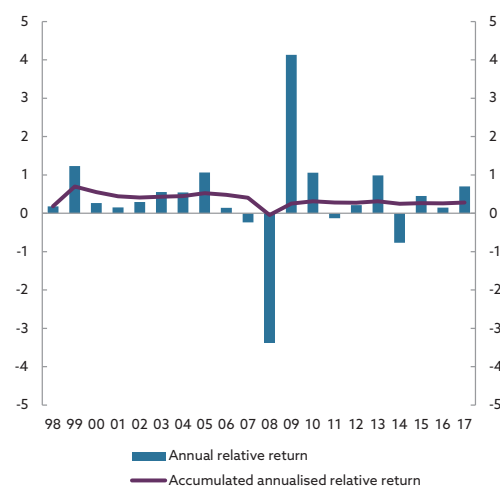
<sup>1</sup> Includes real estate management from 01.01.2017. Relative return prior to 2017 is calculated on the equity and fixed-income management only.

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

**Table 24** Relative return. Percentage points

Fund	2017
Fund	0.70
Equity investments	0.76
Equity management	0.79
Fixed-income investments	0.43
Fixed-income management	0.39

**Chart 18** 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



**REFERENCE PORTFOLIO FOR EQUITIES**

The internal reference portfolio for equity investments returned 18.9 percent in 2017, 0.2 percentage point higher than the benchmark index set by the Ministry of Finance. The reference portfolio's overweight in quality stocks compared to the benchmark contributed positively to the relative return, while a higher weight of value stocks made a negative contribution.

The equity portfolio was invested in shares in 9,146 listed companies at the end of 2017. These investments are measured against the Ministry of Finance's benchmark index based on the FTSE Global All Cap index, which consisted of 7,536 listed companies.

The return on the fund's equity investments was 0.8 percentage point higher than the return on the benchmark index, due to the fund's different investment strategies. Industrials and financials were the sectors that made the most positive contributions to the relative return, while technology made the greatest negative contribution. Of the countries the fund was invested in, China and Germany contributed most to the relative return, while South Africa had the most negative effect.

**REFERENCE PORTFOLIO FOR FIXED INCOME**

The internal reference portfolio for fixed-income investments returned 3.2 percent in 2017, 0.3 percentage point higher than the benchmark index set by the Ministry of Finance. The reference portfolio's overweight in emerging markets contributed positively to the relative return. A higher weight of government-related bonds also made a positive contribution.

The fund's fixed-income investments consisted of 4,736 securities from 1,262 issuers at the end of 2017. Returns on fixed-income investments are compared with returns on a global benchmark index for bonds set by the Ministry of Finance on the basis of indices from Bloomberg Barclays Indices, which consisted of 13,101 bonds from 2,192 issuers at the end of 2017.

The return on the fund's fixed-income investments was 0.4 percentage point higher than the return on the benchmark index. The fund's fixed-income investments were overweight in emerging markets compared to the benchmark. This made a positive contribution from higher yields. The lower duration of the fund's fixed-income investments in developed markets compared to the benchmark made a positive contribution, as it made the fund less sensitive than the benchmark to a general increase in yields.



**Table 25** Contributions to the fund's relative return from investment strategies in 2017. Percentage points

	Equity management	Fixed-income management	Real estate management	Allocation	Total
Fund allocation	0.10	0.08	0.03	0.01	0.22
Internal reference portfolio	0.13	0.10		0.01	0.23
of which systematic factors	0.02				0.02
of which universe expansion	-0.01	0.08			0.08
Allocation decisions	-0.03	-0.02		0.00	-0.04
Real estate			0.03		0.03
Unlisted real estate			0.02		0.02
Listed real estate			0.01		0.01
Security selection	0.43	-0.03			0.40
Internal security selection	0.22	-0.03			0.19
External security selection	0.21				0.21
Asset management	-0.04	0.10		0.03	0.08
Asset positioning	-0.09	0.08		0.03	0.02
Securities lending	0.04	0.02			0.06
<b>Total</b>	<b>0.49</b>	<b>0.14</b>	<b>0.03</b>	<b>0.04</b>	<b>0.70</b>

**Table 26** Contributions to the fund's relative return from investment strategies for 2013-2017. Annualised. Percentage points

	Equity management	Fixed-income management	Real estate management	Allocation	Total
Fund allocation	-0.01	-0.10	0.01	0.03	-0.07
Internal reference portfolio	0.01	-0.09		0.00	-0.08
of which systematic factors	0.02				0.02
of which universe expansion	0.00	-0.05			-0.05
Allocation decisions	-0.02	0.00		0.03	0.01
Real estate			0.01		0.01
Unlisted real estate			0.00		0.00
Listed real estate			0.00		0.00
Security selection	0.14	-0.01			0.14
Internal security selection	0.03	-0.01			0.02
External security selection	0.11				0.11
Asset management	0.13	0.08		0.01	0.22
Asset positioning	0.08	0.08		0.01	0.16
Securities lending	0.05	0.01			0.06
<b>Total</b>	<b>0.27</b>	<b>-0.02</b>	<b>0.01</b>	<b>0.04</b>	<b>0.29</b>

## 4.2 INVESTMENT RISK

# Expected fluctuations in value

**The value of the fund may fluctuate considerably from year to year. We use a variety of measures and risk analyses to obtain the broadest possible picture of the fund's market risk.**

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.

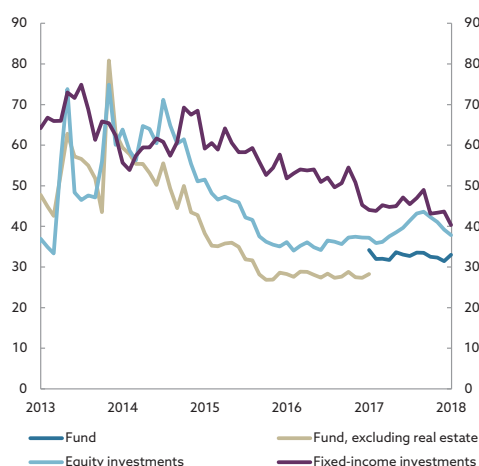
The fund's expected absolute volatility, calculated using the statistical measure standard deviation, uses a three-year price

history to estimate how much the annual return on the fund's equity and fixed-income investments can normally be expected to fluctuate. Expected absolute volatility was 10.8 percent at the end of the year, or about 920 billion kroner, compared with 10.6 percent a year earlier. The increase was due mainly to a higher weight of equities in the portfolio.

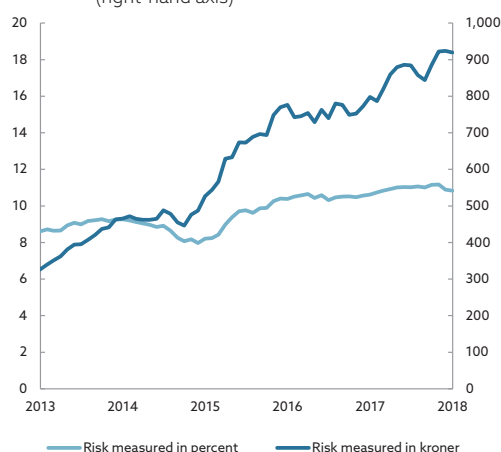
We invest in real estate to create a more diversified portfolio. We expect real estate investments to have a different return profile to equities and bonds in both the short and the longer term. The relative risk that this entails will impact on calculations of the fund's expected relative volatility.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

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

**Chart 19** Expected relative volatility of the fund. Basis points



**Chart 20** Expected absolute volatility of the fund. Percent (left-hand axis) and billions of kroner (right-hand axis)



expected relative volatility, or tracking error, which puts a ceiling on how much the return on these investments can be expected to deviate from the return on the benchmark index. The mandate from the Ministry of Finance was amended with effect from 1 January 2017. All of the fund's investments, including unlisted real estate, are now included in the calculation of expected relative volatility and measured against the fund's benchmark index, which consists solely of global equity and bond indices. The limit for expected relative volatility, including unlisted real estate, is 1.25 percentage points. The actual level at the end of 2017, including unlisted real estate, was 0.33 percentage point.

The Executive Board has also set a limit for expected shortfall between the return on the fund and the benchmark index. The fund is to be managed in such a way that the expected negative relative return in extreme situations does not exceed 3.75 percentage points. The actual figure was 1.49 percentage point at the end of 2017.

## RELATIVE EXPOSURES

The fund is positioned differently to its benchmark indices along several dimensions, including currencies, sectors, countries, regions, individual stocks and individual bond issuers. At the end of 2017, the fund had a higher weight of stocks having somewhat greater volatility than the average in the benchmark, and a higher weight of small companies than the benchmark. The equity portfolio also had an allocation to countries outside the benchmark's universe. The fixed-income portfolio featured a higher weight of emerging markets than the benchmark. It also had more credit and a lower duration than the benchmark. This lower duration means that, in general, the fund is less sensitive than the benchmark index to changes in interest rates.

The fund had 219 billion kroner invested in unlisted real estate and an allocation to listed real estate investments of 73 billion kroner at the end of the year. These real estate investments were financed through sale of stocks and bonds in the same currency and with similar risk as the real estate investments. All of the fund's investments, including those in real estate, are now measured against the

**Table 27** Key figures for the fund's risk and exposure

Limits set by the Ministry of Finance		31.12.2017
Allocation	Equity portfolio 50 - 80 percent of fund's market value <sup>1</sup>	66.7
	Unlisted real estate no more than 7 percent of the fund's market value	2.6
	Fixed-income portfolio 20-50 percent of fund's market value <sup>1</sup>	31.5
Market risk	1.25 percentage points expected relative volatility for the fund's investments	0.3
Credit risk	Maximum 5 percent of fixed-income investments may be rated below BBB-	2.5
Ownership	Maximum 10 percent of voting shares in a listed company in the equity portfolio <sup>2</sup>	9.6

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

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

fund's benchmark index composed of global equity and bond indices. Real estate investments' exposure was among the fund's largest relative exposures at the end of the year.

**FACTOR EXPOSURES**

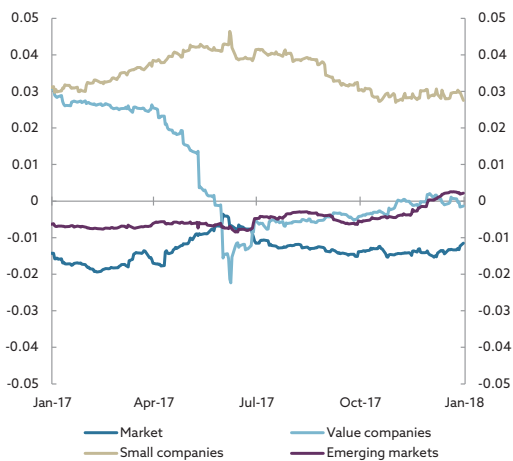
We measure the fund's exposure to various systematic risk factors, such as small companies, value stocks and credit premiums.

Systematic risk factors are common characteristics which securities share to varying degrees over time and which contribute to both the risk and the return on investments. There are different ways of measuring exposure to these risk factors. One of the most widely used is to compare variation in the fund's relative return with variation in the return on these factors. Such an analysis of factor exposures in 2017, based on daily observations, indicates among other things that the fund's equity

investments had closer correlation than the benchmark to small companies. The analysis shows that 20 percent of the variation in the relative return on the fund's equity investments can be explained by general market movements and exposure to value stocks, small companies and emerging markets. The fund's fixed-income investments were slightly less correlated than the benchmark index to long-term bonds in 2017. About 30 percent of the variation in the relative return on the fund's fixed-income investments can be explained by movements in term and credit premiums.

The results of such statistical analyses 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 21** Factor exposures of the fund's equity investments. Coefficients



**Chart 22** Factor exposures of the fund's fixed-income investments. Coefficients



**Table 28** Expected relative volatility of investment strategies as at 31 December 2017. 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	17	10	22	1	28
Internal reference portfolio	13	10		1	15
of which systematic factors <sup>1</sup>	8				8
of which universe expansion	12	9			14
Allocation decisions	6	2			6
Real estate			22		22
Unlisted real estate			16		16
Listed real estate			9		9
Security selection	13	1			13
Internal security selection	10	1			10
External security selection	6				6
Asset management	7	4			8
Asset positioning	7	4			8
<b>Total</b>	<b>23</b>	<b>12</b>	<b>22</b>	<b>1</b>	<b>33</b>

<sup>1</sup> A significant part of the exposure against systematic factors will in 2018 be managed and reported in a separate sub-strategy.

**Table 29** The fund's fixed-income investments as at 31 December 2017 based on credit ratings. Percentage of bond holdings

	AAA	AA	A	BBB	Lower rating	Total
Government bonds	27.1	8.0	11.0	6.5	2.0	54.6
Government-related bonds	5.3	4.5	1.7	0.4	0.0	11.9
Inflation-linked bonds	4.2	0.3	0.1	0.3	-	4.9
Corporate bonds	0.2	2.1	9.0	11.9	0.5	23.7
Securitised bonds	4.2	0.6	0.1	0.1	-	5.0
<b>Total</b>	<b>41.1</b>	<b>15.4</b>	<b>21.9</b>	<b>19.1</b>	<b>2.5</b>	<b>100.0</b>



#### EXTENDED REPORT ON RETURN AND RISK

A separate report on return and risk will be published in March 2018 on our website [www.nbim.no](http://www.nbim.no).



### 4.3 RESPONSIBLE INVESTMENT

# Long-term growth

**Responsible investment supports the investment objective of the highest possible return with a moderate level of risk. Long-term return is dependent on sound economic development and well-functioning markets.**

Our responsible investment management seeks to improve the long-term economic performance of our investments and to reduce financial risks associated with the environmental and social practices of the companies in our portfolio. We do this by considering governance issues that could have an impact on the fund's performance over time. We integrate these issues into our work on standard setting, our long-term ownership, and our investing.

#### SETTING STANDARDS

Standards provide consistency across markets and raise the bar for all companies. Our aim is to contribute to the development of well-functioning markets and good business practices. The fund is invested in more than 9,000 companies across the globe. We benefit from internationally agreed standards that promote sound market practices and good governance of companies. We recognise a set of key international principles and standards from the UN and the OECD. We contribute to the further development of standards. We participate in consultations and engage regularly with international organisations, regulators and other standard setters. In 2017 we participated in 17 public hearings on equal

treatment of shareholders, well-functioning markets, sustainability reporting and responsible investment practices.

Our priorities are based on our mandate, the characteristics of the fund and internationally agreed standards. We formulate expectations of companies and publish our positions on specific issues. This provides predictability in our ownership. In 2017 we published our expectations on tax and transparency. We also published a position note on CEO remuneration where we state that remuneration should be driven by long-term value creation and aligning the interest of CEOs with shareholders.

We will hold boards to account for their decisions, and ensure that minority shareholders can influence decision-making. We expect boards to understand the environmental and social consequences of their business practice.

We are constantly developing our understanding of good governance and good economic development, and how they relate to financial risks and returns. We support and initiate research projects, and we collaborate with academic institutions to obtain analyses that may inform our investment strategy.

### EXERCISING OWNERSHIP

The fund owns a small stake in more than 9,000 companies across the globe. Our aim is to promote long-term value creation and equal treatment of shareholders. Through our voting, we seek to strengthen governance, performance and business practices. Our voting guidelines provide a principled basis for voting. In addition, we integrate investment insights into our company-specific decisions.

We voted at 11,084 shareholder meetings in 2017. In our dialogue with companies, key considerations are good governance and board accountability. We prioritise dialogue with companies where our largest investments are, where we have developed in-depth knowledge. We have a regular dialogue with these nearly 1,000 companies, which make up around two thirds of the total value of the portfolio.

In 2017 we had 3,252 meetings with 1,380 companies. We work with companies, investors and other stakeholders to advance standards, increase the information available to investors, and promote good practices. We have a particular focus on children's rights, water management and climate change. We have also expectations on human rights, and tax and transparency.

Climate change can impact the risk in the fund. Companies should plan for relevant climate scenarios and incorporate climate risks in strategic planning, risk management and reporting. Companies should use water in a sustainable manner and understand the consequences of their use of water. Companies also have a responsibility to respect human rights, including children's rights, in their operations, supply chains and other business relationships. Corporate taxes play a vital role in the public finances of most countries. We believe that taxes should be paid where economic value is generated, that company tax arrangements are a board responsibility, and that public country-by-country reporting is key to greater transparency.

