

FOREIGN EXCHANGE RESERVES

Management of the foreign exchange reserves

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MANAGEMENT OF THE FOREIGN EXCHANGE RESERVES

The foreign exchange reserves are to 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-weighted index of all nominal government bonds with a residual maturity of between one month and 10 years issued by China, 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 2022 Q2

- The market value of the foreign exchange reserves at the end of 2022 Q2 was NOK 668.3bn, an increase of NOK 66.0bn since 2022 Q1.
- The return on the foreign exchange reserves was -4.4% in international currency terms. The return on equity investments was -14.4%, while the return on fixed income investments was -1.9%. In NOK terms, the return on the foreign exchange reserves was 4.5%.
- The size and liquidity of the foreign exchange reserves are regarded as sufficient for meeting Norges Bank's commitments.

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. The petroleum buffer portfolio, which is not held for the purpose of crisis management, is excluded from the measurement of return.

Foreign exchange reserves

The market value of the foreign exchange reserves was NOK 668.3bn at the end of 2022 Q2. The value increased by NOK 66.0 in Q2. A weaker krone increased the value by NOK 57.2bn, while return in international currency terms reduced the value by NOK 25.5bn. Net transfers amounted to NOK 34.2bn. So far in 2022, the market value has increased by NOK 21.9bn.

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

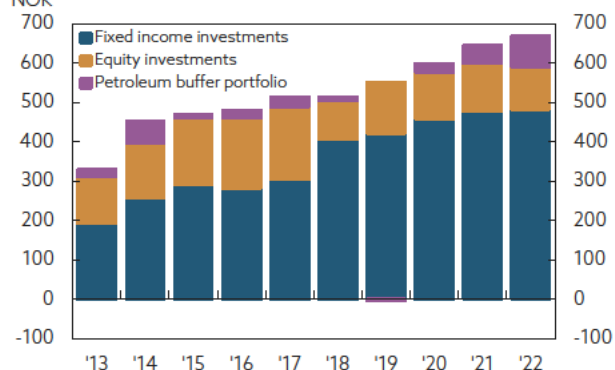


Table 1-1 Market value

	2022 Q2			Foreign exchange reserves	2022			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)	454.2	113.9	34.3	602.4	477.7	122.0	46.8	646.5
Market value (closing)	484.4	107.7	76.3	668.3	484.4	107.7	76.3	668.3
Change in market value	30.2	-6.2	42.0	66.0	6.7	-14.3	29.5	21.9
Net transfers	-1.8	0.0	36.0	34.2	-0.8	0.0	26.2	25.4
Return in NOK terms	31.9	-6.2	6.0	31.7	7.5	-14.3	3.3	-3.6

Table 1-2 Details of fixed income and equity investments

	2022 Q2			Total	2022			Total
	Fixed income investments	Equity investments			Fixed income investments	Equity investments		
<i>In billions of NOK</i>								
Return in NOK terms		31.9	-6.2	25.7	7.5	-14.3		-6.8
Return in international currency		-8.6	-16.9	-25.5	-23.2	-23.3		-46.5
Movements in the krone exchange rate		40.6	10.7	51.2	30.7	9.0		39.7
<i>In percent</i>								
Return in international currency terms		-1.9	-14.4	-4.4	-4.9	-18.8		-7.7
Return in NOK terms		7.0	-5.5	4.5	1.6	-11.7		-1.1
Relative return in NOK terms		0.02	0.05	-	0.04	0.07		-
Expected relative volatility in NOK terms (annualised)		0,03	0,06					-

Fixed income investments

The market value of the fixed income portfolio was NOK 484.4bn at the end of 2022 Q2, an increase of NOK 30.2bn from the previous quarter. A weaker krone increased the value by NOK 40.6bn, while return in international currency terms reduced the value by NOK 8.6bn, equivalent to -1.9%. Net outflows from the fixed income portfolio amounted to NOK 1.8bn, owing to transactions with the IMF.

