

FOREIGN EXCHANGE RESERVES

Management of Norges Bank's foreign exchange reserves

3 | 2019

NOVEMBER 2019

REPORT FOR
THIRD QUARTER 2019



NORGES BANK

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Management of the foreign exchange reserves

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MANAGEMENT OF
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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 the 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 Q3

- The market value of Norges Bank's foreign exchange reserves was NOK 567.2bn at the end of 2019 Q3, an increase of NOK 25.5bn during the quarter.
- The return on the foreign exchange reserves was 1.1% in Q3, 1.9% on equity investments and 0.9% 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 Q3			Foreign exchange reserves	Year to date in 2019			Foreign exchange reserves
	Fixed income investments	Equity investments	Petroleum buffer portfolio		Fixed income investments	Equity investments	Petroleum buffer portfolio	
<i>In billions of NOK</i>								
Market value (opening)	412.1	112.3	17.2	541.7	408.8	97.5	7.8	514.1
Market value (closing)	433.7	120.7	12.9	567.2	433.7	120.7	12.9	567.2
Change in market value	21.5	8.4	-4.4	25.5	24.8	23.2	5.1	53.2
Net transfers	-1.6	0.0	-5.1	-6.6	-2.4	0.0	4.4	1.9
Return in NOK terms	23.1	8.4	0.7	32.2	27.3	23.2	0.7	51.2

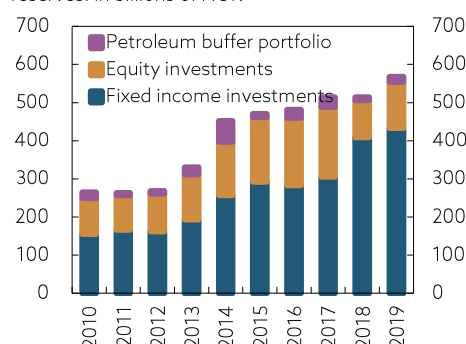
Table 2 Details of fixed income and equity investments

	2019 Q3			Total	Year to date in 2019			Total
	Fixed income investments	Equity investments			Fixed income investments	Equity investments		
<i>In billions of NOK</i>								
Return in NOK terms	23.1	8.4	31.5		27.3	23.2		50.5
Return in international currency terms	3.6	2.2	5.8		14.0	18.5		32.5
Movements in the krone exchange rate	19.5	6.2	25.7		13.2	4.8		18.0
<i>In percent</i>								
Return in NOK terms	5.63	7.45	6.02		6.72	23.85		10.02
Return in international currency terms	0.87	1.85	1.08		3.47	18.91		6.45
Relative return in international currency	-0.01	-0.04	-		-0.07	-0.05		-
Expected relative volatility in NOK terms (annualised)	0.02	0.07	-		-	-		-

Foreign exchange reserves

The market value of the foreign exchange reserves was NOK 567.2bn at the end of 2019 Q3. In all, the value increased by NOK 25.5bn during the quarter. A weaker krone resulted in an increase in value equivalent to NOK 25.7bn. Return measured in international currency terms increased the value by approximately NOK 5.8bn. During the quarter, a net outflow decreased the foreign exchange reserves by the equivalent of NOK 6.6bn.

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



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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 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 Q3 was NOK 433.7bn, an increase of NOK 21.5bn during the quarter. A weaker krone contributed to an increase of NOK 19.5bn in the value. The return in international currency terms amounted to NOK 3.6bn. Net outflows pulled down the value by NOK 1.6bn.

There were wide swings in US yields during 2019 Q3. US long-term yields ended the quarter 35 basis points lower, while short-term yields fell by somewhat less. This development may reflect a number of conditions. The Federal Reserve has steered monetary policy in a more expansionary direction by twice lowering the target range for the federal funds rate. As explanation for the cuts, the Chair of the Federal Reserve Board cited the need to insure against the downside risks from weak global growth and trade policy uncertainty. The escalation of trade tensions between the US and China also contributed to a marked decline in yields in August, which was partially reversed during the quarter. Investments denominated in USD accounted for 50% of the fixed income portfolio and earned a return of 1.1% in domestic currency terms. The decline in yields and a positive contribution from

current interest income explain the return.

