

FOREIGN EXCHANGE RESERVES

Management of Norges Bank's foreign exchange reserves

1 | 2019

MAY 2019

REPORT FOR
FIRST QUARTER 2019



NORGES BANK

Contents

- Management of the foreign exchange reserves 3
 - Foreign exchange reserves 4
 - Fixed income investments 4
 - Equity investments 6
 - Petroleum buffer portfolio 7
 - Financial risk 7
 - International commitments 7
- Key figures 9

NORGES BANK

QUARTERLY REPORT
1 | 2019

MANAGEMENT OF
NORGES BANK'S FOREIGN
EXCHANGE RESERVES

Management of the foreign exchange reserves

NORGES BANK

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MANAGEMENT OF
NORGES BANK'S FOREIGN
EXCHANGE RESERVES

The foreign exchange reserves shall be available for transactions in the foreign exchange market as part of the conduct of monetary policy or with a view to promoting financial stability and to meet Norges Bank's international commitments. The reserves are divided into an equity portfolio, a fixed income portfolio and a petroleum buffer portfolio.

The foreign exchange reserves may be invested in cash deposits, treasury bills and sovereign bonds, and equities listed on a regulated and recognised exchange. The fixed income portfolio's benchmark index is a market value-weighted index of all nominal government bonds with a residual maturity of between one month and 10 years issued by France, Germany,

Japan, the UK and the US. The equity portfolio's benchmark index is a tax-adjusted global equity index for medium- and large-sized companies limited to nine currencies. The strategic equity allocation of the total equity and fixed income portfolio is 20%.

The purpose of petroleum buffer portfolio is to provide for an appropriate management of the government's need for converting foreign currency and NOK, and to make transfers to and from the Government Pension Fund Global (GPF). The petroleum buffer portfolio is invested in short-term fixed income instruments. No benchmark index has been set for the petroleum buffer portfolio.

Main points from 2019 Q1

- The market value of Norges Bank's foreign exchange reserves was NOK 537.0bn at the end of 2019 Q1, an increase of NOK 22.9bn during the quarter.
- The return on the foreign exchange reserves was 3.3% in Q1, 12.4% on equity investments and 1.2% on fixed income investments.
- The size and liquidity of the foreign exchange reserves are regarded as sufficient for meeting Norges Bank's commitments.

Table 1 Key figures

	2019 Q1			Foreign exchange reserves
	Fixed income investments	Equity investments	Petroleum buffer portfolio	
<i>In billions of NOK</i>				
Market value (opening)	408.8	97.5	7.8	514.1
Market value (closing)	408.5	108.8	19.6	537.0
Change in market value	-0.3	11.4	11.8	22.9
Net transfers	-0.8	0.0	11.9	11.1
Return in NOK terms	0.5	11.4	-0.1	11.8

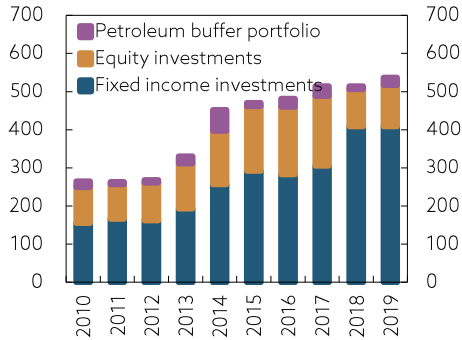
Table 2 Details of fixed income and equity investments

	2019 Q1		Total
	Fixed income investments	Equity investments	
<i>In billions of NOK</i>			
Return in NOK terms	0.5	11.4	11.9
Return in International currency terms	4.7	12.0	16.7
Movements in the krone exchange rate	-4.2	-0.7	-4.9
<i>In percent</i>			
Return in NOK terms	0.12	11.67	2.34
Return in International currency terms	1.16	12.44	3.33
Relative return in International currency terms	-0.03	0.02	-
Expected relative volatility in NOK terms (annualised)	0.03	0.09	-

Foreign exchange reserves

The market value of the foreign exchange reserves was NOK 537.0bn at the end of 2019 Q1. In all, the value increased by NOK 22.9bn during the quarter. Return measured in international currency terms increased the value by approximately 16.7bn, while a stronger krone resulted in a value reduction equivalent to NOK 4.9bn. During the quarter, a net inflow increased the foreign exchange reserves by the equivalent of NOK 11.1bn.