Chart 1-2 Return in international currency terms. Fixed income investments. Percent

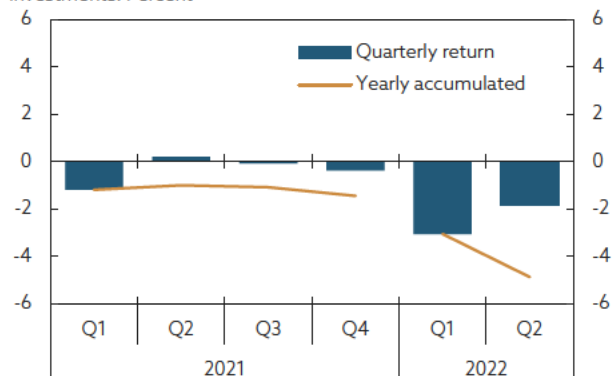


Chart 1-3 Relative return in NOK terms. Fixed income investments. Basis points

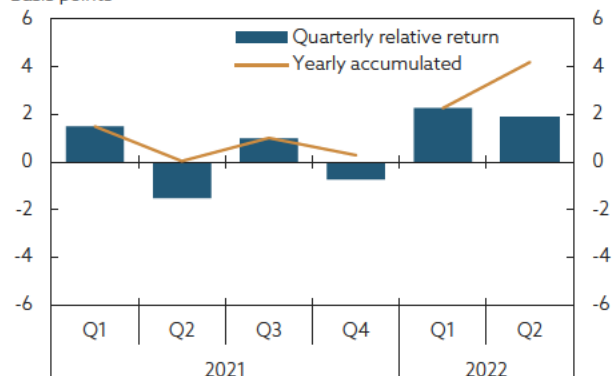
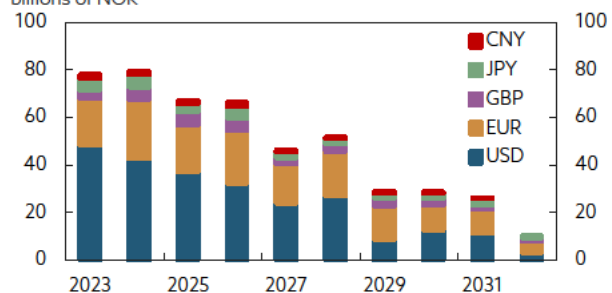


Table 1-3 Fixed income investments by currency at the end of 2022 Q2. Market value in billions of NOK

	Market value	Share	Duration	Yield
Total	484.35	100.00	3.69	1.95
CNY	9.66	1.99	3.40	2.36
EUR	165.28	34.12	4.14	0.94
GBP	33.88	6.99	4.26	1.95
JPY	33.76	6.97	3.72	0.01
USD	241.77	49.92	3.32	2.90

Chart 1-4 Principle and coupon due per year at the end of 2022 Q2. In billions of NOK



US The sharp rise in US government bond yields continued through 2022 Q2. Both two- and 10-year yields rose by between 60 and 70 basis points. The yield curve ended the quarter marginally steeper. Investments denominated in USD earned a return of -1.4% in Q2. The primary reason for the negative return was the rise in yields during the period.

EUROPE European sovereign yields rose in 2022 Q2. German two-year yields were slightly negative at the beginning of Q2 but rose above 1% before falling somewhat towards the end of the quarter. During the period, the 10-year yield was over 1.5%, the highest level since 2014. Investments denominated in EUR earned a return of -3.0% in Q2, primarily owing to the rise in yields.

UK UK government bond yields rose along the entire yield curve in 2022 Q2. During Q2, the Bank of England's policy rate was raised twice and is now 1.25%. Investments denominated in GBP earned a return of -1.8% in Q2, primarily owing to the rise in yields.

JAPAN Short-term Japanese yields remained broadly unchanged while long-term yields rose in 2022 Q2. Investments denominated in JPY earned a return of -0.1% in Q2.

CHINA In 2022 Q2, short-term Chinese yields fell while long-term yields rose. The Chinese 10-year yield ended the quarter slightly above 2.9%. Investments denominated in CNY earned a return of 0.7%, primarily owing to current interest income.