European long-term yields fell to record low levels in August. During the quarter, long-term yields fell by just under 30 basis points, while short-term yields ended the quarter approximately unchanged. Owing to persistently weak developments in European key figures through summer, in September, the European Central Bank (ECB) announced a more expansionary monetary policy and at the same time communicated a greater need for fiscal policy measures in the euro area. This contributed to a particular increase in short-term yields towards the end of the quarter. EUR-denominated investments accounted for about 34% of the fixed income portfolio and, as a result of the fall in yields, earned a return of 0.6% in domestic currency terms. In isolation, negative current interest income pulled down the return.

UK long-term yields fell by approximately 40 basis points in 2019 Q3. The short-term UK yields also fell more than in the other markets. The decline in yields is largely attributable to persistent Brexit-related uncertainties. In its September Monetary Policy Committee announcement, the Bank of England's view of the UK economy was somewhat

more pessimistic, which also contributed to the decline in yields. The fall in UK yields and current interest income contributed to the 1.5% return on GBP-denominated investments, which account for 8% of the fixed income portfolio.

Japanese sovereign yields largely moved in pace with other international yields. The 10-year yield fell along with other safe yields during the escalation of trade

tensions in August and reached its lowest level ever, at negative 0.3%. Yields increased somewhat, reflecting the improvement of the trade policy environment over the quarter. Yields also increased somewhat when the Bank of Japan (BOJ) reduced the purchases of long-term government bonds in its asset purchase programme. JPY-denominated investments accounted for 8% of the fixed income portfolio and earned a return of 0.4% in JPY terms during the period.

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Table 3 Fixed income investments by currency at the end of Q3. Market value in billions of NOK

	Market value	Share	Duration	Yield
Total	433.7	100.0	3.74	0.64
EUR	147.5	34.0	4.26	-0.66
GBP	34.7	8.0	3.97	0.38
JPY	34.6	8.0	4.05	-0.37
USD	216.8	50.0	3.31	1.73

Chart 2 Principal and coupon due per year at the end of Q2. In billions of NOK

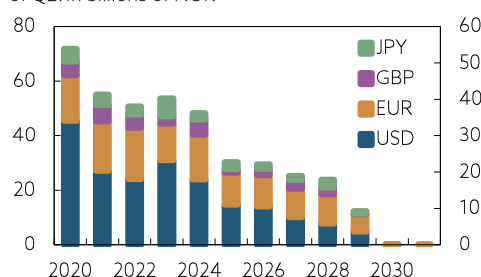


Table 4 Return on fixed income investments

	2019 Q3	Year to date in 2019
<i>In international currency terms</i>		
Return (percent)	0.87	3.47
Return (millions of NOK)	3 581	14 041
<i>In NOK terms</i>		
Return (percent)	5.63	6.72
Return (millions of NOK)	23 078	27 291

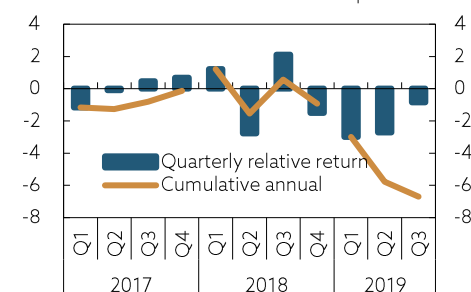
Chart 3 Return measured in international currency terms. Fixed income investments. Percent



Table 5 Relative return on fixed income investments

	2019 Q3	Year to date in 2019
<i>In international currency terms</i>		
Relative return (percentage points)	-0.01	-0.07
Relative return (millions of NOK)	-37	-270

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 at the end of 2019 Q3 was NOK 120.7bn, an increase of NOK 8.4bn over the quarter. A weaker krone increased the market value by NOK 6.2bn. The return in international currency terms amounted to NOK 2.2bn.