Chart 1 Composition of the foreign exchange reserves. In billions of NOK



INTERNATIONAL CURRENCY
The foreign exchange reserves are held for the purpose of crisis management. Movements in the krone exchange rate will affect Norges Bank's equity, but not the Bank's ability to meet its commitments in foreign currency. Therefore, unless stated otherwise, return will henceforth be measured in international currency. The petroleum buffer portfolio, which is not held for the purpose of crisis management, is excluded from the measurement of return.

Fixed income investments

The market value of the fixed income investments at the end of 2019 Q1 was NOK 408.5bn, a reduction of NOK 0.3bn since the end of 2018 Q4. The return in international currency terms was equivalent to approximately NOK 4.7bn, while a stronger krone reduced the value by NOK 4.2bn.

US sovereign yields fell in 2019 Q1. The decline was particularly pronounced during March. For the quarter as a whole, yields ended 25 basis points lower, but the decline in long-term yields was somewhat more pronounced than the decline in short-term yields. At the Federal Open Market Committee meeting in March, the Federal Reserve revised down growth projections for 2019 and 2020. The median projection for future policy rates was also revised down, and now implies no rate increases in 2019. By comparison, the median projection from December 2018 implied two rate hikes in 2019. Weaker global growth prospects, trade tensions between the US and China and persistent uncertainty regarding Brexit may have also increased demand for safe investments and contributed to the decline in US yields. Investments denominated in USD accounted for about 50% of the fixed income portfolio. The decline in government bond yields

and a positive contribution from current interest income explains the return of approximately 1.5% in domestic currency terms.

European government bond yields fell steadily over 2019 Q1. German and French 10-year yields fell by approximately 45 and 35 basis points, respectively, while shorter government bond yields fell somewhat less. The trend of weak key figures continued into 2019 and resulted in several official institutions, such as the IMF and the European Commission, substantially lowering their growth and inflation projections for 2019. At its monetary policy meeting in March, the European Central Bank (ECB) signalled that monetary policy would be more expansionary than expected in the period ahead. Together with the signals from the ECB, weak economic developments led to a marked decline in euro area yields and flatter sovereign yield curves. EUR-denominated investments accounted for about 34% of the fixed income portfolio. The return was 1.0% in domestic currency terms, primarily driven by the decline in government bond yields.

Developments in the Brexit negotiations continued to influence UK sovereign

yields in Q1. Long-term UK sovereign yields fell by over 20 basis points during the quarter, while short-term yields fell by somewhat less. Despite the failure of the Government to secure a majority vote for its Brexit agreement in the House of Commons and the high level of uncertainty related to the negotiations through Q1, UK sovereign yields fell by less than other safe yields. The decline in UK yields and positive current interest income earned a return on GBP-denominated investments of 1.0% in sterling terms.

Japanese sovereign yields largely tracked global developments in 2019 Q1. The 10-year yield remained relatively stable early in the period, but fell in pace with international developments thereafter. The 10-year yield ended the quarter at negative 8 basis points, its lowest since 2016. The Bank of Japan kept its monetary policy stance unchanged throughout the quarter. Like sterling investments, which account for about 8% of the fixed income portfolio, JPY-denominated investments earned a return of about 0.3% in JPY terms.

Table 3 Fixed income investment by currency at the end of Q1. Market value in billions of NOK

	Market value	Share	Duration	Yield
Total	408.5	100.00	3.63	1.09
EUR	139.0	34.03	4.09	-0.37
GBP	32.8	8.04	3.86	0.73
JPY	32.7	8.01	3.94	-0.21
USD	203.9	49.92	3.22	2.36