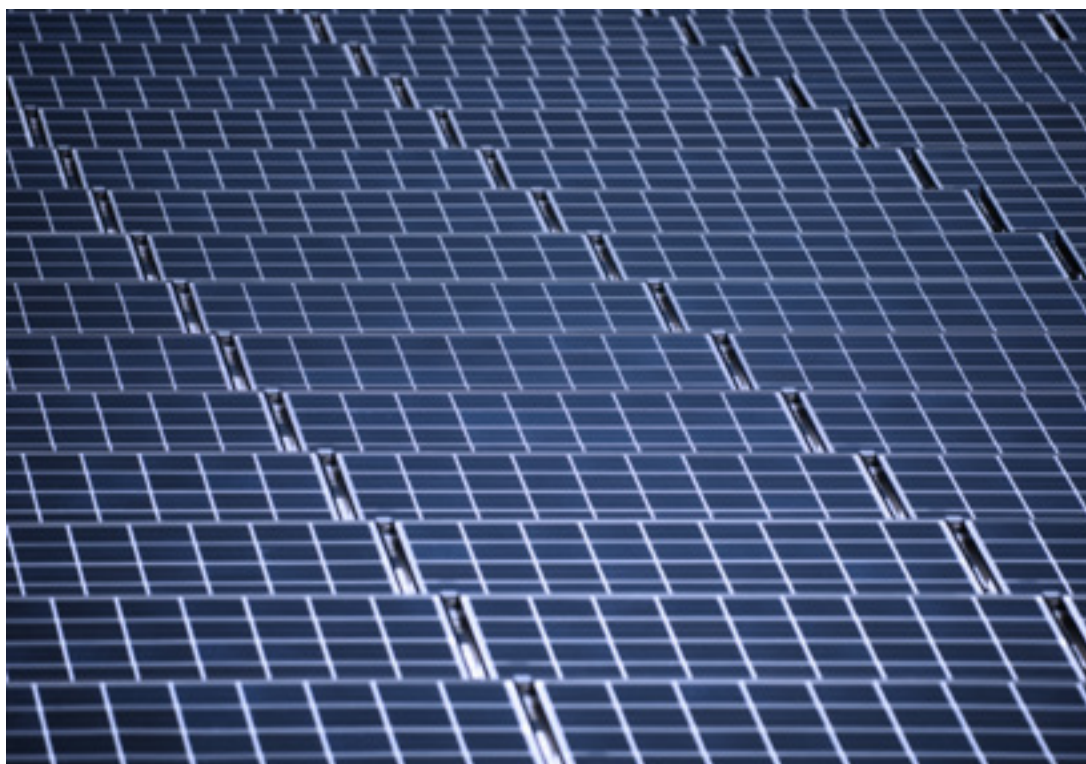


**LONG-TERM INVESTMENTS**

Our aim is to identify long-term opportunities and reduce our exposure to unacceptable risk.

We seek constantly to develop our understanding of issues that may have an impact on the future value of the companies in which we are invested. We concentrate on issues that we expect to have a material effect on the fund's return. We need quantitative data on environmental, social and governance issues for our analyses. An important task in our responsible investment management is to make companies move from words to numbers so that we can evaluate companies' efforts and better understand financial opportunities and risks.

Technology that enables more environmentally friendly economic activity poses investment opportunities. Companies producing such technology may profit from changes in consumer habits and regulation, as economies transit to lower emission. To benefit from such trends, we make investments through our environment-related mandates. At the end of 2017 we had 67.8 billion kroner invested in environmental equity mandates. These investments had a return of 21.7 percent in 2017.



Our view is that properties that are built and operated responsibly have lower financial risk and can provide higher rental income. We do thorough analysis of environmental risks ahead of each investment. We have a systematic approach to risk monitoring of the companies we are invested in.

We analyse individual companies' activities and business models, and indicators of how well they manage relevant risks. Companies that are found to have a high risk exposure could be considered for divestment. In 2017 we did six risk-based divestments. We sold three palm oil companies and one soy producer due to high risk related to deforestation. We sold one chemical company due to high risk related to water management. In addition we removed one company from our investment universe after an analysis of governance and social issues.

The Ministry of Finance has decided, based on ethical assessments, that there are some types of products that the fund should not be invested in, and certain types of corporate conduct that we cannot accept. Ethical exclusions are forward-looking and based on advice from an independent Council on Ethics, except coal exclusions that are performed directly by Norges Bank. Ethical exclusions are regulated by the Guidelines for Observation and Exclusion from the Government Pension Fund Global.

Norges Bank excluded one company in 2017, put four companies under observation, and removed one company from the list of excluded companies. Norges Bank also decided to follow up on two companies through the fund's ownership work. We made public the third tranche of coal exclusions. Norges Bank excluded ten companies and put two companies under observation related to the coal criterion in 2017.

With effect from 1 January 2018, the Ministry of Finance has introduced a requirement in the management mandate that Norges Bank's Executive Board shall approve issuers of government bonds. Investment risk is assessed along the dimensions of stability, sustainability and serviceability. Based on the information collected on investment risk and operational risk, a risk assessment is conducted of each issuer country where the fund is invested in government bonds.

### EXPECTATIONS ON TAX AND TRANSPARENCY

Corporate taxes play an important role in the public finances of developed countries and may be even more critical in developing countries. We believe prudent and transparent corporate tax strategies are a key corporate responsibility. Business operations that are unduly shaped by tax planning rather than long-term value creation may be more vulnerable to changes in regulation or enforcement.

The purpose of our expectations is to set out the ways in which Norges Bank Investment Management, as a financial investor, expects multinational enterprises to exhibit appropriate, prudent and transparent tax behaviour.

Our expectations are primarily directed at boards. We expect that company boards should set corporate tax priorities that are aimed at long-term value creation, and report on their strategy and priorities. Over time, we wish to see companies publish country-by-country breakdowns of how and where their business model generates economic value, where that value is taxed and the amount of tax paid as a result. Companies should also be ready to explain publicly the business case for locating subsidiaries in low-tax environments. As an investor, we welcome efforts to align and harmonise the international tax framework, providing multinational companies with a level playing field for tax and tax transparency.

In 2017 we sent the expectation document to the 500 largest companies in which we invest. We have begun to integrate the topic of tax behaviour in our dialogue with boards. We have also raised the topic in our interactions with international organisations and standard setters.



### EXTENDED REPORT ON RESPONSIBLE INVESTMENT

A separate report on responsible investment was published on 13 February 2018 on our website [www.nbim.no](http://www.nbim.no).

# Organisation

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34  
Nationalities

573  
Employees

**NEW YORK**  
78

**LONDON**

135

**OSLO**

313

**SINGAPORE**

39

**SHANGHAI**

8



# An evolving organisation

**The end of 2017 marked 20 years of Norges Bank Investment Management as a separate operational area of Norges Bank. The management of Norway's wealth is an important and complex undertaking that requires constant development of the organisation managing the fund.**

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We are working systematically on building an international investment organisation that can safeguard the wealth in the fund for future generations. Ours is a result-oriented organisation that demands high standards of precision and quality. Our employees have the global outlook and experience needed to manage a fund that is invested across much of the world.

Norges Bank Investment Management entered a new strategy period in 2017. The strategy for 2017-2019 builds on that for 2014-2016 and aligns with the objective of the highest possible return after costs. The strategy is available on our website.

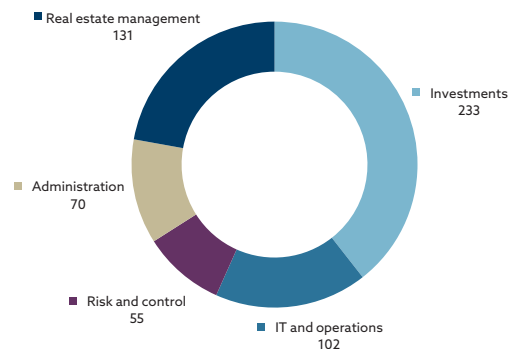
The fund has grown rapidly in recent years. The complexity of the management task has also increased, with more stringent requirements for operations, governance, control, transparency and responsibility. The organisation has expanded to meet these requirements, and we continued to work on developing management and other staff.

The number of permanent employees increased by five during the year, compared with 50 in 2016. A total of 45.4 percent of the workforce was based at our overseas offices in London, New York, Singapore and Shanghai at the end of the year, against 47.2 percent a year earlier. We had 573 employees at the end of the year, including 17 on our trainee programme.

Employees from 34 different nations bring considerable diversity to the organisation. We also have a general aim of increasing the proportion of women. We are keen to attract and retain female staff in general and female managers in particular. Three of the leader group's 11 members are women.

Norges Bank Real Estate Management, which manages the fund's unlisted real estate investments, is an independent organisation. In 2017, the leader group was strengthened with two new chief investment officers for property investments in Europe and the US respectively. The leader group for real estate has seven members, of which two are women.

**Chart 23** Number of employees by area, including subsidiaries



### INVESTMENT PLATFORM

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

We have consolidated and simplified our portfolio of IT systems in recent years, insourcing a number of areas to ensure a more efficient operating model and better data quality. Automation and standardisation are important for ensuring scalable and efficient processes. We have sound processes for developing and updating our systems as well as for managing and following up disruptions. Investments in less developed markets require expertise and capacity to handle more manual and non-standardised processes. We pay considerable attention to IT and information security. Information security has been tightened further in light of new requirements and external threats.

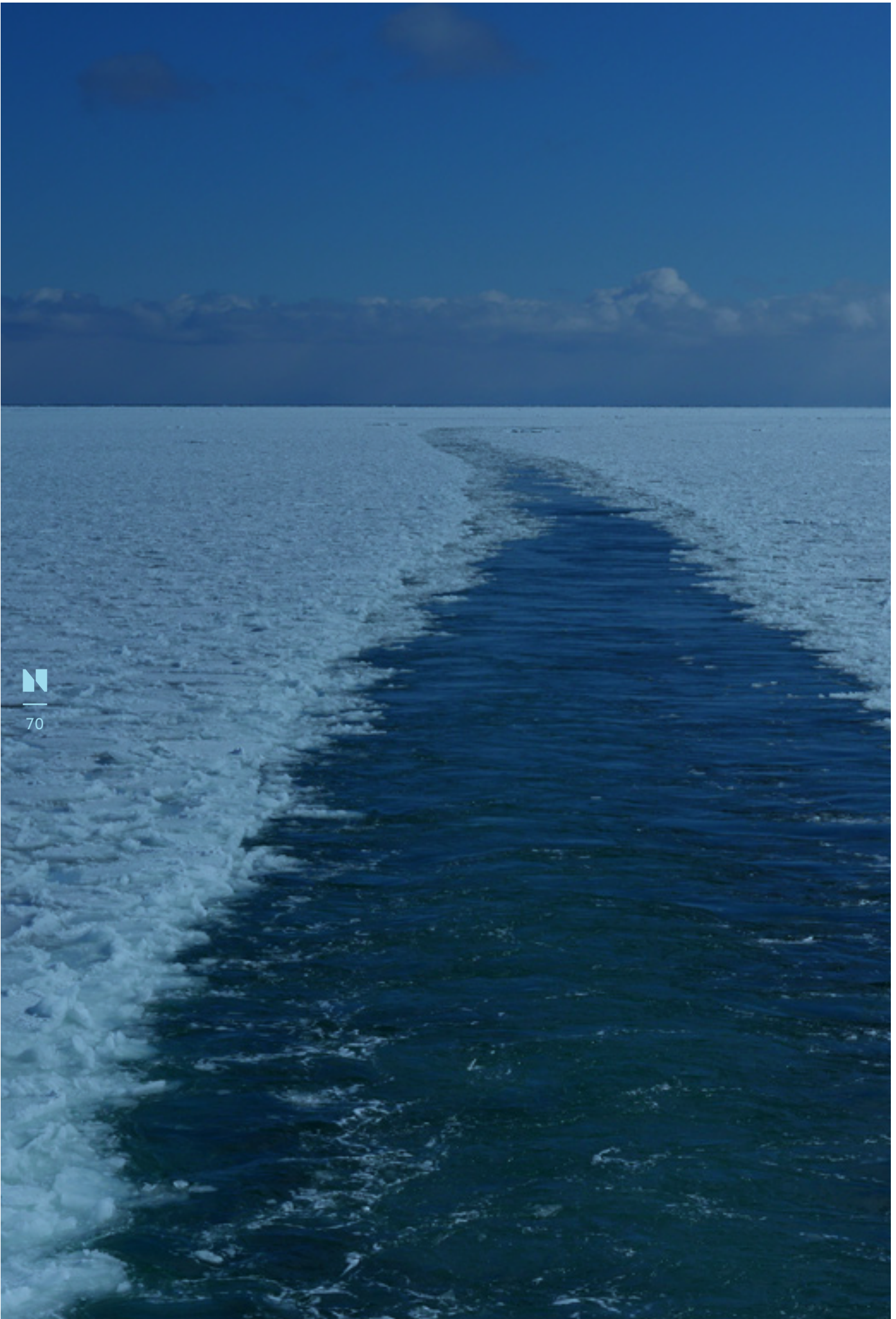
IT infrastructure is an important element of the operational execution of our management task and a source of operational risk in itself. We have established processes to manage this risk and internal control activities for information security and transaction management. This includes access management, integrity and traceability in automated processes.

### KNOWLEDGE BUILDING

Our task is to manage financial wealth for future generations in a responsible, efficient and transparent way. Given the fund's growing size and importance, there is considerable public interest in its management both in Norway and abroad.

A high degree of transparency is a key element of our strategy. We strive constantly to increase knowledge about the fund and provide clear and relevant information on all aspects of its management. In 2017, Norges Bank Investment Management won the Farmand Prize for the best annual report for public bodies in Norway for the fourth time.

We held six press seminars and two press conferences during the year where we presented our reports and results. We hosted the Norwegian Finance Research Conference for a seventh time, arranged two professional conferences and published seven publications on topics relevant to the management of the fund. We receive numerous invitations each year to present the fund at various conferences. The leader group gave presentations at more than 100 events in 2017.





5.2 OPERATIONAL RISK

# Limits for operational risk

**Norges Bank’s Executive Board sets requirements for operational risk management and internal control at Norges Bank Investment Management. We work systematically to identify operational risk and improve our processes.**

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

Our calculated operational risk exposure was within this limit throughout 2017. We work systematically to identify operational risks and improve our processes to prevent unwanted events. Reporting and following up on unwanted events is an important part of our

efforts to improve operations and internal controls.

**UNWANTED EVENTS IN 2017**

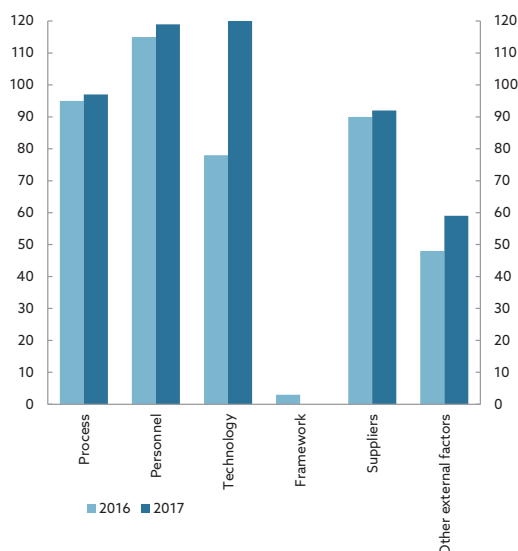
We registered 487 unwanted events in 2017, up from 429 in 2016. Most of these had no direct financial consequences. Six of these events were considered significant. The estimated total financial impact of unwanted events in 2017 was 56.8 million kroner.

Three of the six significant events had financial consequences of around 32 million kroner total. All three incidents were related to securities trading. In two of the events trades were delayed due to technical issues, while the last event was caused by human error. The three remaining significant events were related to information technology and security and had no direct financial consequences.

**COMPLIANCE WITH GUIDELINES**

The Ministry of Finance has set guidelines for the fund’s management. No significant breach of these guidelines was registered in 2017, and we did not receive any notifications from local supervisory authorities of any significant breaches of market rules or general legislation.