The return on equities was positive despite relatively weak figures for global industrial activity during the quarter. Actual and expected monetary policy easing in the US and the euro area, and significant falls in long-term yields have

Table 6 Equity investments excluding cash funds by industry at end-2019 Q3. In billions of NOK

	Market value	Share (%)
Oil and gas	6.5	5.4
Materials	4.4	3.7
Industrials	15.1	12.5
Consumer goods	13.5	11.2
Health care	15	12.4
Consumer services	14.2	11.8
Telecommunications	3.3	2.7
Utilities	3.4	2.8
Financials	25.1	20.8
Technology	20.2	16.7

Table 8 Return on equity investments

	2019 Q3	Year to date in 2019
<i>In international currency terms</i>		
Return (percent)	1.85	18.91
Return (in millions of NOK)	2 199	18 468
<i>In NOK terms</i>		
Return (percent)	7.45	23.85
Return (in millions of NOK)	8 373	23 242

Table 9 Relative return on equity investments

	2019 Q3	Year to date in 2019
<i>In international currency terms</i>		
Relative return (percentage points)	-0.04	-0.05
Relative return (in millions of NOK)	-44	-47

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.

likely also affected global equity prices. There was also uncertainty regarding trade policy negotiations between the US and China, and Brexit.

Asian equities posted the strongest return in Q3, 3.4%. North American and European investments posted returns of 2.5% and negative 0.8%, respectively. The electricity and water supply sector posted the highest return in Q3, 7.6%, while equities related to oil and gas posted the weakest, negative 4.7%.

Table 7 Equity investments by currency at end-2019 Q3. In billions of NOK

	Market value	Share (%)
AUD	3.1	2.5
CAD	3.6	3.0
CHF	4.1	3.4
DKK	0.8	0.6
EUR	13.7	11.4
GBP	6.9	5.7
JPY	11.3	9.3
SEK	1.2	1.0
USD	76.1	63.0

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

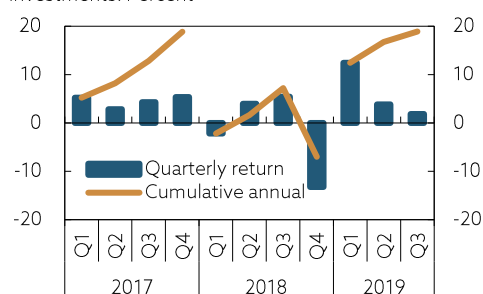
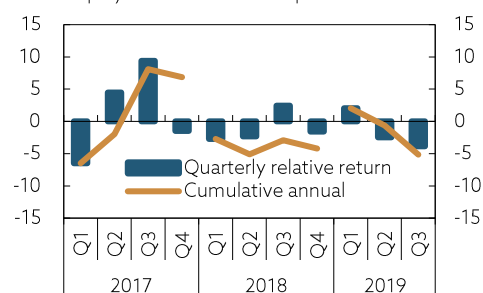


Chart 6 Relative return in international currency terms. Equity investments. Basis points



Petroleum buffer portfolio

At the end of 2019 Q3, the market value of the petroleum buffer portfolio was NOK 12.9bn. During Q3, NOK 29.2bn worth of foreign exchange was purchased from the State's Direct

Financial Interest (SDFI). At the same time, Norges Bank sold NOK 39.5bn worth of foreign exchange in the market. In Q3, a total of NOK 5.2bn was transferred to the GPFG.

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.

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

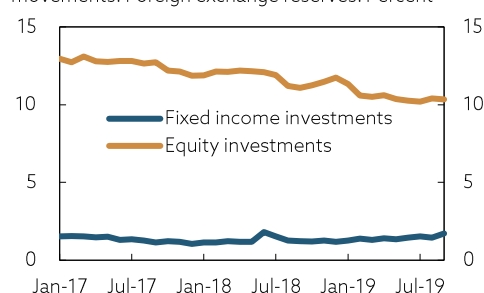
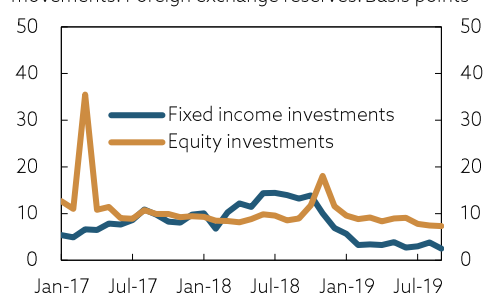