Chart 2 Principal and coupon due per year at the end of Q1. In billions of NOK

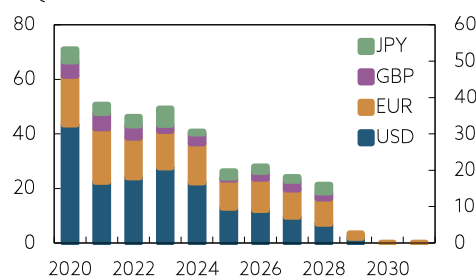


Table 4 Return on fixed income investments

	2019 Q1
<i>In international currency terms</i>	
Return (percent)	1.16
Return (millions of NOK)	4 711
<i>In NOK terms</i>	
Return (percent)	0.12
Return (millions of NOK)	482

Chart 3 Return measured in international currency terms. Fixed income investments. Percent

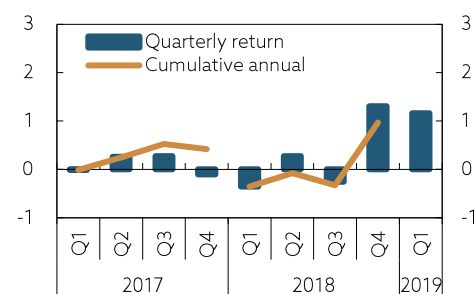
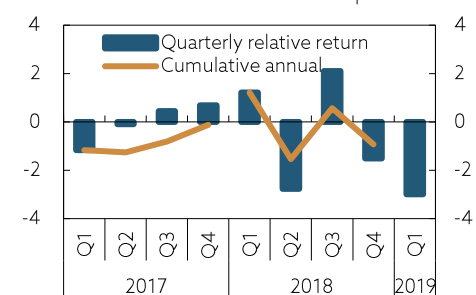


Table 5 Relative return on fixed income investments

	2019 Q1
<i>In international currency terms</i>	
Relative return (percentage points)	-0.03
Relative return (in millions of NOK)	-121

Chart 4 Relative return in international currency terms. Fixed income investments. Basis points



BENCHMARK INDEX

The benchmark index for fixed income investments is provided by Bloomberg and is a market value-weighted index of all nominal government bonds with a residual maturity of between one month and 10 years issued by France, Germany, Japan, the UK and the US. The currency weighting in the fixed income index is 50% USD, 34% EUR, 8% GBP and 8% JPY.

Equity investments

The market value of the equity investments was NOK 108.8bn at the end of 2019 Q1, an increase of NOK 11.4bn from 2018 Q4. The return in international currency terms was equivalent to approximately NOK 12.0bn, while a stronger krone reduced the value by NOK 0.7bn.

Equity markets recovered in 2019 Q1 following weak developments up to end-2018, with all sectors earning positive returns. Prospects for a lower rate path than expected by the Federal Reserve

and less turbulence associated with trade tensions between China and the US have contributed to the positive return.

North American equities posted the strongest return in Q1, 14.0%. European and Asian investments posted returns of 10.6% and 7.6%, respectively. Technology equities posted the strongest returns in Q1, 18.7%, while equities related to telecommunications posted the weakest, 7.3%.

Table 6 Equity investments excluding cash funds by industry at end-2019 Q1. In billions of NOK

	Market value	Share (%)
Oil and gas	6.8	6.2
Materials	4.1	3.8
Industrials	13.6	12.5
Consumer goods	11.9	10.9
Health care	14.1	12.9
Consumer services	12.7	11.6
Telecommunications	3.0	2.7
Utilities	2.9	2.7
Financials	22.2	20.4
Technology	17.7	16.3

Table 7 Equity investments by currency at end-2019 Q1. In billions of NOK

	Market value	Share (%)
AUD	2.7	2.4
CAD	3.3	3.0
CHF	3.6	3.3
DKK	0.7	0.7
EUR	12.1	11.1
GBP	7.0	6.4
JPY	10.4	9.5
SEK	1.1	1.0
USD	68.0	62.5

Table 8 Return on equity investments

	2019 Q1
<i>In international currency terms</i>	
Return (percent)	12.44
Return (in millions of NOK)	12 028
<i>In NOK terms</i>	
Return (percent)	11.67
Return (in millions of NOK)	11 373

Chart 5 Return in international currency terms. Equity investments. Percent.