Equity investments

The market value of the equity portfolio was NOK 107.7bn at the end of 2022 Q2, a decrease of NOK 6.2bn since the end of 2022 Q1. The return in international currency terms reduced the market value by NOK 16.9bn. A weaker krone increased the value of the portfolio by NOK 10.7bn.

The return on the equity portfolio was -14.4% in Q2, in international currency terms. North American equities posted a return of -15.0%, European equities, -12.7% and Asian equities, -12.1%. The technology sector posted the weakest return in Q2, -20.5% and also made the largest contribution to the return on the portfolio. Equities in the consumer goods sector posted the strongest return in Q2, -2.5%.

Chart 1-5 Return in international currency terms. Equity investments. Percent

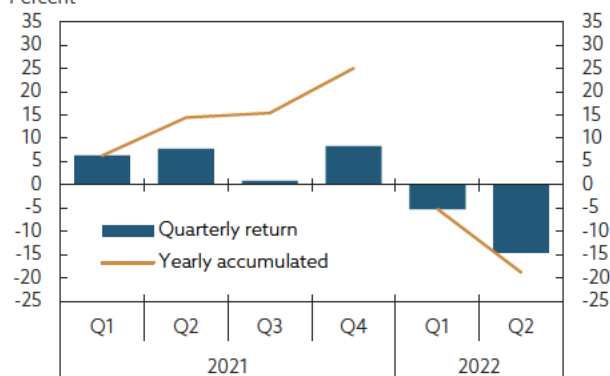


Chart 1-6 Relative return in NOK. Equity investments. Basis points



Table 1-4 Equity investments by sector. At the end of 2022 Q2. In billions of NOK

	Market value	Share
Materials	4	3 %
Consumer discretionary	15	14 %
Consumer staples	7	7 %
Energy	4	4 %
Financials	15	14 %
Health care	16	15 %
Industrials	14	13 %
Real estate	3	3 %
Technology	24	22 %
Telecommunications	4	3 %
Utilities	3	3 %

Table 1-5 Equity investments by currency. At the end of 2022 Q2. In billions of NOK

	Market value	Share
AUD	3	2 %
CAD	3	3 %
CHF	3	3 %
DKK	1	1 %
EUR	10	9 %
GBP	4	4 %
JPY	8	8 %
SEK	1	1 %
USD	75	69 %

Petroleum buffer portfolio

The market value of the petroleum buffer portfolio was NOK 76.3bn at the end of 2022 Q2, an increase of NOK 42.0bn for the quarter. During Q2, NOK 145.6bn worth of foreign exchange was purchased from the State's Direct Financial Interest (SDFI), and NOK 215.2bn worth of foreign exchange was transferred to the GPF from the petroleum buffer portfolio. At the same time, Norges Bank purchased NOK 105.6bn worth of foreign exchange in the market.

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 considerable 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 2022 Q2, excluding exchange rate movements, was 20.5% and 2.9%, respectively. This corresponds to an expected annual fluctuation in value of approximately NOK 22.1bn and NOK 14.2bn, respectively. At the same time, expected relative volatility for equity and fixed income investments was 0.06 and 0.03 percentage point, respectively.

EXPECTED RELATIVE VOLATILITY

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

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. The lowest credit ratings from the three largest rating agencies Fitch, Moody's and Standard & Poor's, are equivalent to AAA for the German government, AA+ for the US government, AA for the French government, AA- for the UK government, A+ for the Chinese government and A for the Japanese government.

Chart 1-7 Absolute volatility, excluding exchange rate movements. Foreign exchange reserves. Percent