**Chart 24** Unwanted events at Norges Bank Investment Management sorted by cause



# Low management costs

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**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 good risk management, control and cost effectiveness. Total management costs as a share of assets under management have been relatively stable in recent years, despite the build-up of a portfolio of unlisted real estate investments and an increase in capital managed externally. More markets and currencies have also been included in the equity and fixed-income portfolios, and the scope and demands of advisory, reporting and responsible investment activities have increased. The objective specified in the mandate from the Ministry of Finance is the highest possible return after costs.

Management costs are low, both as a percentage of assets under management and in comparison with other investment managers. An annual report produced for the Ministry of Finance by CEM Benchmarking Inc shows that the fund's management costs have been considerably lower than costs in comparable funds for a number of years.

Total management costs in Norges Bank were 4.7 billion kroner in 2017, up from 3.7 billion kroner in 2016, due primarily to higher fees to external managers and personnel costs. The growth in headcount and strong returns in 2017 resulted in higher personnel costs, including performance-based pay. Performance-based fees to external managers increased as a result of a high excess return from external management. Base fees to external managers also rose in line with an increase in capital managed externally.

Costs for external managers accounted for 35 percent of operating costs in 2017. Our strategy is to use external managers primarily for investments in emerging markets and small- and mid-cap stocks in certain markets where it is not efficient to build up internal expertise. Some of these costs vary with achieved excess return compared to a benchmark index, and costs increase when excess returns are high. Fees to external managers are therefore expected to be offset by excess returns for the fund. Agreements with external managers on performance-based fees are structured such that the bulk of the positive excess return is retained by the fund.

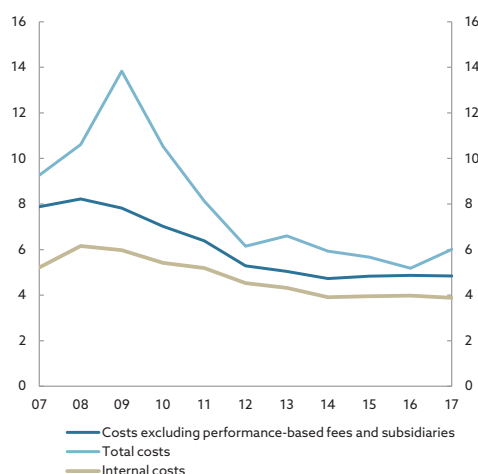
The fund's investments in equities and bonds must be registered with local securities depositories around the world. We have enlisted a global custodian institution to assist us with this process. Custody and related

services accounted for 9 percent of management costs in 2017. Custody costs have been reduced substantially in recent years.

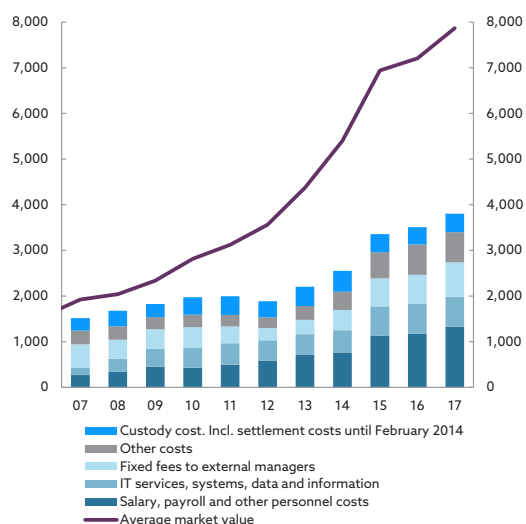
The fund's reporting currency is Norwegian kroner. Exchange rate fluctuations can have a significant accounting impact, even if actual costs in foreign currency are unchanged. Approximately 70 percent of costs are billed and paid in foreign currency. For example, a 10 percent change in the exchange rate for the Norwegian krone against other currencies will impact operating expenses by approximately 350 million kroner. Fluctuations in relevant exchange rates have led to a significant increase in costs measured in kroner in recent years.

Management costs are also incurred in subsidiaries that have been established as part of the fund's investments in unlisted real estate. Management costs in subsidiaries totalled

**Chart 25** Management costs as a share of assets under management. Basis points



**Chart 26** Development of individual cost components. Costs<sup>1</sup> (millions of kroner, left-hand axis) and average market value (billions of kroner, right-hand axis)



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



116 million kroner in 2017, up from 100 million kroner in 2016. Other operating costs are also incurred in subsidiaries, relating to the ongoing maintenance, operation and development of properties and leases. These are not costs related to investing in real estate – they are the costs of operating the underlying properties once they are acquired. Therefore, they are not defined as management costs.

The Ministry of Finance sets an upper limit for management costs each year, as a proportion of assets under management. The upper limit for management costs for 2017 was 7.5 basis points. Norges Bank is reimbursed for costs

incurred in its management of the fund up to this limit. Management costs in subsidiaries are measured against the limit, but are not reimbursed since they are expensed directly in the portfolio result. In addition to this, Norges Bank is reimbursed for performance-based fees to external managers. Total management costs measured against the upper limit amounted to 3.9 billion kroner in 2017. This consists of 3.8 billion kroner incurred in Norges Bank, excluding performance-based fees to external managers, and 0.1 billion kroner incurred in subsidiaries. This amounts to 5.0 basis points of assets under management, which is unchanged compared to 2016.

**Table 30** Management costs per investment strategy in 2017. Costs as reimbursed by the Ministry of Finance. Basis points

	Contribution to the fund's management costs	Management costs based on assets under management
Fund allocation	0.9	
of which unlisted real estate	0.6	23.3
Security selection	2.9	13.8
Internal security selection	0.7	4.3
External security selection <sup>1</sup>	2.2	46.6
Asset management	2.2	3.0
<b>Total</b>	<b>6.0</b>	

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

**Table 31** Management cost per investment strategy 2013-2017. Costs as reimbursed by the Ministry of Finance. Basis points

	Contribution to the fund's management costs	Management costs based on assets under management
Fund allocation	0.4	
Security selection	2.7	17.4
Internal security selection	0.7	6.3
External security selection <sup>1</sup>	2.0	47.7
Asset management	2.4	3.0
Unlisted real estate <sup>2</sup>	0.5	25.3
<b>Total</b>	<b>5.9</b>	

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

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

### MANAGEMENT COSTS BROKEN DOWN BY INVESTMENT STRATEGY

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

### REMUNERATION SYSTEM

Norges Bank's Executive Board establishes the principles for the remuneration system at Norges Bank Investment Management. Members of the leader groups receive only a fixed salary. New members of the leader groups who were previously in receipt of performance-based pay will, however, still receive any such pay that has been held back over the following

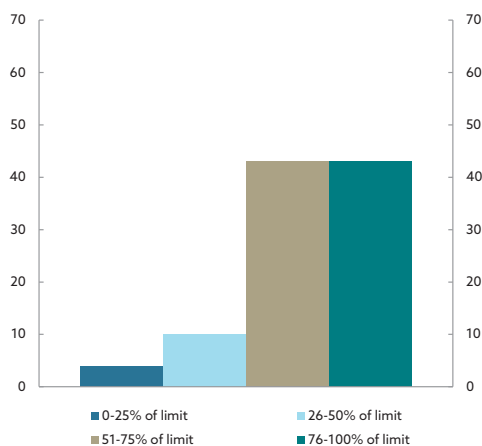
three years. The CEO's salary and pay bands for other members of the leader groups are set by the Executive Board. The CEO's salary totalled 6.7 million kroner in 2017.

In addition to a fixed salary, those working directly on investment decisions and certain other employees may also be entitled to performance-based pay. This is calculated on the basis of the performance of the fund, group and individual measured against set targets, and is paid over a number of years. Half is paid the year after it is accrued, while half is held back and paid over the following three years. The amount held back is adjusted in line with the return on the fund.

A total of 246 employees were entitled to performance-based pay in 2017, of whom six were employed in subsidiaries. Their fixed salaries totalled 337 million kroner, while the upper limit for performance-based pay was 360 million kroner. On average, employees eligible for performance-based pay accrued 64 percent of the limit for 2017 based on multi-year performance. Performance-based pay may not exceed 100 percent of fixed salary, except for a small number of employees at the overseas offices where the limit is 200 percent.

Besides the leader groups and employees in receipt of performance-based pay, 331 permanent employees worked in risk management, compliance and control, operations and support at the end of 2017, of whom 12 were employed in subsidiaries. Their fixed salaries totalled 317 million kroner.

**Chart 27** Performance-based pay relative to upper limit in 2017. Percentage of workforce



**Table 32** Remuneration of senior management in 2017. Kroner

Position	Name	Paid salary	Performance-based pay <sup>1</sup>	Value of other benefits	Pension benefit earned	Employee loan
<b>Norges Bank Investment Management</b>						
Chief Executive Officer	Yngve Slyngstad	6,706,974	-	7,980	965,153	-
Deputy Chief Executive Officer and Chief Administrative Officer	Trond Grande	4,550,966	-	8,101	331,376	-
Chief Compliance and Control Officer	Stephen A. Hirsch	4,240,267	-	11,259	298,579	-
Chief Investment Officer Equity Strategies	Petter Johnsen <sup>2</sup>	7,452,483	-	86,887	745,248	-
Chief Investment Officer Asset Strategies	Geir Øivind Nygård <sup>1</sup>	4,197,889	1,668,240	8,541	191,101	500,000
Chief Investment Officer Allocation Strategies	Ole Christian Bech-Moen <sup>1</sup>	4,298,958	402,033	7,980	230,318	-
Chief Risk Officer	Dag Huse <sup>1</sup>	4,629,654	575,879	7,980	550,532	-
Chief Operating Officer	Age Bakker	3,491,971	-	8,202	372,350	-
<b>Norges Bank Real Estate Management</b>						
Chief Executive Officer	Karsten Kallevig	5,322,133	-	8,475	312,655	-
Chief Investment Officer Europe	Romain Veber <sup>1,2,3</sup>	1,613,562	-	21,546	161,356	-
Chief Investment Officer US	Per Løken <sup>1,3</sup>	866,667	-	4,199	55,777	-
Chief Administrative Officer	Mie Caroline Holstad <sup>4</sup>	1,393,824	-	13,598	211,126	-
Chief Operating Officer	Nina Kathrine Hammerstad	2,862,004	-	8,070	277,846	-
Chief Risk Officer	Lars Oswald Dahl	3,294,653	-	8,044	378,173	-
Chief Compliance and Control Officer	Jan Thomsen	3,446,713	-	8,844	370,669	-

<sup>1</sup> Senior managers receive only a fixed salary. Senior managers who were previously in receipt of performance-related pay will, however, still receive any such pay that has been held back. The figures reported are paid out in the fiscal year of 2017 but are earned in previous fiscal years.

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

<sup>3</sup> Started on 1 September 2017. The figures reported are paid remuneration from 1 September 2017.

<sup>4</sup> Was on unpaid leave from 1 June to 31 August 2017.

## 6.1 FINANCIAL STATEMENTS

# Financial reporting

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## FINANCIAL STATEMENTS

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**NOTES**

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**AUDITOR**

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## Income statement

Amounts in NOK million	Note	2017	2016
Profit/loss on the portfolio before foreign exchange gains and losses			
Income/expense from:			
- Equities	4	933 501	342 813
- Bonds	4	81 410	100 250
- Unlisted real estate	6	14 237	6 942
- Financial derivatives	4	278	-3 213
- Secured lending	12	3 532	4 013
- Secured borrowing	12	-345	23
Tax expense	9	-4 796	-4 061
Interest income/expense		-16	-54
Other costs		-11	-40
<b>Profit/loss on the portfolio before foreign exchange gains and losses</b>		<b>1 027 790</b>	<b>446 673</b>
Foreign exchange gains and losses	10	14 701	-306 099
<b>Profit/loss on the portfolio</b>		<b>1 042 492</b>	<b>140 574</b>
Management fee	11	-4 728	-3 731
<b>Profit/loss for the period and total comprehensive income</b>		<b>1 037 764</b>	<b>136 843</b>

## Balance sheet

Amounts in NOK million	Note	31.12.2017	31.12.2016
<b>ASSETS</b>			
Deposits in banks		11 027	17 759
Secured lending	12,13	185 046	134 338
Cash collateral posted	13	1 894	2 320
Unsettled trades		13 389	13 196
Equities	5	5 250 871	4 373 042
Equities lent	5,12	411 664	340 865
Bonds	5	2 080 061	2 220 286
Bonds lent	5,12	591 277	454 735
Unlisted real estate	6	217 160	188 469
Financial derivatives	5,13	9 025	9 366
Other assets		3 219	1 966
<b>TOTAL ASSETS</b>		<b>8 774 633</b>	<b>7 756 342</b>
<b>LIABILITIES AND OWNER'S CAPITAL</b>			
<b>Liabilities</b>			
Secured borrowing	12,13	260 136	213 520
Cash collateral received	13	5 804	3 688
Unsettled trades		15 905	22 195
Financial derivatives	5,13	3 919	4 501
Other liabilities		415	1 944
Management fee payable	11	4 728	3 731
<b>Total liabilities</b>		<b>290 907</b>	<b>249 579</b>
Owner's capital		8 483 727	7 506 763
<b>TOTAL LIABILITIES AND OWNER'S CAPITAL</b>		<b>8 774 633</b>	<b>7 756 342</b>

#### ACCOUNTING POLICY

The statement of cash flows is prepared in accordance with the direct method. Major classes of cash receipts and cash payments are presented separately. Specific categories of cash flows, primarily arising from the purchase and sale of financial instruments, are shown on a net basis. Cash comprises *Deposits in banks*.

Cash transfers between the GPFG and the Norwegian government in the form of inflows and withdrawals are classified as financing activities. These transfers have been settled in the period (cash principle). In the *Statement of changes in owner's capital*, accrued inflows/withdrawals are shown.

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 (-)	2017	2016
<b>Operating activities</b>		
Receipts of dividend from equities	128 293	118 517
Receipts of interest from bonds	73 575	74 832
Receipts of interest and dividend from unlisted real estate subsidiaries	3 869	3 657
Net receipts of interest and fee from secured lending and borrowing	3 426	4 097
<i>Receipts of dividend, interest and fee from holdings of equities, bonds and unlisted real estate</i>	<i>209 163</i>	<i>201 103</i>
Net cash flow from purchase and sale of equities	-141 382	-72 588
Net cash flow from purchase and sale of bonds	17 878	-38 151
Net cash flow to/from investments in unlisted real estate subsidiaries	-17 234	-17 269
Net cash flow financial derivatives	-4 886	84
Net cash flow cash collateral related to derivative transactions	2 754	983
Net cash flow secured lending and borrowing	-21	50 236
Net payment of taxes	-6 786	-3 116
Net cash flow related to interest on deposits in banks and bank overdraft	-84	-
Net cash flow related to other expenses, other assets and other liabilities	-857	-430
Management fee paid to Norges Bank	-3 731	-3 933
<b>Net cash inflow/outflow from operating activities</b>	<b>54 813</b>	<b>116 919</b>
<b>Financing activities</b>		
Inflow from the Norwegian government	-	-
Withdrawal by the Norwegian government	-60 837	-100 616
<b>Net cash inflow/outflow from financing activities</b>	<b>-60 837</b>	<b>-100 616</b>
<b>Net change in cash</b>		
Deposits in banks at 1 January	17 759	2 543
Net increase/decrease of cash in the period	-6 024	16 303
Net foreign exchange gains and losses on cash	-708	-1 087
<b>Deposits in banks at end of period</b>	<b>11 027</b>	<b>17 759</b>

## ACCOUNTING POLICY

*Owner's capital* for the GPFG comprises contributed capital in the form of accumulated net inflows from the Norwegian government and retained earnings in the form of total comprehensive income. *Total 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 2016	3 494 640	3 976 580	7 471 220
Total comprehensive income	-	136 843	136 843
Net inflow/withdrawal during the period <sup>1</sup>	-101 300	-	-101 300
<b>31 December 2016</b>	<b>3 393 340</b>	<b>4 113 423</b>	<b>7 506 763</b>
1 January 2017	3 393 340	4 113 423	7 506 763
Total comprehensive income	-	1 037 764	1 037 764
Net inflow/withdrawal during the period <sup>1</sup>	-60 800	-	-60 800
<b>31 December 2017</b>	<b>3 332 540</b>	<b>5 151 187</b>	<b>8 483 727</b>

<sup>1</sup> In 2017 there was a withdrawal from the krone account of NOK 64.5 billion. Of this, NOK 3.7 billion was used to pay the accrued management fee for 2016. In 2016, there was a withdrawal from the krone account of NOK 105.2 billion. Of this, NOK 3.9 billion was used to pay the accrued management fee for 2015.