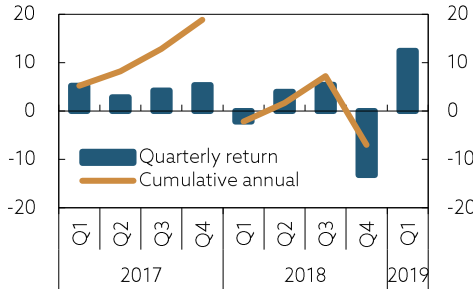
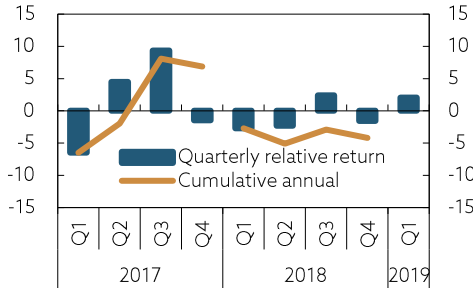


Table 9 Relative return on equity investments

	2019 Q1
<i>In international currency terms</i>	
Relative return (percentage points)	0.02
Relative return (in millions of NOK)	18

Chart 6 Relative return in international currency terms. Equity investments. Basis points



BENCHMARK INDEX

The benchmark index for equity investments is a tax-adjusted version of the FTSE All-World Developed Market Index, limited to euro area countries, the US, Japan, the UK, Canada, Australia, Switzerland, Sweden and Denmark.

Petroleum buffer portfolio

At the end of 2019 Q1, the market value of the petroleum buffer portfolio was NOK 19.6bn. During Q1, NOK 44.4bn worth of foreign exchange was purchased from the State's Direct Financial Interest (SDFI). At the same time, Norges Bank sold NOK 29.3bn

worth of foreign exchange in the market. In Q1, a total of NOK 7.8bn was transferred to the GPFG. At the same time, Norges Bank was paid a management fee of NOK 4.5bn, resulting in a net transfer to the GPFG of NOK 3.3bn.

Financial risk

The foreign exchange reserves are invested in foreign currency, while Norges Bank's liabilities are mainly denominated in NOK. This means that movements in the krone exchange rate will have a major impact on Norges Bank's earnings in NOK terms. A stronger krone will reduce the krone value of the foreign exchange reserves, while a weaker krone will increase the krone value. For the purpose of crisis management, however, the krone value of the foreign exchange reserves will be of secondary importance. Excluding changes in the krone value, the financial risk associated with the foreign exchange reserves comprises market, credit and counterparty risk.

The foreign exchange reserves' market risk is determined by the composition of investments and movements in equity prices, interest rates and credit spreads.

For equity and fixed income investments, expected absolute volatility at the end of 2019 Q1 excluding exchange rate movements was 10.5% and 1.3%, respectively. This corresponds to an expected annual fluctuation in value of approximately NOK 11bn and NOK 5bn, respectively. At the same time, expected relative volatility was 0.09 and 0.03 percentage points, for equity and fixed income investments, respectively.

Credit and counterparty risk is defined as the risk of losses if issuers or counterparties default on payment obligations. The credit risk on bond and Treasury bill investments in the foreign exchange reserves is low. According to credit ratings from Fitch, the US and German governments are rated AAA, the UK and French governments are rated AA, and the Japanese government is rated A.

Chart 7 Absolute volatility, excluding exchange rate movements. Foreign exchange reserves. Percent

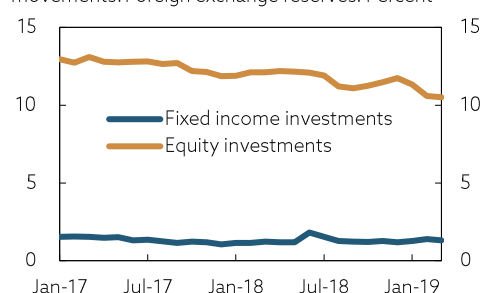
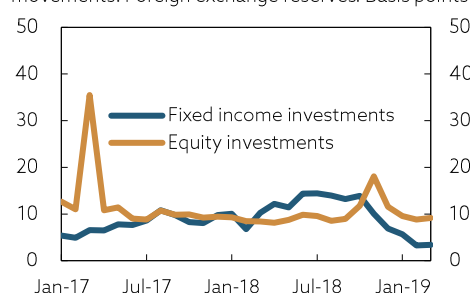