Chart 8 Relative volatility, including exchange rate movements. Foreign exchange reserves. Basis points



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 3755m.¹ At the end of 2019 Q3, the amount drawn totalled SDR 590m, an increase of SDR 64m (Chart 9).²

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 129m at the end of 2019 Q3. Repayments made under the NAB during the quarter totalled SDR 21m. 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 agreement of SDR 3000m, which was continued under the NAB. In 2012, Norges Bank provided the IMF with a borrowing facility under a bilateral borrowing agreement of SDR 6000m, 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, which will remain in effect until end-2019, with the possibility of a one-year extension. In June 2019, the Ministry of Finance approved Norges Bank's extension of the agreement for one year. At the end of 2019 Q3, no amounts had been drawn on the new borrowing agreement.

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 Q3 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 Q3, no amounts had been drawn on the new borrowing agreement.

Loan resource commitments under the quota, NAB, bilateral agreements and the PRGT total SDR 12021m, of which the IMF had drawn SDR 719m at the end of 2019 Q3. A further SDR 11303m may thus be drawn under these arrangements (see Table 14 under Key figures).

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 2345m. 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 Q3, holdings of SDRs were SDR 1677m, an increase of SDR 116m (Chart 12).

Chart 9 IMF quota. In billions of SDRs

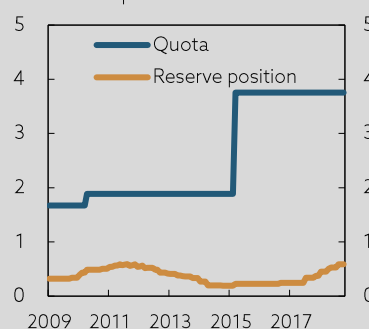


Chart 10 NAB. In billions of SDRs

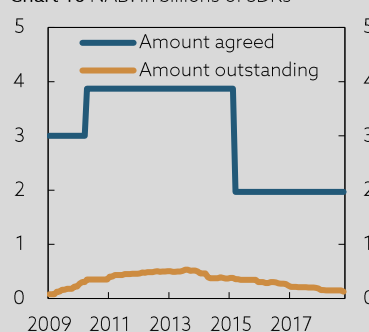


Chart 11 PRGT. In hundreds of millions of SDRs

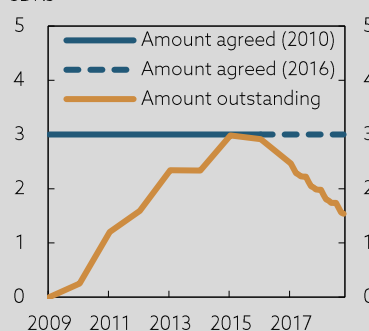
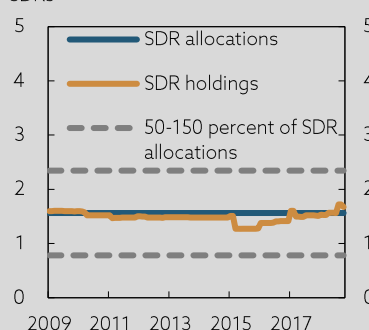


Chart 12 Holdings of SDRs. In billions of SDRs



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

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Table 10 Market value. In billions of NOK