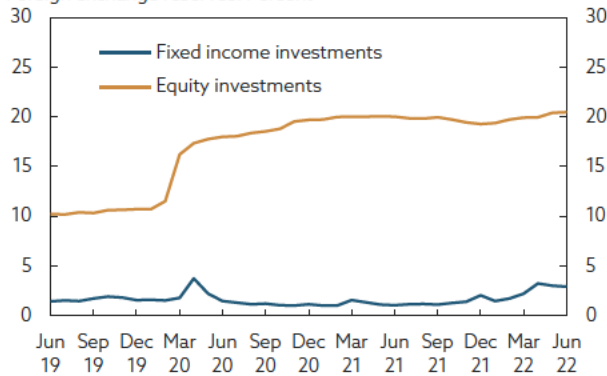
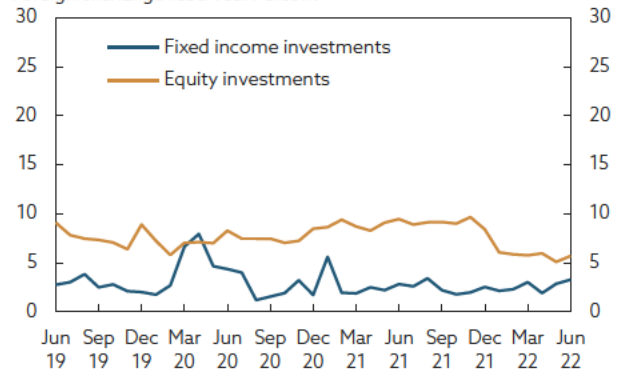


Chart 1-8 Absolute volatility, including exchange rate movements. Foreign exchange reserves. Percent



COMMITMENTS TO THE IMF

Pursuant to the Central Bank Act, Norges Bank shall meet the commitments ensuing from membership of the International Monetary Fund (IMF). This membership entails a standing commitment to furnish foreign exchange for IMF loans to member countries.

Loan resource commitments under the quota, the New Arrangements to Borrow (NAB), bilateral agreements and the Poverty Reduction and Growth Trust (PRGT)¹ totalled SDR 10 673m on 30 June 2022. At the end of 2022 Q2, the IMF had drawn SDR 1 414m. The total remaining amount that can be drawn under these arrangements is SDR 9 581m. The quota subscription, which determines a country's standing in the IMF, applies to all member countries, but participation in the funding of the IMF's borrowing arrangements is voluntary. The size and liquidity of the foreign exchange reserves are assessed to be sufficient to meet Norges Bank's international commitments.

Table 2-1 Details of lending programmes. Figures in thousands of SDRs

	Agreed amount	Amount outstanding	Amount remaining	Change in amount outstanding	
				2022 Q2	2022
Total	10 673 080	1 414 364	9 580 729	27 432	47 727
Quota	3 754 700	1 066 040	2 688 660	50 900	78 900
NAB	3 933 380	26 311	3 907 069	-12 400	-19 900
Bilateral agreements	2 585 000	0	2 585 000	0	0
PRGT	400 000	322 013	400 000	-11 068	-11 273

Table 2-2 Details of SDR holdings. Figures in thousands

	SDR allocations	SDR holdings	Remaining voluntary purchases	Change in SDR holdings	
				2022 Q2	2022
SDR holdings	5 161 781	5 355 386	2 387 285	100 602	854

INTEREST RATE ON THE ARRANGEMENTS

Norges Bank receives SDR interest payments on the reserve position, the NAB, PRGT and SDR holdings, and pays the SDR interest rate on SDR allocations. The SDR interest rate is a weighted average of the yields on three-month government securities in the countries/currency areas included in the SDR basket. The floor for the SDR interest rate is 0.05%. For the reserve position, an interest deduction is applied for any burden sharing². Under the burden sharing mechanism, member debtors and lenders share the cost of settling overdue obligations on outstanding credit to the IMF through an interest rate adjustment.

¹ The commitments include the 2020 arrangement under PRGT, but not the 2010 and 2016 agreements as they can no longer be drawn on. The same applies for the total remaining amount that can be drawn. Amount outstanding includes all arrangements.

² The basis for the calculation is the reserve position less SDR 60m. The reason for the deduction is that, prior to 1978, only 75% of the quota was included in the calculation.

QUOTA SUBSCRIPTIONS are the IMF's primary source of funding and reflect the member country's relative size in the global economy. Norway's quota subscription is SDR 3 755m³. The amount drawn⁴ increased by SDR 50.9m during 2022 Q2 (Table 2-1 and Chart 2-1).