# Notes to the financial reporting

## Note 1 General Information

### 1. INTRODUCTION

Norges Bank is Norway's central bank. The bank manages Norway's foreign exchange reserves and the Government Pension Fund Global (GPFG).

The GPFG shall support saving to finance future government 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 GPFG is managed by Norges Bank on behalf of the Ministry of Finance, in accordance with section 2, second paragraph of the Government Pension Fund Act and the management mandate for the GPFG issued by the Ministry of Finance. The Executive Board of Norges Bank has delegated day-to-day management of the GPFG to the Bank's asset management area, 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 port-

folio consisting of equities, fixed-income securities and real estate. The GPFG is invested in its entirety outside of Norway.

In accordance with the management mandate for the GPFG, transfers are made to and from the krone account. 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*.

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.

### 2. APPROVAL OF THE FINANCIAL STATEMENTS

The annual financial statements of Norges Bank for 2017, which include the financial reporting for the GPFG, were approved by the Executive Board on 7 February 2018 and adopted by the Supervisory Council on 22 February 2018.

## Note 2 Accounting policies

### REFERENCES TO ACCOUNTING POLICIES, SIGNIFICANT ESTIMATES AND CRITICAL ACCOUNTING JUDGEMENTS

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

### EXPLANATION OF SIGNIFICANT ESTIMATES AND CRITICAL ACCOUNTING JUDGEMENTS

The preparation of the financial statements involves the use of estimates and judgements that may affect assets, liabilities, income and expenses. Estimates and judgements are based on historical experience and expectations about future events that are considered probable at the time the financial statements are presented. Estimates are based on best judgement; however, actual results may deviate from estimates.

### 1. BASIS OF PREPARATION

In accordance with the regulation on the financial reporting of Norges Bank, the financial reporting of the GPFG shall be prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, subject to the exemptions and additions specified in the regulation. The annual financial statements are prepared with a closing date of 31 December, and are presented in Norwegian kroner (NOK), rounded to the nearest million kroner. Rounding differences may occur.

### 2. CHANGES IN ACCOUNTING POLICIES AND IMPLEMENTATION OF NEW AND/OR AMENDED STANDARDS OR INTERPRETATIONS

Accounting policies are applied consistently with those of the previous financial year. There are no new or amended IFRS standards and interpretations that have become effective for the financial year starting 1 January 2017, that have had a material impact on the financial statements.

### 3. ACCOUNTING POLICIES FOR THE FINANCIAL STATEMENTS AS A WHOLE

#### 3.1 Financial assets and liabilities

##### Recognition and derecognition

Financial assets and liabilities are recognised in the balance sheet upon becoming a party to the instrument's contractual provisions, or when the risks and rewards of ownership are transferred, if this occurs at a different point in time. Transactions are recognised at trade date when the purchase or sale of the instrument involves settlement under normal market conditions.

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

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

#### Classification

Financial assets and liabilities are initially recognised at fair value. On initial recognition, all financial assets and liabilities are classified depending on the type of instrument, the contractual terms and the purpose of the investment in accordance with IAS 39 *Financial instruments: Recognition and measurement*.

#### Fair value through profit or loss (fair value option)

Financial assets and liabilities that are managed and whose performance is evaluated on a fair value basis in accordance with a documented investment strategy, are designated at *fair value through profit or loss* on initial recognition. This implies that a fair value business model is used for the portfolios comprising these financial assets and liabilities, and that the primary objective is to achieve gains over the longer term connected to changes in fair value. The vast majority of financial assets and liabilities are classified as at *fair value through profit or loss*.

#### Held for trading

Financial assets and liabilities that are financial derivatives are classified as *held for trading* on initial recognition.

#### Loans and receivables

Financial assets and liabilities other than those classified as either at *fair value through profit or loss* or *held for trading* are classified as *loans and receivables* on initial recognition.

#### 3.2 Subsidiaries

Subsidiaries are established that exclusively constitute investments as part of the management of the GPFG. These subsidiaries are entities over which the GPFG has control. Principal subsidiaries are listed in note 15 *Interests in other entities*.

IFRS 10 *Consolidated financial statements* has been applied. IFRS 10 defines an investment entity and introduces a mandatory exemption from consolidation for investment entities.

Subsidiaries that are investment entities are measured at fair value through profit or loss in line with the exemption for consolidation for investment entities. Other subsidiaries that are not investment entities, and that provide investment-related services to the GPFG in connection with the management of unlisted real estate investments, are consolidated in the financial statements of the GPFG.

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

Subsidiaries measured at fair value through profit or loss are presented in the balance sheet as *Unlisted real estate*. These subsidiaries invest, through other entities, exclusively in real estate. See section 3.1 for further information on accounting policies for financial assets, which are applied to subsidiaries measured at fair value through profit or loss. See note 6 for accounting policies specific to unlisted real estate.

#### Consolidated subsidiaries

Consolidated subsidiaries do not own, directly or indirectly, investments in real estate. Intra-group transactions and intercompany balances are eliminated on consolidation.



**ACCOUNTING JUDGEMENT**

The GPFG is an investment entity based on the following:

- a) It obtains funds from the Norwegian government, a related party and its sole owner, and delivers professional investment services, being the management of the fund, to the Norwegian government,
- b) It commits itself towards the Norwegian government to invest solely for capital appreciation and investment income,
- c) It measures and evaluates returns for all its investments exclusively based on fair value.

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. After an overall assessment, it has been concluded that the GPFG meets the criteria in the definition of an investment entity.

**4. NEW STANDARDS WITH EFFECT FROM 2018 OR LATER**

Issued IFRS standards with application dates from 2018 or later are described below. Other standards, changes in standards or interpretations which are issued, but not yet effective, are expected to be immaterial or not applicable upon implementation.

IFRS 9 *Financial Instruments*

IFRS 9 includes requirements for recognition, measurement, impairment, hedge accounting and derecognition of financial instruments. The standard replaces IAS 39 *Financial Instruments: Recognition and Measurement*.

Under IFRS 9, financial assets with basic loan features shall be measured at amortised cost, unless the business model entails that they should be measured at fair value. All other financial assets shall be measured at fair value.

Classification and measurement of financial liabilities under IFRS 9 is a continuation of IAS 39, with

the exception of financial liabilities designated as at *fair value through profit or loss* (fair value option), where changes in fair value relating to own credit risk shall be separated and presented in other comprehensive income.

IFRS 9 is effective from 1 January 2018. The option to early adopt the standard will not be used. Implementation of IFRS 9 will not result in changes in the classification and measurement of financial instruments for Norges Bank, and will therefore not have any impact on the financial statements.

IFRS 15 *Revenue from contracts with customers* and IFRS 16 *Leases*

The standards are effective from 1 January 2018 and 1 January 2019 respectively. The implementation of these standards will not have any impact on Norges Bank's financial statements.

## Note 3 Returns per asset class

Table 3.1 Returns per asset class

	2017	2016	4Q 2017	3Q 2017	2Q 2017	1Q 2017
<b>Returns in the fund's currency basket</b>						
Return on equity investments (percent)	19.44	8.72	4.96	4.31	3.37	5.53
Return on fixed-income investments (percent)	3.31	4.32	0.53	0.85	1.12	0.77
Return on unlisted real estate <sup>1</sup> (percent)	7.52	0.78	1.97	2.68	2.05	0.62
Return on fund (percent)	13.66	6.92	3.49	3.15	2.60	3.78
Relative return on fund <sup>2</sup> (percentage points)	0.70	0.15	0.17	0.10	0.28	0.09
<b>Returns in Norwegian kroner (percent)</b>						
Return on equity investments	19.74	3.67	8.45	0.40	2.92	6.85
Return on fixed-income investments	3.57	-0.53	3.87	-2.93	0.68	2.03
Return on unlisted real estate <sup>1</sup>	7.80	-3.91	5.36	-1.16	1.61	1.88
Return on fund	13.95	1.95	6.92	-0.71	2.15	5.08

<sup>1</sup> Return on unlisted real estate includes return on listed real estate investments for 2016.

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

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

return of the currency basket. The fund's relative return is calculated as the arithmetic difference between the fund's return and the return of the fund's benchmark index. The fund's relative return includes return on unlisted real estate from 1 January 2017. The fund's relative return prior to 2017 is measured on the aggregated equity and fixed-income investments. The fund's benchmark index consists of global equity and bond indices determined by the Ministry of Finance. The benchmark return is measured 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. Return on unlisted real estate includes return on listed real estate investments for 2016.

## 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 as income when the dividends are formally approved by the shareholders' meeting or equivalent responsible party.

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

*Realised gain/loss* mainly represents amounts realised when assets or liabilities have been derecognised. 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 duties.

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

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

Table 4.1 Specification Income/expense from equities

Amounts in NOK million	2017	2016
Dividends	128 846	118 584
Realised gain/loss	233 652	107 005
Unrealised gain/loss	571 003	117 224
Income/expense from equities before foreign exchange gain/loss	933 501	342 813

Table 4.2 Specification Income/expense from bonds

Amounts in NOK million	2017	2016
Interest	71 811	72 573
Realised gain/loss	9 283	30 861
Unrealised gain/loss	316	-3 184
<b>Income/expense from bonds before foreign exchange gain/loss</b>	<b>81 410</b>	<b>100 250</b>

Table 4.3 Specification Income/expense from financial derivatives

Amounts in NOK million	2017	2016
Dividends	140	102
Interest	-1 933	-2 113
Realised gain/loss	128	-3 251
Unrealised gain/loss	1 943	2 049
<b>Income/expense from financial derivatives before foreign exchange gain/loss</b>	<b>278</b>	<b>-3 213</b>

## Note 5 Holdings of equities, bonds and financial derivatives

### ACCOUNTING POLICY

Investments in equities and bonds are designated at initial recognition as at *fair value through profit or loss* and are measured in the balance sheet at fair value. Earned and accrued dividends and interest are presented in the balance sheet on the same line as the respective financial asset or liability 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 classified as *held for trading* and are measured in the balance sheet at fair value. Variation margin for exchange traded futures is considered to be settlement, and amounts are presented as *Deposits in banks*. Norges Bank does not engage in hedge accounting, and therefore no financial instruments are designated as hedging instruments.

For further information on fair value measurement of equities, bonds and financial derivatives, see note 7 *Fair value measurement*. Changes in fair value for the period are recognised in the income statement and specified in note 4 *Income/expense from equities, bonds and financial derivatives*.

Table 5.1 Equities

Amounts in NOK million	31.12.2017		31.12.2016	
	Fair value including dividends	Accrued dividends	Fair value including dividends	Accrued dividends
Equities	5 662 535	6 111	4 713 907	5 557
<b>Total equities</b>	<b>5 662 535</b>	<b>6 111</b>	<b>4 713 907</b>	<b>5 557</b>
<i>Of which equities lent</i>	<i>411 664</i>		<i>340 865</i>	

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

Table 5.2 Bonds

Amounts in NOK million	31.12.2017			31.12.2016		
	Nominal value	Fair value including accrued interest	Accrued interest	Nominal value	Fair value including accrued interest	Accrued interest
<b>Government bonds</b>						
Government bonds issued in the government's local currency	1 304 201	1 458 828	10 712	1 290 977	1 461 360	11 356
<b>Total government bonds</b>	<b>1 304 201</b>	<b>1 458 828</b>	<b>10 712</b>	<b>1 290 977</b>	<b>1 461 360</b>	<b>11 356</b>
<b>Government-related bonds</b>						
Sovereign bonds	7 477	8 094	119	11 625	12 408	211
Bonds issued by local authorities	94 610	101 287	615	92 164	98 677	668
Bonds issued by supranational bodies	54 476	57 374	472	54 791	58 474	511
Bonds issued by federal agencies	148 622	150 032	732	161 022	164 578	1 000
<b>Total government-related bonds</b>	<b>305 185</b>	<b>316 787</b>	<b>1 938</b>	<b>319 602</b>	<b>334 137</b>	<b>2 390</b>
<b>Inflation-linked bonds</b>						
Inflation-linked bonds issued by government authorities	112 513	131 125	375	114 916	140 814	547
<b>Total inflation-linked bonds</b>	<b>112 513</b>	<b>131 125</b>	<b>375</b>	<b>114 916</b>	<b>140 814</b>	<b>547</b>
<b>Corporate bonds</b>						
Bonds issued by utilities	42 780	46 599	522	40 653	43 602	531
Bonds issued by financial institutions	244 859	248 894	2 322	225 022	227 803	2 264
Bonds issued by industrial companies	322 378	336 464	3 116	308 074	319 741	3 197
<b>Total corporate bonds</b>	<b>610 017</b>	<b>631 957</b>	<b>5 960</b>	<b>573 749</b>	<b>591 146</b>	<b>5 992</b>
<b>Securitised bonds</b>						
Covered bonds	138 447	132 642	1 013	140 209	147 237	1 477
Commercial mortgage-backed securities	828	-	-	1 357	327	1
<b>Total securitised bonds</b>	<b>139 275</b>	<b>132 642</b>	<b>1 013</b>	<b>141 566</b>	<b>147 564</b>	<b>1 478</b>
<b>Total bonds</b>	<b>2 471 191</b>	<b>2 671 338</b>	<b>19 999</b>	<b>2 440 810</b>	<b>2 675 021</b>	<b>21 763</b>
<i>Of which bonds lent</i>		591 277			454 735	

Financial derivatives, such as futures, interest rate derivatives and foreign exchange derivatives are used in asset management to adjust the exposure in various portfolios, as a cost efficient alternative to trading in the underlying securities. This may be to adjust the exposure to equities or bonds. Furthermore, foreign exchange derivatives are used in the

financing of securities investment management. Equity derivatives with an option component are often a result of corporate actions and these can be converted to equities or be sold. Participatory notes are used as an alternative to direct equity investments in certain markets.

Table 5.3 gives a specification of financial derivative holdings. Notional amounts (the nominal values of the underlying) are the basis for calculating any cash flows and gains/losses for the contracts. This provides information regarding the extent to which different types of financial derivatives are used.

Table 5.3 Financial derivatives

Amounts in NOK million	31.12.2017			31.12.2016		
	Notional amount	Fair value		Notional amount	Fair value	
		Asset	Liability		Asset	Liability
Foreign exchange derivatives	252 601	770	2 687	321 580	4 586	1 995
Interest rate derivatives	34 225	1 304	1 232	31 284	528	2 506
Equity derivatives	7 379	6 951	-	6 645	4 252	-
<b>Total financial derivatives</b>	<b>294 205</b>	<b>9 025</b>	<b>3 919</b>	<b>359 509</b>	<b>9 366</b>	<b>4 501</b>

## OVER-THE-COUNTER (OTC) FINANCIAL DERIVATIVES

### *Foreign exchange derivatives*

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

### *Interest rate derivatives*

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

### *Equity derivatives*

Equity derivatives are derivatives with exposure to an underlying equity. Equity derivatives include instruments with an option component such as warrants and rights. These instruments grant the owner the right to purchase an equity at an agreed price within a certain time frame. Equity derivatives also include participatory notes which is an instrument that provides exposure to an underlying equity.

## EXCHANGE-TRADED FUTURES CONTRACTS

Futures contracts are listed contracts to buy or sell a specified asset (security, index, interest rate or other) at an agreed price at a future point in time. Settlement is normally made in cash, with initial and daily margin settlement of gains and losses.

## Note 6 Unlisted real estate

### ACCOUNTING POLICY

Investments in unlisted real estate are made through subsidiaries of Norges Bank, which exclusively constitute investments as part of the management of the GPFG. Subsidiaries are financed through equity and long-term debt financing. Subsidiaries presented as *Unlisted real estate* are designated upon initial recognition as financial instruments 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 on fair value measurement of unlisted real estate investments, see note 7 *Fair value measurement*.