Chart 8 Relative volatility, including exchange rate movements. Foreign exchange reserves. Basis points



EXPECTED RELATIVE VOLATILITY

Under the Executive Board's principles for the foreign exchange reserves, maximum expected relative volatility is set at 0.5 percentage point for both fixed income and equity portfolios. Relative volatility of 50 basis points means that the excess return is expected to be within ± 0.5 percentage point in two out of three years.

International commitments

Pursuant to the Norges Bank Act, Norges Bank shall meet the commitments ensuing from membership of the IMF. This membership entails a standing commitment to furnish foreign exchange for IMF loans to other member

countries. See page 8 for an overview of Norges Bank's commitments to the IMF. The size and liquidity of the foreign exchange reserves are assessed to be sufficient to meet Norges Bank's international commitments.

OVERVIEW OF NORGES BANK'S COMMITMENTS TO THE IMF

QUOTA SUBSCRIPTIONS are the IMF's primary source of funding and reflect the member country's relative size in the global economy. In 2010, the IMF approved the 14th General Review of Quotas, under which IMF quota subscriptions doubled with effect from 2016. Norway's quota subscription increased to SDR 3 755m¹. At the end of 2019 Q1, the amount drawn² totalled SDR 504m (Chart 9). In Q1, an amount equivalent to SDR 53m was drawn on the quota by the IMF.

The **NAB** (New Arrangements to Borrow) represents the IMF's second line of defence. Under the NAB, a number of member countries and institutions are committed to lending additional resources to the IMF. At the same time as the quota increase, Norway's resource commitments under the NAB were reduced by approximately the same amount. Norges Bank's commitments under the NAB now amount to SDR 1967m (Chart 10). Total outstanding drawings were SDR 150m at the end of 2019 Q1. Repayments made under the NAB during the quarter totalled SDR 5m. Since the quota increase in 2016, the IMF funds all new loans by drawing on the quotas. The IMF's Executive Board must specifically decide to activate the NAB in order to fund new lending by drawing on the NAB. Payments for loans approved by the IMF before 26 February 2016 will continue to be partly funded by drawing on the NAB.

BILATERAL AGREEMENTS serve as the IMF's third line of defence after quota subscriptions and the NAB. In 2009, Norges Bank provided the IMF with a borrowing facility under a bilateral borrowing agreement of SDR 3 000m, which was continued under the NAB. In 2012, Norges Bank provided the IMF with a borrowing facility under a bilateral borrowing agreement of SDR 6 000m, to be drawn on only in very special circumstances. This agreement expired in November 2016 and was never drawn on. In April 2017, on behalf of the Ministry of Finance, Norges Bank signed a new bilateral agreement with the IMF for the same amount. The agreement is in effect until end-2019, with the possibility of a one-year extension. At the end of 2019 Q1, no amounts had been drawn on the new borrowing arrangement.

The **PRGT** (Poverty Reduction and Growth Trust), is an agreement signed by the Ministry of Finance and the IMF under which Norway will furnish SDR 300m in loan resources to the IMF's programme for low-income countries. Norges Bank is the agent for the loan and administers the commitments. This facility is now fully drawn, and under the agreement from 2010, only repayments will be made (Chart 11). Repayments made under the PRGT in 2019 Q1 totalled SDR 20m. In November 2016, a new borrowing agreement was signed under which Norway will provide the PRGT with an additional SDR 300m. At the end of 2019 Q1, no amounts had been drawn on the new borrowing agreements.

Loan resource commitments under the quota, NAB, bilateral agreements and the PRGT total SDR 12 021m, of which the IMF had drawn SDR 654m at the end of Q1. A further SDR 11 367m may thus be drawn under these arrangements (See Table 14 under Key figures for further details).