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. The IMF Executive Board must specifically decide to activate the NAB to fund new lending by drawing on the NAB. The government, represented by the Ministry of Finance, is the IMF's contractual counterparty. Commitments under the NAB amount to SDR 3 933m. Total outstanding drawings were reduced by SDR 12.4m during Q2 (Table 2-1 and Chart 2-2).

Chart 2-1 Quota. In billions of SDRs

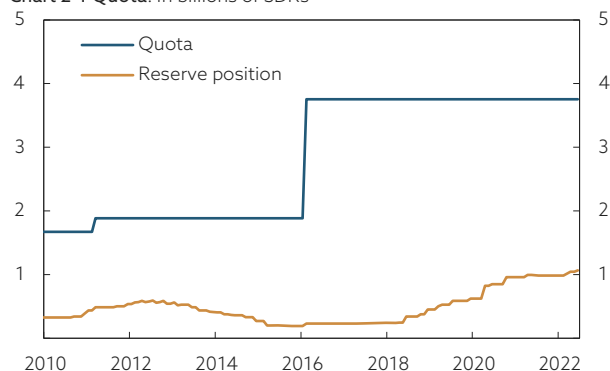
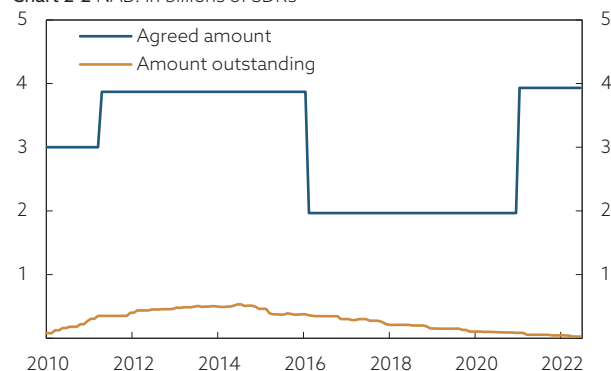


Chart 2-2 NAB. In billions of SDRs



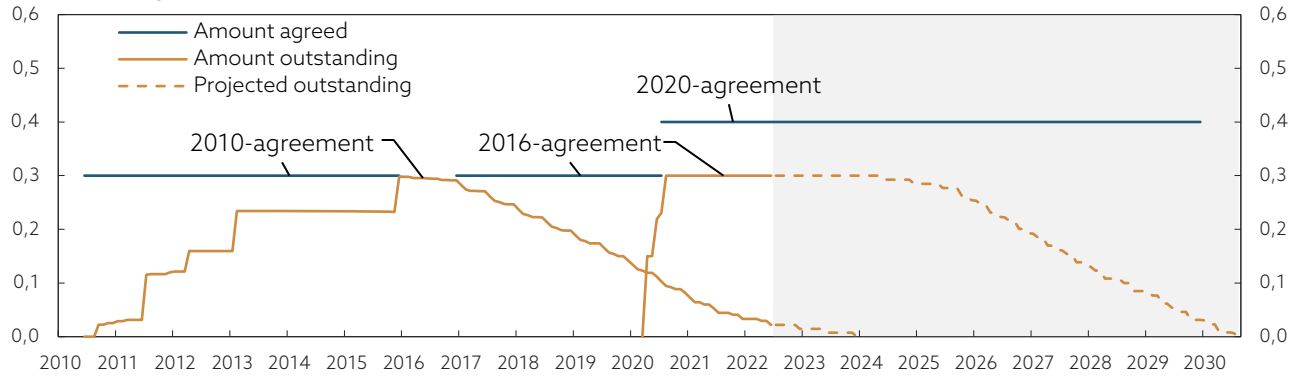
BILATERAL AGREEMENTS serve as the IMF's third line of defence after quota subscriptions and the NAB. The current agreement, which entered into force on 1 January 2021 and applies until 31 December 2023, has a SDR 2 585m borrowing facility. At the end of 2022 Q2, no amounts had been drawn on this agreement. Norges Bank is the IMF's contractual counterparty under the bilateral borrowing agreement. Norges Bank's borrowing agreements with the IMF are subject to the approval of the Ministry of Finance (cf Section 3-10, Subsection 2, of the Central Bank Act).