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

Income generated in the real estate subsidiaries may be distributed to the GPFG in the form of interest and dividends as well as repayment of equity and long-term loan financing provided from the GPFG to the subsidiary. There are no significant restrictions on distribution of dividends and interest from subsidiaries to the GPFG.

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

*Dividends* are recognised as income when the dividends are formally approved by the shareholders' meeting/equivalent responsible party, or as a consequence of the company's articles of association.

*Interest income* is recognised when the interest is earned. Dividends and interest are presented in table 6.1 based on the cash principle.

*Unrealised gain/loss* represents the change in fair value for the balance sheet line *Unlisted real estate*, which is not attributable to dividends and interest paid.





Table 6.1 provides a specification of the income statement line *Income/Expense from unlisted real estate*, before foreign exchange gains and losses.

Table 6.1 Income/expense from unlisted real estate

Amounts in NOK million	2017	2016
Dividend	2 057	2 167
Interest income	1 812	1 490
Unrealised gain/loss	10 368	3 285
<b>Income/expense from unlisted real estate before foreign exchange gain/loss</b>	<b>14 237</b>	<b>6 942</b>

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

Table 6.2 Changes in carrying amounts unlisted real estate

Amounts in NOK million	31.12.2017	31.12.2016
<b>Unlisted real estate, opening balance for the period</b>	<b>188 469</b>	<b>180 021</b>
Payments to new investments <sup>1</sup>	14 771	19 147
Payments to existing investments <sup>1</sup>	5 167	2 808
Payments from existing investments <sup>1</sup>	-2 704	-4 686
Unrealised gain/loss	10 368	3 285
Foreign currency translation effect	1 089	-12 106
<b>Unlisted real estate, closing balance for the period</b>	<b>217 160</b>	<b>188 469</b>

<sup>1</sup> This represents the net 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, in order to fund investments in real estate assets, primarily properties. Net income generated in the subsidiaries may be distributed to the GPFG through repayment of equity and long-term loan financing.

#### UNDERLYING REAL ESTATE COMPANIES

Real estate subsidiaries have investments in other non-consolidated, unlisted companies. For a list of principal entities, see note 15 *Interests in other entities*.

A further specification of *Unlisted real estate* is provided in tables 6.3 and 6.4. Table 6.3 specifies the GPFG's share of net income generated in the underlying real estate companies, which is the basis for *Income/expense from unlisted real estate* presented in table 6.1. Table 6.4 specifies the GPFG's share of assets and liabilities in the underlying real estate companies, which comprise the closing balance for *Unlisted real estate* as presented in table 6.2.

#### PRINCIPLES FOR MEASUREMENT AND PRESENTATION

The following policies apply for the respective income and expense elements presented in table 6.3:

Rental income is recognised as income 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.

Unrealised gain/loss presented in table 6.1 includes undistributed profits and will therefore not reconcile with fair value changes for properties, debt and other assets and liabilities presented in table 6.3.

*Transaction costs* are incurred as a one-time cost when purchasing or selling properties. Transaction costs include stamp duty, registration fees, due diligence costs (fees to advisors, such as lawyers and valuation experts) and insurance. Transaction costs are expensed as incurred.

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.



Table 6.3 Income from underlying real estate companies

Amounts in NOK million	2017	2016
Net rental income	8 579	7 645
Realised gain/loss	199	109
Fair value changes - properties	8 375	1 416
Fair value changes - debt	-420	-191
Fair value changes - other assets and liabilities	-461	-174
Transaction costs	-324	-411
Interest expense external debt	-626	-622
Tax expense payable	-140	-151
External asset management - fixed fees	-482	-454
External asset management - variable fees	-248	-39
Internal asset management - fixed fees <sup>1</sup>	-32	-
Operating costs within the limit from the Ministry of Finance <sup>2</sup>	-97	-81
Other costs	-88	-105
<b>Net income underlying real estate companies</b>	<b>14 237</b>	<b>6 942</b>

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

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

Table 6.4 Assets and liabilities underlying real estate companies

Amounts in NOK million	31.12.2017	31.12.2016
Properties	235 507	204 635
External debt	-17 694	-15 727
Net other assets and liabilities <sup>1</sup>	-653	-439
<b>Total assets and liabilities underlying real estate companies</b>	<b>217 160</b>	<b>188 469</b>

<sup>1</sup> Net other assets and liabilities comprise cash, tax and operational receivables and liabilities.

## 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 held at fair value in the balance sheet.

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

The fair value of the vast majority of assets and liabilities is based on quoted market prices. If the market for a security or an asset is not active, fair value is established by using standard valuation techniques. Estimating fair value introduces valuation uncertainty, mostly due to the use of unobservable inputs used in valuation models. This valuation risk is addressed by the management and control framework in Norges Bank Investment Management, which governs fair value measurement, and is described in section 6 of this note.

### 2. VALUATION UNCERTAINTY AND THE FAIR VALUE HIERARCHY

All assets and liabilities measured at fair value are categorised in the three categories in the fair value hierarchy presented in table 7.1. The level of valuation uncertainty determines the categorisation:

- Level 1 comprises assets that are valued on the basis of unadjusted quoted prices in active markets and are considered to have very limited valuation uncertainty.
- Assets and liabilities classified as Level 2 are valued using models with observable inputs. Inputs are considered observable if they can be directly observed from transactions in an active market, or if there is compelling external evidence demonstrating an executable exit price. Holdings classified as Level 2 have some valuation uncertainty.
- Assets classified as Level 3 are valued using models with considerable use of unobservable inputs, leading to a high degree of valuation uncertainty.

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

### SIGNIFICANT ESTIMATE

Level 3 investments consist of instruments held at fair value that are not traded or quoted in active markets. Fair value is therefore determined using valuation techniques that use models with unobservable inputs. The resulting values are particularly uncertain estimates, due to the significant use of unobservable inputs.

Table 7.1 classifies investments by level of valuation uncertainty into the fair value hierarchy and includes all balance sheet items measured at fair value.

Table 7.1 Investments by level of valuation uncertainty

Amounts in NOK million	Level 1		Level 2		Level 3		Total	
	31.12.2017	31.12.2016	31.12.2017	31.12.2016	31.12.2017	31.12.2016	31.12.2017	31.12.2016
<b>Equities</b>	<b>5 616 897</b>	<b>4 673 199</b>	<b>34 265</b>	<b>28 845</b>	<b>11 373</b>	<b>11 863</b>	<b>5 662 535</b>	<b>4 713 907</b>
Government bonds	1 417 376	1 369 188	41 452	92 172	-	-	1 458 828	1 461 360
Government-related bonds	271 415	279 772	43 151	53 463	2 221	902	316 787	334 137
Inflation-linked bonds	126 023	124 646	5 102	16 168	-	-	131 125	140 814
Corporate bonds	597 276	538 692	34 572	52 293	109	161	631 957	591 146
Securitised bonds	113 337	136 088	18 863	11 149	442	327	132 642	147 564
<b>Total bonds</b>	<b>2 525 427</b>	<b>2 448 386</b>	<b>143 140</b>	<b>225 245</b>	<b>2 772</b>	<b>1 390</b>	<b>2 671 338</b>	<b>2 675 021</b>
Financial derivatives (assets)	120	291	8 905	9 075	-	-	9 025	9 366
Financial derivatives (liabilities)	-	-	-3 919	-4 501	-	-	-3 919	-4 501
<b>Total financial derivatives</b>	<b>120</b>	<b>291</b>	<b>4 986</b>	<b>4 574</b>	<b>-</b>	<b>-</b>	<b>5 106</b>	<b>4 865</b>
Unlisted real estate	-	-	-	-	217 160	188 469	217 160	188 469
Other <sup>1</sup>	-	-	-67 685	-71 768	-	-	-67 685	-71 768
<b>Total</b>	<b>8 142 444</b>	<b>7 121 876</b>	<b>114 706</b>	<b>186 896</b>	<b>231 305</b>	<b>201 722</b>	<b>8 488 454</b>	<b>7 510 494</b>
<b>Total (percent)</b>	<b>95.9</b>	<b>94.8</b>	<b>1.4</b>	<b>2.5</b>	<b>2.7</b>	<b>2.7</b>	<b>100.0</b>	<b>100.0</b>

<sup>1</sup> Other consists of non-investment assets and liabilities limited to money-market instruments such as secured lending and borrowing positions, deposits in banks, unsettled trades, posted and received cash collateral and other assets and liabilities.

Valuation uncertainty for the GPFG as a whole at the end of 2017 is virtually unchanged compared to the end of 2016. The majority of the total portfolio has low valuation uncertainty. At the end of 2017, 97.3 percent was classified as Level 1 or 2, which is unchanged compared to year-end 2016. 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 (99.2 percent) are valued based on official closing prices from stock exchanges and are classified as Level 1. A small number of equities (0.6

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. A few securities (0.2 percent) that are not listed, or where trading has been suspended over a longer period, have high uncertainty related to fair value and are classified as Level 3. Almost 90 percent of the value of equities classified as Level 3 is attributable to one shareholding with a lock-in period, which was received as compensation following the merger of two companies in 2016. Due to the lock-in period, there has been significant use of unobservable inputs in the valuation of these shares, resulting in Level 3 classification.

**Bonds**

The majority of bonds (94.5 percent) have observable, executable market quotes and are classified as Level 1. A minority of bonds (5.4 percent) are classified as Level 2. These securities do not have a sufficient number of observable quotes or they are priced based on comparable liquid bonds. A few bonds (0.1 percent) that do not have observable quotes are classified as Level 3.

**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. Other derivatives are classified as Level 2, as the valuation of these is based on standard models using observable market inputs.

Other assets and liabilities are classified as Level 2.

**3. MOVEMENTS BETWEEN LEVELS OF VALUATION UNCERTAINTY**

*Reclassifications between Level 1 and Level 2*

The relative share of equities classified as Level 1 has increased marginally by 0.1 percentage point compared to year-end 2016.

Bonds classified as Level 1 have increased by 3 percentage points in 2017. This is mainly due to reclassifications from Level 2 to Level 1 and purchases during the year. The reclassified bonds consist mainly of corporate bonds denominated in US dollar and government bonds in emerging markets. Price and currency gains also added to the increase in Level 1 bond holdings.

Table 7.2 Specification of changes in Level 3 holdings

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

Amounts in NOK million	01.01.2016	Purchases	Sales	Settlements	Net gain/loss	Transferred into Level 3	Transferred out of Level 3	Foreign exchange gains and losses	31.12.2016
Equities	3 607	9 956	-455	-41	-533	257	-842	-86	11 863
Bonds	2 731	-	-1 011	-163	-33	6	-91	-49	1 390
Unlisted real estate <sup>1</sup>	180 021	17 269	-	-	3 285	-	-	-12 106	188 469
<b>Total</b>	<b>186 359</b>	<b>27 225</b>	<b>-1 466</b>	<b>-204</b>	<b>2 719</b>	<b>263</b>	<b>-933</b>	<b>-12 241</b>	<b>201 722</b>

<sup>1</sup> Purchases represent the net cash flow in the period from the GPFG to subsidiaries presented as *Unlisted real estate*.

The GPFG's aggregate exposure that is considered particularly uncertain with respect to valuation (Level 3) increased by NOK 29 583 million in 2017, to an exposure at the end of the year of NOK 231 305 million.

The relative share of equities classified as Level 3 has decreased by 0.1 percentage point compared to 2016. The marginal decrease is primarily due to price depreciation of the largest Level 3 holding, combined with a general price appreciation of equities within Level 1 and Level 2 during the year.

There is no change in the relative share of bonds classified as Level 3, compared to 2016.

All unlisted real estate investments are classified as Level 3, and the increase of NOK 28 691 million in 2017 is mainly due to new investments and value increases.

#### 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 index 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. The next section sets out the main valuation techniques for those instruments included in Level 2 and Level 3 of the fair value hierarchy. Furthermore, it highlights the most significant observable and unobservable inputs to 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 judgments. These include key assumptions and estimates with respect to each individual property type, location, future revenue streams and relevant yields. These assumptions represent mainly unobservable inputs and *Unlisted real estate* is therefore classified as Level 3 in the fair value hierarchy. Estimates used reflect recent comparable market transactions of properties with a similar location, condition and quality, and are based on market conditions.

Valuation of commercial real estate in the European and American markets is based on variations of discounted cash flow models.

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

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

##### *Equities (Level 2 and 3)*

Equities that are valued based on models with observable inputs provided by vendors according to the pricing hierarchy, are classified as Level 2. These holdings are often not traded daily, or are listed shares of companies where trading has been suspended. The valuation models take into account various observable market inputs such as comparable equity quotes, last traded date, volumes and reasons for suspension.

Some holdings in Level 3 are illiquid because of lock-in periods. Valuation models for these holdings take into account both observable inputs, such as

comparable equity quotes and unobservable inputs such as historic volatility.

Other holdings of Level 3 equities where trading has been suspended for a prolonged period, are valued either based on the last market price using regression analysis or based on comparable companies.

#### *Bonds (Level 2 and 3)*

Bonds that are valued based on indicative quotes, or liquid comparable issues with executable quotes for those that are less liquid, are classified as Level 2. These holdings usually consist of less liquid bonds than those actively traded on the market.

Bonds valued by external price vendors, based on models with extensive use of unobservable inputs, are classified as Level 3. Such inputs include probability of future cash flows, outdated indirect quotes on comparable issues and spreads to reference curves. These holdings include defaulted and highly illiquid bonds.

#### *Financial derivatives (Level 2)*

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

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

Equity derivatives, such as rights and warrants, are mainly valued based on prices provided by vendors according to the pricing hierarchy. In some cases where an equity derivative is not traded, observable inputs such as conversion factors, subscription price and strike price are utilised to value the instruments. Participatory certificates are valued using the underlying price of the quoted equity, adjusted for observable inputs related to credit and liquidity risk.

## 5. SENSITIVITY ANALYSIS FOR LEVEL 3 HOLDINGS

Table 7.3 Additional specification Level 3 and sensitivities

Amounts in NOK million	Specification of Level 3 holdings 31.12.2017	Sensitivities 31.12.2017		Specification of Level 3 holdings 31.12.2016	Sensitivities 31.12.2016	
		Unfavourable changes	Favourable changes		Unfavourable changes	Favourable changes
Equities	11 373	-2 409	2 409	11 863	-2 638	2 606
Government-related bonds	2 221	-222	222	902	-90	90
Corporate bonds	109	-11	11	161	-16	16
Securitised bonds	442	-44	44	327	-33	33
<b>Total bonds</b>	<b>2 772</b>	<b>-277</b>	<b>277</b>	<b>1 390</b>	<b>-139</b>	<b>139</b>
Unlisted real estate	217 160	-12 969	14 988	188 469	-9 678	10 711
<b>Total</b>	<b>231 305</b>	<b>-15 655</b>	<b>17 674</b>	<b>201 722</b>	<b>-12 455</b>	<b>13 456</b>



There is uncertainty associated with the fair value of investments classified as Level 3 and the downside valuation uncertainty is estimated at NOK 15 655 million at year-end 2017, an increase of NOK 3 200 million from 2016. Upside valuation uncertainty has increased by NOK 4 218 million and is estimated at NOK 17 674 million at the end of 2017. The increase in valuation uncertainty compared to 2016 is mainly due to new real estate investments.

#### *Unlisted real estate*

Changes in key assumptions can have a material effect on the valuation of the unlisted real estate portfolio. This is illustrated in the sensitivity analysis by using other reasonable alternative assumptions for yield and market rents. The sensitivity analysis is based on a statistically relevant sample that is representative for the real estate portfolio, and reflects both favourable and unfavourable changes.

Real estate values are particularly sensitive to changes in yields and assumptions influencing future revenues. In an unfavourable outcome, an increase of 0.2 percentage point in the yield, and a reduction of 2 percent in future market rents will result in a decrease in value of the real estate portfolio of approximately 6.0 percent (5.1 percent in 2016) or NOK 12 969 million. In a favourable outcome, a reduction in the yield of 0.2 percentage point and an increase in future market rents of 2 percent will increase the value of the real estate portfolio by 6.9 percent (5.7 percent in 2016) or NOK 14 988 million. The slight change in sensitivity compared to 2016 is mainly due to increased size and changes in the composition of the unlisted real estate portfolio.

#### *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 sus-

pending, as well as specific factors related to the individual company such as the financial situation and volatility.