HOLDINGS OF SDRs are allocated by the IMF to member countries. Member countries may change their SDR holdings by purchasing from or selling to members who have voluntarily agreed to be a counterparty in SDR transactions. In 2009, Norges Bank entered into an agreement with the IMF on the voluntary purchase and sale of SDRs, as long as holdings remain within 50%-150% of SDR allocations. Thus, if other countries wish to sell SDRs, Norges Bank may have to increase holdings of SDRs to SDR 2 345m. Purchases of SDRs are charged to the foreign exchange reserves. The agreement also gives Norges Bank the right to sell SDRs. At the end of 2019 Q1, holdings of SDRs were SDR 1 567m (Chart 12).

Chart 9 IMF quota. In billions of SDRs

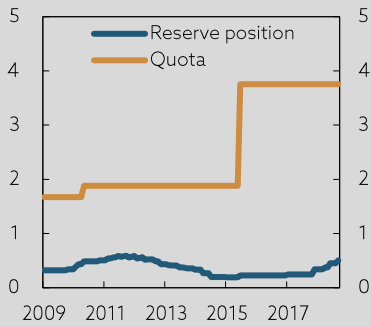


Chart 10 NAB. In billions of SDRs

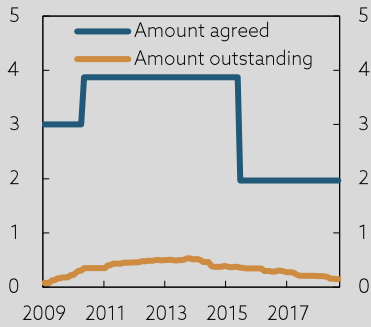


Chart 11 PRGT. In hundreds of millions of SDRs

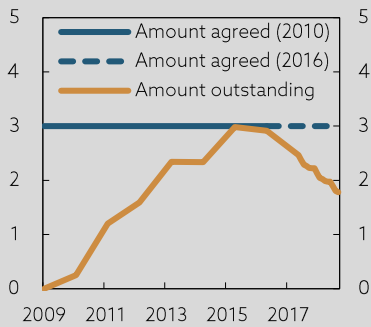
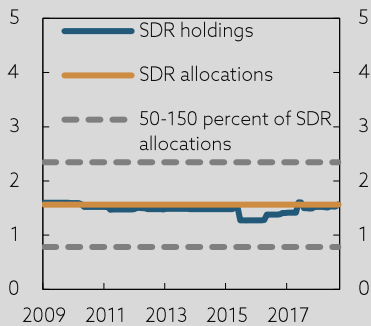


Chart 12 Holdings of SDRs. In billions of SDRs



¹ Special Drawing Rights (SDR). The SDR is an instrument the IMF can use to allocate international liquidity. The value of the SDR is based on a basket of five currencies: USD, EUR, JPY, GBP and CNY.
² The amount drawn is equal to Norway's reserve position in the IMF.

Key figures

NORGES BANK

QUARTERLY REPORT
1 | 2019

MANAGEMENT OF
NORGES BANK'S FOREIGN
EXCHANGE RESERVES

Table 10 Market value. In billions of NOK

	2019 Q1	2018 Q1	Full year 2018
Market value of fixed income and equity investments	517.4	472.5	-
Change in market value	11.1	-16.5	17.3
Net transfers	-0.8	1.5	-0.2
Return in NOK	11.9	-18.0	17.5
<i>Return in international currency</i>	16.7	-4.7	-3.7
<i>Change due to movements in krone exchange rate</i>	-4.9	-13.3	21.2
Market value of the petroleum buffer portfolio	19.6	26.5	-
Change in market value	11.8	1.2	-17.5
Net transfers	11.9	1.7	-18.3
<i>Foreign exchange purchases from the SDFI</i>	44.4	44.0	168.3
<i>Foreign exchange purchases in the market</i>	-29.3	-53.0	-157.5
<i>Transfers from the GPFG</i>	-3.3	10.7	-29.1
Return in NOK	-0.1	-0.5	0.8
Market value of the foreign exchange reserves	537.0	499.0	-

Table 11 Return in international currency terms. Percent

	2019 Q1	2018 Q1	Full year 2018
Return on fixed income investments	1.16	-0.35	0.97
Return on equity investments	12.44	-2.20	-6.99
Return on the foreign exchange reserves¹	3.33	-1.04	-0.78
Return on the benchmark index for fixed income investments	1.19	-0.37	0.98
Return on the benchmark index for equity investments	12.42	-2.17	-6.95
Relative return on fixed income investments	-0.03	0.01	-0.01
Relative return on equity investments	0.02	-0.03	-0.04

¹Excluding the petroleum buffer portfolio.