PRGT The Ministry of Finance has signed loan agreements with the IMF under the PRGT (Poverty Reduction and Growth Trust), which contribute to the IMF's borrowing arrangements for low-income member countries. Norges Bank signed borrowing agreements in both 2010 and 2016, and under each, Norway provided SDR 300m. These facilities are now fully drawn and under the agreements, only repayments will be made (Table 2-1 and Chart 2-3). Repayments made under the 2010 agreement in 2022 Q2 totalled SDR 11.1m. In 2020, an additional borrowing agreement for SDR 400m was entered into. This agreement, which applies until 31 December 2029, had not been drawn on at the end of Q2. Norges Bank is the agent for PRGT loans and administers the commitments.

³ 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.

⁴ The amount drawn is equal to Norway's reserve position in the IMF.

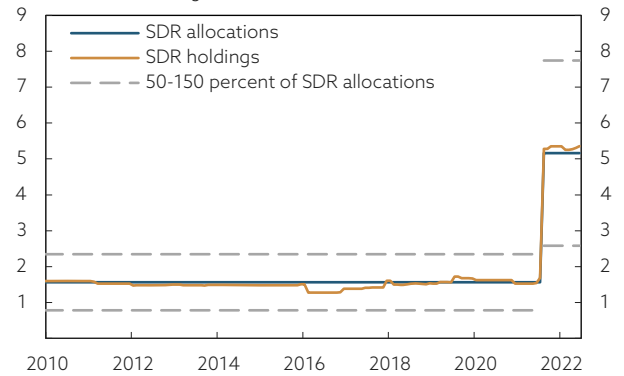
Chart 2-3 PRGT agreements. In billions of SDRs



SDR HOLDINGS are allocated by the IMF to member countries. Member countries, the IMF and prescribed holders may change their SDR holdings by purchasing from or selling to each other. Individual member countries and prescribed holders have entered into agreements with the IMF on participating in SDR trading arrangements intended to support SDR liquidity. In 2009, Norges Bank entered into such 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, Norges Bank's holdings shall be between SDR 2 581m and SDR 7 743m. Purchases of SDRs are charged to the foreign exchange reserves. The agreement also gives Norges Bank the right to sell SDRs. In 2022 Q2, SDR holdings increased

by around SDR 100.6m. At the end of Q2, Norway's holdings amounted to SDR 5 355m (Table 2-2 and Chart 2-4).

Chart 2-4 SDR holdings. In billions of SDRs



ANNEX KEY FIGURES

Table 1 Key figures at quarter-end. Annualised values in international currency terms. Percent

	Past year	Past three years	Past five years	Past 10 years
Return on the foreign exchange reserves	-6.27	1.24	2.35	4.28
<i>Fixed income investments</i>				
Return on fixed income investments	-5.31	-1.05	0.10	0.90
Return on the benchmark index	-5.35	-1.07	0.10	0.88
Relative return	0.04	0.01	0.00	0.02
<i>Equity investments</i>				
Return on equity investments	-11.34	8.63	8.86	11.49
Return on the benchmark index	-11.51	8.54	8.80	11.32
Relative return	0.17	0.09	0.06	0.17

Table 2 Duration of and yield on fixed income investments. Past five quarters

	2022 Q2	2022 Q1	2021 Q4	2021 Q3	2021 Q2
Duration	3.69	3.78	3.83	3.89	3.84
CNY	3.40	3.42	3.37	3.41	3.35
EUR	4.14	4.22	4.24	4.42	4.40
GBP	4.26	4.13	4.19	4.39	4.25
JPY	3.72	4.10	4.26	4.05	4.09
USD	3.32	3.40	3.47	3.47	3.40
Yield	1.95	1.31	0.40	0.23	0.20
CNY	2.36	2.40	2.38	2.51	2.70
EUR	0.94	0.21	-0.47	-0.51	-0.47
GBP	1.95	1.38	0.70	0.55	0.31
JPY	0.01	0.02	-0.06	-0.08	-0.11
USD	2.90	2.20	0.94	0.64	0.59