Sensitivity in absolute values has decreased slightly for the equity portfolio, in line with the holdings classified as Level 3. The small reduction in relative sensitivity for the equity portfolio compared to 2016 is caused by the removal of several holdings with lock-in periods that are now classified as Level 1 as the trading restrictions are no longer applicable, in addition to the aforementioned decrease in Level 3 holdings.

#### *Bonds*

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

The sensitivity in fair value for bonds is somewhat lower than for equities, particularly for bonds with shorter maturities. The increase in sensitivity in 2017 in absolute value is in line with the increase in the holdings classified as Level 3.

## **6. CONTROL ENVIRONMENT**

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

The valuation environment has been adapted in accordance with market standards and established valuation practices. This is implemented in practice through daily valuation of all holdings, except for unlisted real estate investments where valuations

are performed quarterly. These processes are scalable with regard to market changes and are based on internal and external data solutions.

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

Valuation 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 accepted 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. The controls are based on defined thresholds and sensitivities,

which are monitored and adjusted in accordance with prevailing market conditions. At each month-end for financial instruments and at the end of each quarter for unlisted real estate investments, more extensive controls are performed to ensure valuation is in accordance with fair value. As part of this review, particular attention is paid to illiquid financial instruments and unlisted real estate investments, i.e. investments deemed to pose valuation challenges. Illiquid instruments are identified using sector and currency classifications, credit rating indicators, bid/ask spreads, and market activity.

Valuation memos and reports are prepared at 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 Risk

### MANAGEMENT MANDATE FOR THE GPF

See note 1 for a description of the framework for management of the GPF.

The GPF shall seek to obtain the highest possible return after costs measured in the currency basket of the benchmark, within the set management limits. The strategic benchmark index set by the Ministry of Finance is divided into two asset classes, equities and bonds, with an allocation of 62.5 percent to equities, and 37.5 percent to bonds. The Ministry of Finance has further determined a plan to increase the strategic equity share to 70 percent.

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

From January 2017, investments in real estate are no longer defined by the fund's benchmark index. The fund's allocation to unlisted real estate is regulated in the investment mandate. It is up to Norges Bank to determine the allocation to real estate and how it shall be financed.

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

### NORGES BANK'S GOVERNANCE STRUCTURE

The Executive Board of Norges Bank has delegated the responsibility for the management of the GPF 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.

### GOVERNANCE STRUCTURE

Investment responsibilities within Norges Bank Investment Management are further delegated through investment mandates. Responsibility for processes and personnel is delegated through job descriptions, while process requirements are described in policies and guidelines. The composition of the leader group and the delegation of authority shall ensure segregation of duties between the investment areas, trading, operations, risk management and compliance and control. Norges Bank Real Estate Management is structured as a separate unit with its own leader group, and the CEO for Norges Bank Real Estate Management reports to the CEO of Norges Bank Investment Management.

The investment risk committee complements the delegation of responsibility by advising on investment risk management, and the investment universe committee advises on the portfolio's investment universe.

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

#### FRAMEWORK FOR INVESTMENT RISK

In the management mandate for the GPF, 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 or new counterparties are monitored and require approval by the Chief Risk Officer (CRO), or a person authorised by the CRO.

The Executive Board's principles for risk management are further described through policies and guidelines. Responsibility for effective processes related to risk management is delegated to the CRO and Chief Compliance and Control Officer (CCO). Risk management related to unlisted real estate investments is delegated to the CRO and CCO in Norges Bank Real Estate Management.

Risk management is defined as management of market risk, credit risk, counterparty risk, operational risk and risk related to environmental, social and governance factors. The first three items listed are defined as investment risk. Within Norges Bank Investment Management, the investment area 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, asset classes and other levels within the portfolio that reflect the investment process. Risk analyses are required in advance of investments in unlisted real estate.

#### *Investment risk – market risk*

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

#### *Investment risk – credit risk*

Norges Bank Investment Management defines credit risk as the risk of loss due to an issuer not meeting its payment obligations. Credit risk is measured both in relation to single issuers, where the probability of default and loss given default are taken into account, and portfolio credit risk, where credit risk takes into account the correlation of credit losses between instruments and issuers. Credit risk is actively taken to generate investment returns in line with the objectives of the investment mandates.

*Investment risk – counterparty risk*

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

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 investments in the GPFPG.

*Asset class by country and currency*

The portfolio is invested across several asset classes, countries and currencies as shown in table 8.1.

Table 8.1 Allocation by asset class, country and currency

Asset class	Market	Market value in percent by country and currency <sup>1</sup>		Market value in percent by asset class		Assets minus liabilities excluding management fee	
		31.12.2017	Market 31.12.2016	31.12.2017	31.12.2016	31.12.2017	31.12.2016
Equities	Developed	89.0	Developed	90.5			
	US	35.4	US	37.6			
	UK	9.7	UK	9.8			
	Japan	9.1	Japan	9.0			
	Germany	6.1	Germany	5.4			
	France	5.1	France	5.2			
	Total other	23.6	Total other	23.5			
	<b>Emerging</b>	<b>11.0</b>	<b>Emerging</b>	<b>9.5</b>			
	China	3.6	China	2.7			
	Taiwan	1.6	Taiwan	1.5			
	India	1.2	India	1.0			
	Brazil	0.9	Brazil	0.8			
	South Africa	0.7	South Africa	0.6			
	Total other	3.0	Total other	2.9			
<b>Total equities</b>					<b>66.60</b>	<b>62.47</b>	<b>5 653 440</b> <b>4 691 863</b>
Fixed income	Developed	90.5	Developed	87.6			
	US Dollar	44.9	US Dollar	43.7			
	Euro	25.8	Euro	25.3			
	Japanese Yen	6.7	Japanese Yen	5.9			
	British Pound	4.6	British Pound	4.6			
	Canadian Dollar	3.2	Canadian Dollar	3.0			
	Total other	5.3	Total other	5.1			
	<b>Emerging</b>	<b>9.5</b>	<b>Emerging</b>	<b>12.4</b>			
	Mexican Peso	1.6	Mexican Peso	1.9			
	South Korean Won	1.4	South Korean Won	1.7			
	Indonesian Rupee	0.9	Indian Rupee	0.9			
	Indian Rupee	0.7	Polish Zloty	0.8			
	Brazilian Real	0.7	Brazilian Real	0.8			
	Total other	4.1	Total other	6.3			
<b>Total fixed income</b>					<b>30.82</b>	<b>34.31</b>	<b>2 616 372</b> <b>2 576 875</b>
Unlisted real estate	US	46.2	US	46.0			
	UK	23.5	UK	23.0			
	France	16.6	France	14.6			
	Switzerland	3.9	Germany	7.6			
	Germany	3.5	Switzerland	3.6			
	Total other	6.3	Total other	5.2			
<b>Total unlisted real estate<sup>2</sup></b>					<b>2.58</b>	<b>3.22</b>	<b>218 643</b> <b>241 756</b>

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

<sup>2</sup> Listed real estate investments are presented as *Equities* from 01.01.2017. These were previously included in the asset class *Real estate*. Comparative amounts are not restated.

At the end of the year, the share of equities in the fund was 66.6 percent. This is an increase of 4.1 percentage points compared to year-end 2016. The share of the bond portfolio in the fund decreased to 30.8 percent at year-end 2017, a reduction of 3.5 percentage points from year-end 2016. This change in asset class allocation in 2017 was mainly a result of stronger returns for equities than bonds. The unlisted real estate portfolio's share of the fund was 2.6 percent at year-end 2017. In 2016, the real estate asset class constituted 3.2 percent of the

fund. The reduction of 0.6 percentage point is mainly due to listed equities now being reported as part of the equity share, following a change in the management mandate issued by the Ministry of Finance. The share of unlisted real estate in the fund increased by 0.1 percentage point compared to year-end 2016.

#### *Concentration risk*

The GPFG has substantial investments in government-issued bonds.

Table 8.2 shows the largest holdings in bonds issued by governments. These include government bonds issued in local currency, sovereign bonds and inflation-linked bonds issued in local currency.

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Table 8.2 Largest holdings within the segment government bonds

Amounts in NOK million	Market value 31.12.2017	Amounts in NOK million	Market value 31.12.2016
US	607 651	US	579 357
Japan	190 956	Japan	161 544
Germany	119 591	Germany	137 231
UK	70 061	UK	88 983
France	63 517	Mexico	54 214
Spain	48 221	South Korea	51 995
Mexico	46 036	France	49 121
South Korea	45 425	Italy	43 339
Italy	42 150	Spain	34 926
Australia	34 860	India	30 695

The portfolio is also invested in companies which issue both equities and bonds. Table 8.3 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 8.3 Largest holdings excluding sovereigns, both bonds and equities

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

Amounts in NOK million, 31.12.2016	Sector	Equities	Bonds	Total
Nestlé SA	Consumer goods	50 985	710	51 696
Apple Inc	Technology	44 965	4 648	49 613
Royal Dutch Shell Plc	Oil and gas	46 153	3 287	49 440
Bank of America Corp	Finance	18 153	20 291	38 444
JPMorgan Chase & Co	Finance	23 211	14 998	38 209
Microsoft Corp	Technology	34 665	2 947	37 612
Alphabet Inc	Technology	36 566	955	37 521
Novartis AG	Health care	32 349	2 675	35 024
Roche Holding AG	Health care	32 896	2 110	35 005
Kreditanstalt für Wiederaufbau	Government-related	-	34 529	34 529



Table 8.4 shows the composition of the unlisted real estate asset class per sector. Following a change in the management mandate issued by the Ministry of Finance, listed real estate investments are now included in equity investments.

Table 8.4 Distribution of unlisted real estate investments per sector, percent

Sector	31.12.2017	31.12.2016
Office	58.2	63.6
Retail	19.4	12.0
Logistics	21.2	22.2
Other	1.1	2.2
Total	100.0	100.0

#### *Volatility and correlation risk*

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

The management mandate issued by the Ministry of Finance was changed from 1 January 2017. All of the fund's investments, including investments in unlisted real estate, are now included in the calculations for relative volatility and are measured against the fund's benchmark index consisting of global equity and bond indices. The limit for the fund's expected relative volatility, now including unlisted real estate, is still 1.25 percentage points.

The Barra Private Real Estate 2 (PRE2) model from MSCI is used to calculate the market risk for the fund's investments in unlisted real estate. As a general modelling issue there are few, if any, available historical prices for any specific property. 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 specific to location and type of property, and constructs synthetic time series of risk factor returns on a 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 8.5 and 8.6 present risk both in terms of the portfolio's absolute risk and the relative risk.

Table 8.5 Portfolio risk in terms of expected volatility, in percent

	Expected volatility, actual portfolio							
	31.12.2017	Min 2017	Max 2017	Average 2017	31.12.2016	Min 2016	Max 2016	Average 2016
Portfolio	10.8	10.7	11.2	11.0	10.6	10.2	10.7	10.5
Equities	13.6	13.6	14.1	14.0	14.0	12.9	14.1	13.7
Fixed income	9.4	9.4	9.8	9.7	9.7	9.6	10.3	10.0
Unlisted real estate <sup>1</sup>	12.0	11.9	12.7	12.5				

<sup>1</sup> Risk for the fund's investments in unlisted real estate is calculated separately from 2017.

Table 8.6 Relative risk measured against the fund's benchmark indices, expected relative volatility, in basis points

	Expected relative volatility							
	31.12.2017	Min 2017	Max 2017	Average 2017	31.12.2016	Min 2016	Max 2016	Average 2016
Portfolio <sup>1</sup>	33	31	35	33	34			
Equity and fixed-income portfolio					28	26	29	28

<sup>1</sup> Real estate is included in the framework for relative volatility in the new investment management mandate from 2017. Prior to 2017, the framework in the management mandate was based on the aggregated equity and fixed-income portfolio.

Risk measured as expected volatility indicates an expected annual value fluctuation in the fund of 10.8 percent, or approximately NOK 920 billion at the end of 2017, compared to 10.6 percent at the end of 2016. Expected volatility for the equity portfolio was 13.6 percent at year-end, down from 14.0 percent at the end of 2016, while expected volatility for the bond portfolio was 9.4 percent, down from 9.7 percent at year-end 2016. The increase in expected volatility for the fund in 2017 is mainly due to the increased share of equities in the portfolio.

The mandate for the GPFG specifies that expected relative volatility for the fund, including unlisted real estate, shall not exceed a limit of 1.25 percentage points. The measurement of risk and follow-up of the limit is performed based on the risk model described above. Expected relative volatility has increased to 33 basis points at the end of the year, from 28 basis points at year-end 2016, mainly due

to the inclusion of unlisted real estate in the volatility calculations.

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

Expected shortfall is a tail risk measure that measures the expected loss of a portfolio in extreme market situations. The expected shortfall measure provides an estimate of the annual expected loss for a given confidence level. Using historical simulations, relative returns of the current portfolio and benchmark are measured on a weekly basis over a sampling period of ten years. 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.

#### 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 of ten years, so that the measure can capture extreme market movements. A confidence level of 97.5 percent is used for the calculations.

The Executive Board has determined that the fund shall be managed in such a way that the annual expected shortfall does not exceed 3.75 percentage points. Expected shortfall is measured and monitored based on the risk model described above. At the end of the year, expected shortfall was 1.49 percentage points, compared to 0.87 percentage point at year-end 2016. The increase is mainly due to unlisted real estate being included in the risk measurement from 1 January 2017.

#### *Strengths and weaknesses*

The strength of these types of risk models is that one can estimate the risk in 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.

The model-based risk estimates are based on historical relationships in the markets and are expected to provide reliable forecasts in markets without significant changes in volatility and correlation.

Estimates will be less reliable in periods marked by significant changes in volatility and correlation. Calculated volatility gives a point estimate of risk and provides little information on the total risk profile and any tail risk. Annualisation means that it is assumed that volatility and the composition of the portfolio are constant over time. To compensate for these shortcomings, complementary models and methods are employed, such as stress tests and analyses of concentration risk and realised return.

#### Verification of models

Risk models used in estimating and controlling investment risk are continuously evaluated and veri-

fied for their ability to estimate risk. The special nature of the investment portfolio and the investment universe, as well as the GPF's long-term investment horizon are taken into account when evaluating the models.

#### CREDIT RISK

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

Table 8.7 Bond portfolio specified by credit rating

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

Amounts in NOK million, 31.12.2016	AAA	AA	A	BBB	Lower rating	Total
Government bonds	716 767	260 859	271 238	173 321	39 176	1 461 360
Government-related bonds	143 279	136 550	36 316	15 579	2 413	334 137
Inflation-linked bonds	109 025	9 493	3 662	12 459	6 175	140 814
Corporate bonds	5 290	59 469	219 333	297 198	9 856	591 146
Securitised bonds	126 001	16 054	2 010	3 499	-	147 564
<b>Total bonds</b>	<b>1 100 361</b>	<b>482 424</b>	<b>532 559</b>	<b>502 058</b>	<b>57 620</b>	<b>2 675 021</b>

During 2017, the share of holdings in government-related bonds and securitised bonds was reduced, while holdings in European and American corporate bonds increased. Government and government-related bonds, including inflation-linked bonds, amounted to 71.4 percent of the bond portfolio compared to 72.4 percent at year-end 2016, while corporate bonds increased to 23.7 percent of the bond portfolio at the end of 2017 from 22.1 percent at year-end 2016.

The share of bonds grouped under *Lower rating* increased to 2.5 percent of the bond portfolio at year-end 2017, compared to 2.2 percent at year-end 2016. This was mainly due to the downgrade of South Africa to this category as a result of lower growth forecasts and deterioration of fiscal policy.

Holdings of AAA bonds were relatively stable through the year and amounted to 41.1 percent of the bond portfolio at year-end 2017, unchanged from year-end 2016. AA bonds decreased to 15.4 percent at the end of 2017, compared to 18.0 percent at year-end 2016. Holdings of A bonds increased to 21.9 percent at year-end 2017 from 19.9 percent at year-end 2016. Defaulted bonds had a market value of NOK 109 million at year-end 2017, down from NOK 164 million at year-end 2016. The nominal size of defaulted bonds was NOK 14.9 billion at the end of 2017, compared to NOK 15.2 billion at year-end 2016. Defaulted bonds are grouped under *Lower rating*. The total bond portfolio's credit quality decreased slightly during the year.