Table 12 Return in NOK terms. Percent

	2019 Q1	2018 Q1	Full year 2018
Return on fixed income investments	0.12	-2.82	4.91
Return on equity investments	11.67	-5.11	-2.88
Return on the foreign exchange reserves¹	2.34	-3.68	3.29
Return on the benchmark index for fixed income investments	0.15	-2.83	4.92
Return on the benchmark index for equity investments	11.65	-5.09	-2.84
Relative return on fixed income investments	-0.03	0.01	-0.01
Relative return on equity investments	0.02	-0.03	-0.04

¹Excluding the petroleum buffer portfolio.

Table 13 Key figures at quarter-end. Annualised data in international currency terms. Percent

	Past year	Past 3 years	Past 5 years	Past 10 years
Return on the foreign exchange reserves	3.60	4.52	4.34	7.56
<i>Fixed income investments</i>				
Return on fixed income investments	2.51	0.62	1.68	3.76
Return on the benchmark index	2.56	0.62	1.72	2.66
Relative return	-0.05	0.00	-0.04	1.11
Realised absolute volatility ¹	1.43	1.51	1.75	2.63
Realised relative volatility ¹	0.05	0.05	0.06	1.03
Information rate ²	-1.04	0.02	-0.66	1.07
<i>Equity investments</i>				
Return on equity investments	6.93	12.00	9.28	14.12
Return on the benchmark index	6.93	11.89	9.13	13.83
Relative return	0.00	0.11	0.15	0.28
Realised absolute volatility ¹	14.44	9.67	10.48	12.18
Realised relative volatility ¹	0.08	0.11	0.13	0.23
Information rate ²	0.01	1.02	1.10	1.25

¹ Realised volatility is a measure of the fluctuation in monthly return values, expressed here by the annualised empirical standard deviation. Absolute/relative volatility expresses risk related to absolute/relative return.

² IR is a risk-adjusted return measure. IR is the ratio between excess return and the portfolio's realised relative market risk (measured by relative volatility).

Table 14 Claims on and liabilities to the International Monetary Fund (IMF) at quarter-end. In millions of NOK

	Loan resource commitments ²	Recognised in the balance sheet			Total amount
		Drawn on commitments	Subscription ³	SDRs	
<i>Financial assets</i>					
IMF subscription (quota) ¹	-	-	44 949	-	44 949
Holdings of SDRs	-	-	-	18 761	18 761
Loans to the IMF - NAB	23 501	1 798	-	-	1 798
Loans to the IMF - Bilateral agreement	71 699	-	-	-	-
Loans to the IMF - PRGT	7 170	2 132	-	-	2 132
Claims on the IMF	-	3 929	44 949	18 761	67 639
<i>Financial liabilities</i>					
Krone liability to the IMF	-	-	38 919	-	38 919
Equivalent value of SDR allocations	-	-	-	18 713	18 713
Liabilities to the IMF	-	-	38 919	18 713	57 632
Net positions with the IMF	-	3 929	6 029	49	10 008

¹ The IMF allocates quotas to member countries, which primarily reflect member countries' relative size in the world economy. The quota provides the basis for determining the member country's voting power in the IMF, the member's financial contribution to the IMF, the amount of financing the member can access in the event of balance of payments problems and the amount of SDRs the member is allocated.

² Commitments giving the IMF a borrowing facility with Norges Bank up to an agreed amount. Only the portion drawn is recognised in the balance sheet. Norges Bank's commitments to the IMF are in SDRs; amounts have been translated into NOK.

³ The net subscription is referred to as the reserve tranche position (RTP) comprising Norway's IMF quota less Norway's krone liability to the IMF, i.e. the net amount at the bottom of the column.