	2019 Q3	2019 Q1-Q3	2018 Q3	2018 Q1-Q3
Market value of fixed income and equity investments	554.4	-	493.1	-
Change in market value	29.9	48.1	7.1	4.1
Net transfers	-1.6	-2.4	0.3	0.6
Return in NOK	31.5	50.5	6.8	3.5
<i>Return in international currency</i>	5.8	32.5	9.3	12.4
<i>Change due to movements in the krone exchange rate</i>	25.7	18.0	-2.5	-8.8
Market value of the petroleum buffer portfolio	12.9	-	9.9	-
Change in market value	-4.4	5.1	-6.3	-15.4
Net transfers	-5.1	4.4	-6.3	-15.5
<i>Foreign exchange purchases from the SDFI</i>	29.2	111.1	42.1	120.6
<i>Foreign exchange purchases from the market</i>	-39.5	-103.0	-36.0	-136.0
<i>Transfers from the GPFG</i>	5.2	-3.8	-12.4	-0.2
Return in NOK	0.7	0.7	0.1	0.1
Market value of the foreign exchange reserves	567.2	-	503.0	-

Table 11 Return in international currency terms. Percent

	2019 Q3	2019 Q1-Q3	2018 Q3	2018 Q1-Q3
Return on fixed income investments	0.87	3.47	-0.25	-0.33
Return on equity investments	1.85	18.91	5.45	7.21
Return on the foreign exchange reserves¹	1.08	6.45	1.91	2.50
Return on benchmark index for fixed income investments	0.88	3.54	-0.27	-0.34
Return on benchmark index for equity investments	1.89	18.96	5.43	7.23
Relative return on fixed income investments	-0.01	-0.07	0.02	0.01
Relative return on equity investments	-0.04	-0.05	0.02	-0.03

¹Excluding the petroleum buffer portfolio

Table 12 Return in NOK terms. Percent

	2019 Q3	2019 Q1-Q3	2018 Q3	2018 Q1-Q3
Return on fixed income investments	5.63	6.72	-0.81	-2.18
Return on equity investments	7.45	23.85	5.01	5.54
Return on the foreign exchange reserves¹	6.02	10.02	1.40	0.72
Return on benchmark index for fixed income investments	5.64	6.79	-0.83	-2.19
Return on benchmark index for equity investments	7.49	23.90	4.98	5.57
Relative return on fixed income investments	-0.01	-0.07	0.02	0.01
Relative return on equity investments	-0.04	-0.05	0.02	-0.03

¹Excluding the petroleum buffer portfolio

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

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	Past year	Past 3 years	Past 5 years	Past 10 years
Return on the foreign exchange reserves	3.04	4.56	4.26	5.65
<i>Fixed income investments</i>				
Return on fixed income investments	4.82	1.08	1.72	2.70
Return on the benchmark index	4.91	1.09	1.76	2.35
Relative return	-0.08	-0.02	-0.04	0.34
Realised absolute volatility ¹	1.60	1.67	1.77	2.21
Realised relative volatility ¹	0.04	0.05	0.06	0.40
Information rate ²	-1.92	-0.30	-0.66	0.86
<i>Equity investments</i>				
Return on equity investments	3.16	11.75	9.31	11.00
Return on benchmark index	3.22	11.68	9.20	10.79
Relative return	-0.06	0.06	0.11	0.21
Realised absolute volatility ¹	17.19	10.84	11.19	11.59
Realised relative volatility ¹	0.11	0.12	0.14	0.22
Information rate ²	-0.57	0.56	0.81	0.97

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 Information rate (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			
		Drawn on commitments	Subscription ³	SDRs	Total amount
<i>Financial assets</i>					
IMF subscription (quota) ¹	-	-	46 555	-	46 555
Holdings of SDRs	-	-	-	20 794	20 794
Loans to the IMF – NAB	24 348	1 596	-	-	1 596
Loans to the IMF – Bilateral agreement	74 282	-	-	-	-
Loans to the IMF – PRGT	7 428	1 910	-	-	1 910
Claims on the IMF	-	3 507	46 555	20 794	70 856
<i>Financial liabilities</i>					
Krone liability to the IMF	-	-	39 243	-	39 243
Equivalent value of SDR allocations	-	-	-	19 381	19 381
Liabilities to the IMF	-	-	39 243	19 381	58 624
<i>Net positions with the IMF</i>					
Net positions with the IMF	-	3 507	7 312	1 413	12 232

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