Table 8.8 Bond portfolio by credit rating and currency, in percent

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

31.12.2016	AAA	AA	A	BBB	Lower rating	Total
US Dollar	23.8	2.8	6.6	8.6	0.3	42.1
Euro	11.0	6.2	2.2	5.1	0.2	24.7
Japanese Yen	-	-	6.6	-	-	6.6
British Pound	0.3	3.7	0.4	0.7	-	5.1
Canadian Dollar	1.6	1.1	0.3	0.3	-	3.3
Other currencies	4.4	4.2	3.8	4.1	1.6	18.1
<b>Total</b>	<b>41.1</b>	<b>18.0</b>	<b>19.9</b>	<b>18.8</b>	<b>2.2</b>	<b>100.0</b>

There were no credit derivatives in the portfolio at year-end 2017.

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

#### *Counterparty risk*

Counterparties are necessary to trade in the markets and to ensure effective management of liquidity, market and credit risk. Exposure to counterparty risk is related to trading in OTC derivatives and currency contracts, cleared OTC and listed derivatives, repurchase and reverse repurchase agreements, securities lending, securities posted as collateral in derivatives trades and participatory certificates. Unsecured deposits in banks are also defined as having counterparty risk. Such counterparty risk arises partly in connection with the daily cash management of the fund and 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 long settlement period are also defined as counterparty risk.

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

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

There are also requirements governing the way real estate transactions are conducted. Counterparty risk that arises is analysed in advance of the transaction and requires approval from the CRO. In 2017, 11 transactions were approved by the CRO through this process.

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

The methods used to calculate counterparty risk are in accordance with internationally recognised standards. Generally, the Basel regulations for banks are used for measuring counterparty risk, with certain adjustments based on internal analyses. The risk models calculate the expected counterparty exposure in the event of a counterparty default. For OTC derivatives and currency contracts, the current exposure method in the Basel regulations is applied. For each contract, the market value and a rate for potential future exposure is calculated. Netting agreements and collateral are taken into account in the calculation of net exposure.

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

Exposure to counterparty risk is related to counterparties in the settlement and custody systems, both for currency trades and for the purchase and sale of securities. Settlement risk for most currency trades is low. Settlement risk is reduced using the currency settlement system CLS (Continuous Linked Settlement), or by trading directly with custodians. In a few currencies, Norges Bank is exposed to settlement risk when the sold currency is delivered to the counterparty before the receipt

of currency is confirmed. This type of exposure is included on the line *OTC derivatives including foreign exchange contracts* in table 8.9.

Norges Bank Investment Management also invests in Saudi Arabian participatory certificates, which are instruments issued by registered foreign institutional investors to international investors. This instrument creates counterparty risk against the issuer of the note.

In table 8.9, exposure is broken down by type of activity/instrument associated with counterparty risk.

Total counterparty risk measured in terms of gross and net exposure has increased in 2017. Net risk exposure increased by NOK 4.9 billion to NOK 118.0 billion, and gross exposure increased by NOK 3.5 billion to NOK 123.8 billion.

The increase is mainly related to increased exposure from securities lending and Saudi Arabian participatory certificates, as well as reverse repurchase and repurchase agreements. Net risk exposure from securities lending increased to NOK 71.2 billion at year-end 2017 from NOK 64.0 billion at year-end 2016 and now comprises 60.3 percent of the fund's total net exposure. Both bonds and equities are lent through the securities lending programme, of which the bond share was 51 percent at year-end. The exposure from unsecured bank deposits was reduced by NOK 6.6 billion to NOK 14.0 billion at year-end 2017.

Table 8.9 Counterparty risk by type of position

Amounts in NOK million, 31.12.2017	Gross exposure	Effect of netting	Collateral and guarantees	Net exposure
Securities lending	72 275	-	1 125	71 150
Unsecured bank deposits <sup>1</sup>	14 008	-	-	14 008
OTC derivatives including foreign exchange contracts	16 937	5 254	-1 293	12 976
Cleared OTC and listed derivatives <sup>2</sup>	9 856	1 443	140	8 272
Participatory certificates	6 802	-	-	6 802
Repurchase and reverse repurchase agreements	3 802	428	-1 288	4 662
Settlement risk towards broker and long settlement transactions	119	-	-	119
<b>Total</b>	<b>123 799</b>	<b>7 126</b>	<b>-1 316</b>	<b>117 989</b>

Amounts in NOK million, 31.12.2016	Gross exposure	Effect of netting	Collateral and guarantees	Net exposure
Securities lending	64 908	-	868	64 040
Unsecured bank deposits <sup>1</sup>	20 570	-	-	20 570
OTC derivatives including foreign exchange contracts	19 347	3 667	2 608	13 071
Cleared OTC and listed derivatives <sup>2</sup>	8 003	1 183	-1 685	8 505
Participatory certificates	3 934	-	-	3 934
Repurchase and reverse repurchase agreements	3 523	492	149	2 882
Settlement risk towards broker and long settlement transactions	50	-	-	50
<b>Total</b>	<b>120 335</b>	<b>5 342</b>	<b>1 940</b>	<b>113 054</b>

<sup>1</sup> Includes bank deposits in non-consolidated real estate subsidiaries.

<sup>2</sup> Relates to futures trades and interest rate swaps cleared by a central clearing counterparty.

The line *OTC derivatives including foreign exchange contracts* in the table comprises foreign exchange derivatives, equity derivatives (excluding participatory certificates) and interest rate swaps.

Norges Bank's counterparties have a credit rating from independent credit rating agencies. An inter-

nal credit evaluation can only be used as the basis for counterparty approval in instances when the counterparty risk is considered low. Credit ratings for counterparties are monitored and complemented by alternative credit risk indicators.



Table 8.10 shows approved counterparties classified according to their credit rating category at year-end 2017. The table also includes brokers that are used when purchasing and selling securities.

Table 8.10 Counterparties by credit rating<sup>1</sup>

	Norges Bank's counterparties (excluding brokers)		Brokers	
	31.12.2017	31.12.2016	31.12.2017	31.12.2016
AAA	-	-	-	-
AA	30	30	30	28
A	63	58	77	72
BBB	11	15	16	24
BB	1	1	16	11
B	-	-	15	18
<b>Total</b>	<b>105</b>	<b>104</b>	<b>154</b>	<b>153</b>

<sup>1</sup> The table shows the number of legal entities, and the same legal entity can therefore be included in both brokers and counterparties.

The number of counterparties has remained stable during the year. There were 105 counterparties at year-end 2017, compared to 104 at year-end 2016. The number of brokers increased to 154 at year-end 2017 from 153 at year-end 2016. There was an improvement in the credit distribution of brokers and counterparties during the year.

#### LEVERAGE

Leverage may be used to ensure effective management of the investments within the equity and bond portfolios, but not with the aim of increasing the economic exposure to risky assets. The use of leverage is regulated both in the management mandate issued by the Ministry of Finance and in the investment mandate issued by the Executive Board of Norges Bank to Norges Bank Investment Management. 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 underlying exposure. When the exposure is greater than market value, the portfolio is leveraged.

The GPF's leverage was 0.7 percent for the aggregated equity and bond portfolio at the end of 2017, compared to 0.9 percent at the end of 2016. For the real estate portfolio, requirements are set in the investment mandate from the Executive Board in Norges Bank, limiting the maximum leverage of the portfolio to 35 percent. The real estate portfolio had a leverage of 7.1 percent at the end of 2017.

#### SALE OF SECURITIES NORGES BANK DOES NOT OWN

Sale of securities not owned by Norges Bank (short sales) can only be carried out if there are established borrowing agreements to cover a negative position. Such transactions are rarely undertaken, and no securities had been sold in this manner at year-end 2017.

## Note 9 Tax

### ACCOUNTING POLICY

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

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

Other income tax, not collected at source, is recognised in the income statement in the period the related income or gains arise and is presented in the balance sheet as a payable within *Other liabilities*, until it has been settled.

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

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

Table 9.1 shows tax expenses per type of investment and type of tax.

Table 9.1 Specification tax expense

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

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Amounts in NOK million, 2016	Gross income before taxes	Income tax on dividend, interest and fees	Capital gains tax	Other	Tax expense	Net income after taxes
<b>Income/expense from:</b>						
Equities	342 813	-3 887	-18	-	-3 905	338 908
Bonds	100 250	-62	-27	-	-89	100 161
Secured lending	4 013	-67	-	-	-67	3 946
Other	-	-	-	-	-	-
<b>Tax expense</b>		<b>-4 016</b>	<b>-45</b>	<b>-</b>	<b>-4 061</b>	

At the end of 2017, a receivable of NOK 2 589 million was recognised in the balance sheet related to refundable withholding tax, an increase from

NOK 600 million at year-end 2016. The GPFPG did not have any liability relating to tax payable at the end of 2017 or 2016.

## Note 10 Foreign exchange gains and losses

The fund invests in international securities in foreign currencies. The functional currency is the Norwegian krone (NOK). Transactions in foreign currency are recognised in the financial statements at 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.

In the income statement, the foreign exchange element linked to realised and unrealised gains and losses on assets and liabilities is disaggregated and presented on a separate line *Foreign exchange gains and losses*. Foreign exchange adjustments for the period are estimated based on the cost in foreign currency and changes in exchange rates between the time of purchase, or the previous balance sheet date for financial instruments purchased in earlier periods, and the balance sheet date. Upon realisation, the exchange rate at the transaction date is used.

### SIGNIFICANT ESTIMATE

Gains and losses on securities and financial derivatives are based on changes in the price of the security/instrument (before foreign exchange gains and losses) and changes in foreign exchange rates (foreign exchange gains and losses). These are presented separately in the income statement. The method of allocating total gains and losses in Norwegian kroner to a security element and a foreign exchange element is an estimate, as different methods will result in different allocations.

#### *Foreign exchange element*

Unrealised gains and losses due to changes in foreign exchange rates are calculated based on the cost of the holding in local 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 previous period, previously recognised gains and losses are deducted to arrive at the gain or loss for the current period. Similarly, for realised gains or losses, the exchange rate on the date of sale is used instead of the exchange rate at the balance sheet date, and previously recognised unrealised gains or losses for the holding are reversed in the current period.

#### *Security element*

Unrealised gains and losses from 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. Gains and losses recognised in previous periods are deducted to arrive at the gain or loss from security prices for the current period. Realised gains and losses from changes in security prices are based on the selling price as opposed to the price on the balance sheet date, and previously recognised unrealised gains or losses for the holding are reversed in the current period.

The market value of the fund in Norwegian kroner is impacted by changes in foreign exchange rates. See table 8.1 in note 8 *Risk* for an overview of the allocation of the GPFG's investments per asset class,

country and currency. The change in the market value of the fund due to changes in foreign exchange rates is presented in table 10.1.

Table 10.1 Specification foreign exchange gains and losses

Amounts in NOK million	2017	2016
Foreign exchange gains and losses - USD/NOK	-126 868	-17 535
Foreign exchange gains and losses - EUR/NOK	111 425	-76 762
Foreign exchange gains and losses - JPY/NOK	-8 367	2 459
Foreign exchange gains and losses - GBP/NOK	20 745	-114 266
Foreign exchange gains and losses - other	17 766	-99 995
<b>Foreign exchange gains and losses</b>	<b>14 701</b>	<b>-306 099</b>

Table 10.2 gives an overview of exchange rates at the balance sheet date for the main currencies the GPFG is exposed to.

Table 10.2 Exchange rates

	31.12.2017	31.12.2016	Percent change
US Dollar	8.18	8.61	-5%
Euro	9.82	9.08	8%
Japanese Yen	0.07	0.07	-2%
British Pound	11.06	10.64	4%

The fund's return is primarily measured 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 market value of the fund in

Norwegian kroner is impacted by changes in exchange rates, but this has no bearing on the fund's international purchasing power.

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## Note 11 Management costs

### ACCOUNTING POLICY

Management fee is recognised in the GPFG's income statement as an expense when incurred, but is cash settled in the following year. Management fee payable is a financial liability classified as a loan and 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 change in best estimate in the period is recognised in profit or loss.



Management costs comprise all costs relating to the management of the fund. These are mainly incurred in Norges Bank, as well as in subsidiaries of Norges Bank exclusively established as part of the management of the GPFG's investments in unlisted real estate.

### MANAGEMENT COSTS IN NORGES BANK

The Ministry of Finance reimburses Norges Bank for costs incurred in connection with the management of the GPFG, in the form of a management fee. The management fee is equivalent to the actual costs incurred by Norges Bank, including performance-based fees to external managers, and is expensed in the income statement line *Management fee*. Costs included in the management fee are specified in table 11.1.

Table 11.1 Management fee

Amounts in NOK million	2017		2016	
		Basis points		Basis points
Salary, social security and other personnel-related costs	1 325		1 177	
Custody costs	404		379	
IT services, systems, data and information	657		649	
Research, consulting and legal fees	252		261	
Other costs	251		244	
Allocated costs Norges Bank	161		161	
Base fees to external managers	755		638	
<b>Management fee excluding performance-based fees</b>	<b>3 804</b>	<b>4.8</b>	<b>3 509</b>	<b>4.9</b>
Performance-based fees to external managers	924		222	
<b>Total management fee</b>	<b>4 728</b>	<b>6.0</b>	<b>3 731</b>	<b>5.2</b>

**MANAGEMENT COSTS IN SUBSIDIARIES**

Management costs incurred in subsidiaries consist of operating 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 costs*, respectively. These costs are specified in table 11.2.

Table 11.2 Management costs, real estate subsidiaries

Amounts in NOK million	2017	2016
Salary, social security and other personnel-related costs	33	27
IT services, systems, data and information	42	36
Research, consulting and legal fees	23	19
Other costs	17	18
<b>Total management costs, real estate subsidiaries</b>	<b>116</b>	<b>100</b>
<i>Of which management costs non-consolidated subsidiaries</i>	<i>97</i>	<i>81</i>
<i>Of which management costs consolidated subsidiaries</i>	<i>19</i>	<i>19</i>

### UPPER LIMIT FOR REIMBURSEMENT OF MANAGEMENT COSTS

The Ministry of Finance has established an upper limit for the reimbursement of management costs and Norges Bank is only reimbursed for costs incurred within this limit. Performance-based fees to external managers are reimbursed in addition to this limit.

For 2017, the sum of total management costs incurred in Norges Bank and its subsidiaries, excluding performance-based fees to external managers, is limited to 7.5 basis points of average assets under management. 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 amount to NOK 3 920 million in 2017. This consists of management costs in Norges Bank of NOK 3 804 million, excluding performance-based fees to external managers, and management costs in subsidiaries of NOK 116 million. This corresponds to 5.0 basis points of assets under management on an annual basis.

Total management costs including performance-based fees to external managers amount to NOK 4 844 million in 2017. This corresponds to 6.2 basis points of assets under management on an annual basis.

### 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 cost limit.

Other operating costs incurred in non-consolidated companies are presented in the income statement line *Income/expense from unlisted real estate*. See table 6.3 in note 6 *Unlisted real estate* for further information. Other operating costs incurred in consolidated subsidiaries are expensed in the income statement line *Other costs*.



## Note 12 Secured lending and borrowing

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

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

### ACCOUNTING POLICY

#### *Income and expense from secured lending and borrowing transactions*

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

Table 12.1 specifies income and expense from secured lending and borrowing.

Table 12.1 Income/expense from secured lending and borrowing

Amounts in NOK million	2017	2016
Income/expense from secured lending	3 532	4 013
Income/expense from secured borrowing	-345	23
<b>Net income/expense from secured lending and borrowing</b>	<b>3 187</b>	<b>4 036</b>

#### ACCOUNTING POLICY

##### *Transferred financial assets*

Securities lent 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. As the counterparty has the right to sell or pledge the security, the security is considered transferred. Lent securities are therefore presented on separate lines in the balance sheet, *Equities lent* and *Bonds lent*. During the lending period, the underlying securities are accounting for in accordance with accounting policies for the relevant securities.

##### *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 designated at initial recognition as a financial asset measured at *fair value through profit or loss*.

##### *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 designated at initial recognition as a financial liability measured at *fair value through profit or loss*.

##### *Collateral received in the form of securities*

Collateral in the form of securities, received through secured lending and borrowing transactions, 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	31.12.2017	31.12.2016
Secured lending	185 046	134 338
<b>Total secured lending</b>	<b>185 046</b>	<b>134 338</b>
<b>Associated collateral in the form of securities (off balance sheet)</b>		
Equities received as collateral	52 413	31 983
Bonds received as collateral	134 430	106 400
<b>Total security collateral received related to lending</b>	<b>186 843</b>	<b>138 383</b>

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

Table 12.3 Transferred financial assets and secured borrowing

Amounts in NOK million	31.12.2017	31.12.2016
<b>Transferred financial assets</b>		
Equities lent	411 664	340 865
Bonds lent	591 277	454 735
<b>Total transferred financial assets</b>	<b>1 002 941</b>	<b>795 600</b>
<b>Associated cash collateral, recognised as liability</b>		
Secured borrowing	260 136	213 520
<b>Total secured borrowing</b>	<b>260 136</b>	<b>213 520</b>
<b>Associated collateral in the form of securities or guarantees (off balance sheet)</b>		
Equities received as collateral	573 127	388 340
Bonds received as collateral	232 465	236 471
Guarantees	12 537	9 701
<b>Total collateral received in the form of securities or guarantees related to transferred financial assets</b>	<b>818 129</b>	<b>634 512</b>

Certain amounts for the comparable years have been restated to conform to current year presenta-

tion in the tables above. This has no impact on the amounts recognised in the financial statements.

## 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 designated at initial recognition as financial assets/liabilities measured at *fair value through profit or loss*.

#### *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 more 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 are considered to be potentially not legally enforceable. Transactions under such contracts are shown together with unsettled trades in the column *Unsettled trades and assets/liabilities not subject to enforceable netting agreements*. Unsettled trades can be cancelled if the counterparty defaults before assets involved in the trade are transferred.

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

Table 13.1 Assets and liabilities subject to netting agreements

Amounts in NOK million, 31.12.2017	Amounts subject to enforceable master netting agreements					Unsettled trades and assets not subject to enforce- able netting agreements	Gross financial assets recog- nised in the balance sheet
	Assets in the balance sheet subject to netting	Financial liabilities related to same counter- party	Cash collateral received (recognised as liability)	Security collateral received (not recognised)	Assets after netting and collateral		
Description							
<b>ASSETS</b>							
Secured lending	120 952	-	91 571	29 382	-	64 094	185 046
Cash collateral posted	1 894	1 878	-	-	16	-	1 894
Financial derivatives	2 074	1 875	141	-	58	6 951	9 025
<b>Total</b>	<b>124 920</b>	<b>3 753</b>	<b>91 712</b>	<b>29 382</b>	<b>74</b>	<b>71 045</b>	<b>195 965</b>

Amounts in NOK million, 31.12.2017	Amounts subject to enforceable master netting agreements					Unsettled trades and liabilities not subject to enforce- able netting agreements	Gross financial liabilities recog- nised in the balance sheet
	Liabilities in the balance sheet subject to netting	Financial assets related to same counter- party	Cash collateral posted (recognised as asset)	Security collateral posted (not derecog- nised)	Liabilities after netting and collateral		
Description							
<b>LIABILITIES</b>							
Secured borrowing	202 291	-	91 571	110 337	383	57 845	260 136
Cash collateral received	740	740	-	-	-	5 064	5 804
Financial derivatives	3 919	1 875	1 342	-	701	-	3 919
<b>Total</b>	<b>206 950</b>	<b>2 615</b>	<b>92 913</b>	<b>110 337</b>	<b>1 084</b>	<b>62 909</b>	<b>269 859</b>

Description	Amounts subject to enforceable master netting agreements					Unsettled trades and assets not subject to enforceable netting agreements	Gross financial assets recognised in the balance sheet
	Amounts in NOK million, 31.12.2016	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)		
<b>ASSETS</b>							
Secured lending	121 263	-	106 368	14 895	-	13 075	134 338
Cash collateral posted	2 320	2 320	-	-	-	-	2 320
Financial derivatives	5 114	2 519	2 573	-	22	4 252	9 366
<b>Total</b>	<b>128 697</b>	<b>4 839</b>	<b>108 941</b>	<b>14 895</b>	<b>22</b>	<b>17 327</b>	<b>146 024</b>

Description	Amounts subject to enforceable master netting agreements					Unsettled trades and liabilities not subject to enforceable netting agreements	Gross financial liabilities recognised in the balance sheet
	Amounts in NOK million, 31.12.2016	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)		
<b>LIABILITIES</b>							
Secured borrowing	193 462	-	106 368	87 094	-	20 058	213 520
Cash collateral received	2 755	2 573	-	-	182	933	3 688
Financial derivatives	4 501	2 519	1 982	-	-	-	4 501
<b>Total</b>	<b>200 718</b>	<b>5 092</b>	<b>108 350</b>	<b>87 094</b>	<b>182</b>	<b>20 991</b>	<b>221 709</b>

## 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 GPF, 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 GPF. The GPF conducts all transactions at market terms.

### TRANSACTIONS WITH THE GOVERNMENT

The Ministry of Finance has placed funds for investment in the GPF 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. In accordance with the management mandate for the GPF, 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 GPF. The Ministry of Finance reimburses Norges Bank for costs incurred in connection with the management of the GPF in

the form of a management fee, see note 11 *Management costs*. In 2017, NOK 3.7 billion was deducted from the krone account to pay the accrued management fee for 2016 to Norges Bank.

Internal trades between the GPF and Norges Bank's foreign exchange reserves are presented as a net balance between the two reporting entities in the balance sheet lines *Other assets* and *Other liabilities*. At year-end 2017, the net balance between the portfolios represented an asset for the GPF of NOK 292 million. 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 GPF's investments in unlisted real estate. For an overview of the principal companies, see note 15 *Interests in other entities*. For more information regarding transactions with subsidiaries, see note 6 *Unlisted real estate*.

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## Note 15 Interests in other entities

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

The overall objective of the ownership structures used for unlisted real estate investments is to safeguard the financial wealth under management and

to ensure the highest possible net return after costs, in accordance with the mandate from the Ministry of Finance. The key criteria when deciding the ownership structure are legal protection, governance and operational efficiency. Tax expense may represent a significant cost for the unlisted real estate investments. Expected tax cost for the fund is therefore one of the factors considered when determining the ownership structure.





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

Table 15.1 Real estate companies

Company	Business address	Property address	Ownership share and voting right in percent	Effective ownership share of underlying properties in percent	Recognised from
<b>Non-consolidated companies</b>					
<b>United Kingdom</b>					
NBIM George Partners LP <sup>1</sup>	London	London	100.00	25.00	2011
MSC Property Intermediate Holdings Limited	London	Sheffield	50.00	50.00	2012
NBIM Charlotte Partners LP	London	London	100.00	57.75	2014
NBIM Edward Partners LP	London	London	100.00	100.00	2014
NBIM Caroline Partners LP	London	London	100.00	100.00	2015
NBIM James Partners LP	London	London	100.00	100.00	2015
NBIM Henry Partners LP	London	London	100.00	100.00	2016
NBIM Elizabeth Partners LP	London	London	100.00	100.00	2016
<b>Luxembourg</b>					
NBIM S.à.r.l.	Luxembourg	N/A	100.00	N/A	2011
<b>France</b>					
NBIM Louis SAS	Paris	Paris	100.00	50.00	2011
SCI 16 Matignon	Paris	Paris	50.00	50.00	2011
Champs Elysées Rond-Point SCI	Paris	Paris	50.00	50.00	2011
SCI PB 12	Paris	Paris	50.00	50.00	2011
SCI Malesherbes	Paris	Paris	50.00	50.00	2012
SCI 15 Scribe	Paris	Paris	50.00	50.00	2012
SAS 100 CE	Paris	Paris	50.00	50.00	2012
SCI Daumesnil	Paris	Paris	50.00	50.00	2012
SCI 9 Messine	Paris	Paris	50.00	50.00	2012
SCI Pasquier	Paris	Paris	50.00	50.00	2013
NBIM Marcel SCI	Paris	Paris	100.00	100.00	2014
NBIM Victor SCI	Paris	Paris	100.00	100.00	2016
NBIM Eugene SCI	Paris	Paris	100.00	100.00	2017

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

Company	Business address	Property address	Ownership share and voting right in percent	Effective ownership share of underlying properties in percent	Recognised from
<b>Germany</b>					
Die Welle 1 Frankfurt Immobilien GmbH & Co. KG	Cologne	Frankfurt	50.00	50.00	2012
Die Welle 3 Frankfurt Immobilien GmbH & Co. KG	Cologne	Frankfurt	50.00	50.00	2012
NKE Neues Kranzler Eck Berlin Immobilien GmbH & Co. KG	Cologne	Berlin	50.00	50.00	2012
Tower SZ Munich GmbH & Co. KG	Hamburg	Munich	50.00	50.00	2013
STEG LBG 2 S.C.S	Luxembourg	Munich	94.90	94.90	2014
STEG LBG 3 S.C.S	Luxembourg	Munich	94.90	94.90	2014
<b>Switzerland</b>					
NBIM Antoine CHF S.à r.l.	Luxembourg	Zürich	100.00	100.00	2012
<b>Europe</b>					
Prologis European Logistics Partners S.à r.l.	Luxembourg	Multiple European cities	50.00	50.00	2013
<b>United States</b>					
T-C 1101 Pennsylvania Venture LLC	Wilmington, DE	Washington	49.90	49.90	2013
T-C Franklin Square Venture LLC	Wilmington, DE	Washington	49.90	49.90	2013
T-C 33 Arch Street Venture LLC	Wilmington, DE	Boston	49.90	49.90	2013
T-C 470 Park Avenue South Venture LLC	Wilmington, DE	New York	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

Company	Business address	Property address	Ownership share and voting right in percent	Effective ownership share of underlying properties in percent	Recognised from
T-C Hall of States Venture LLC	Wilmington, DE	Washington	49.90	49.90	2014
SJP TS JV LLC	Wilmington, DE	New York	45.00	45.00	2015
T-C Republic Square Venture LLC	Wilmington, DE	Washington	49.90	49.90	2015
T-C 888 Brannan Venture LLC	Wilmington, DE	San Francisco	49.90	49.90	2015
Hudson Square Properties, LLC	Wilmington, DE	New York	48.00	48.00	2015
ConSquare LLC	Wilmington, DE	Washington	47.50	47.50	2016
100 First Street Member LLC	Wilmington, DE	San Francisco	44.00	44.00	2016
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
<b>Japan</b>					
TMK Tokyo TN1	Tokyo	Tokyo	70.00	70.00	2017
<b>Consolidated subsidiaries</b>					
<b>Singapore</b>					
NBRE Management Singapore Pte. Ltd.	Singapore	N/A	100.00	N/A	2015
<b>Japan</b>					
NBRE Management Japan Advisors K.K.	Tokyo	N/A	100.00	N/A	2015
<b>United Kingdom</b>					
NBRE Management Europe Limited	London	N/A	100.00	N/A	2016

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

In addition to the companies shown in table 15.1, Norges Bank has wholly-owned holding companies

established in connection with investments in unlisted real estate. These holding companies do not engage in any operations and do not own any properties directly. The holding companies have their business address either in the same country as the property, in connection with NBIM S.à r.l. in Luxembourg or in Norway for the holding companies established for Japanese property investments.

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 2017, 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 presents fairly, in all material respects, the financial position for the investment portfolio of the Government Pension Fund Global as at 31 December 2017, and its financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by EU.

  
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### *Basis for Opinion*

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

### *Key Audit Matters*

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial reporting for 2017. These matters were addressed in the context of our audit of the financial reporting as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

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

Key audit matter	How the matter was addressed in our audit
<p>Processes and control activities in the equity and fixed-income management related to amongst others trading, secured lending and borrowing, interest income and dividends, valuation, calculation of gains and losses, foreign currency translation and performance- and risk measurement are largely automated.</p> <p>Deviations in the automated processes are analysed and followed up.</p> <p>Norges Bank's IT systems are based on standard systems with varying degrees of customisation and modifications. The technical operation of the IT systems is largely outsourced to various service providers.</p> <p>IT systems used in portfolio management are essential for accounting and reporting.</p> <p>For a more detailed description of the development, management and operation of IT systems in Norges Bank, see chapter 5.1 Management organisation in the annual report 2017.</p> <p>Effective internal controls in the automated portfolio management processes as well as in handling deviations is vital to ensure accurate, complete and reliable financial reporting and is therefore a key audit matter.</p>	<p>Norges Bank has established overall governance models and control activities for evaluation of the equity and fixed-income management.</p> <p>We assessed those elements of the overall governance models that are relevant to financial reporting.</p> <p>We assessed and tested the design of selected control activities related to IT operations, change management and information security. We tested that a sample of these control activities had operated effectively in the reporting period.</p> <p>We assessed and tested the design of selected automated control activities for the IT systems related to trading, secured lending and borrowing, recognition of interest income and dividends, valuation, calculation of gains and losses, foreign currency translation and performance- and risk measurement. We tested that a sample of these control activities had operated effectively in the reporting period.</p> <p>We assessed and tested the design of selected manual control activities for the areas listed above related to analysis and the monitoring of deviations identified through the automated processes. We tested that a sample of these control activities had operated effectively in the reporting period.</p> <p>We assessed various third party confirmations (ISAE 3402 reports) received from service providers that Norges Bank uses in portfolio management, to assess whether these service providers had adequate internal controls in areas that are important for Norges Bank's financial reporting.</p> <p>We used our own IT specialists to understand the overall governance model for IT and in the assessment and testing of the control activities related to IT.</p>

**Valuation of investments in unlisted real estate**

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

**Risk and return disclosures**

Key audit matter	How the matter was addressed in the audit
<p>Returns are measured in Norwegian kroner and in foreign currency based on a weighted composition of currencies in the benchmark indices for equity and fixed-income investments.</p> <p>In the management mandate for the Government Pension Fund Global, there are several limits and restrictions for the management of the fund. The management mandate issued by the Ministry of Finance was changed from 1 January 2017. All of the Government Pension Fund Global's investments, including investments in unlisted real estate are now included in the calculations of relative volatility and are measured against the Government Pension Fund Global's reference index consisting of global equity and bond indices.</p> <p>Absolute and relative return information for the Government Pension Fund Global's equity and fixed-income investments is presented in note 3 Returns per asset class. Information regarding risk is presented in note 8 Risk.</p> <p>Measurement of absolute and relative returns and information regarding market risk, presented in note 8, tables 8.5 and 8.6 and in the section on volatility and correlation risk, is important information about the performance of, and risk associated with, management of the Government Pension Fund Global and is therefore a key audit matter.</p>	<p>Norges Bank has established various control activities related to the calculation of returns and market risk.</p> <p>We assessed and tested selected control activities related to the application of formulas in the calculations of returns, the consistency between accounting and performance measurement, and that external sources of information were accurate and correctly applied in the calculations.</p> <p>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.</p> <p>For information regarding market risk in note 8, tables 8.5 and 8.6, and in the section on volatility and correlation risk, we assessed whether the calculations were conducted in accordance with the calculation methods and assumptions as described in note 8. In addition, we assessed and tested the design of selected controls established by Norges Bank to monitor the service provider. We tested that a sample of these control activities had operated effectively in the reporting period.</p> <p>We collected and compared the reports from the service providers regarding market risk with the disclosures in note 8, tables 8.5 and 8.6, and the disclosures regarding expected shortfall in the section on volatility and correlation risk.</p> <p>We assessed whether the disclosures on returns in note 3 and the disclosures on market risk in note 8, tables 8.5 and 8.6, and in the section on volatility and correlation risk were adequate.</p>

### *Other information*

Management is responsible for the other information. The other information comprises the annual report for 2017, but does not include the financial reporting and our auditor's report thereon.

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

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

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

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

The Executive Board and management are responsible for the preparation and 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 objective is 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 these financial reporting.

As part of an audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including International Standards on Auditing (ISAs), we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error. We design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not



detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Norges Bank's internal control.
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- evaluate the overall presentation, structure and content of the financial reporting, including the disclosures, and whether the financial reporting represent the underlying transactions and events in a manner that achieves fair presentation.

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

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

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

Oslo, 7 February 2018  
Deloitte AS

Henrik Woxholt  
State Authorised Public Accountant

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





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