

# FOREIGN EXCHANGE RESERVES

## Management of the foreign exchange reserves

4 | 2023

FEBRUARY 2024

REPORT FOR FOURTH  
QUARTER 2023

# 1 MANAGEMENT OF THE FOREIGN EXCHANGE RESERVES

The foreign exchange reserves are to be sufficiently liquid to be available for use in foreign exchange market transactions or as part of the conduct of monetary policy with a view to promoting financial stability and to meet Norges Bank's international commitments. The aim of the management of foreign exchange reserves is the highest possible return within the applicable risk limits. 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, government 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 market-weighted, 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 petroleum buffer portfolio is intended to receive foreign currency from the State's Direct Financial Interest in petroleum activities (SDFI) and transfers from the Government Pension Fund Global (GPFG), as well as to smooth the government's need for converting foreign currency and NOK. 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 2023 Q4

- The market value of the foreign exchange reserves at the end of 2023 Q4 was NOK 692.1bn, a reduction of NOK 10.4bn since 2023 Q3.
- The return on the foreign exchange reserves was 4.9% in international currency terms. The return on equity investments was 10.1%, while the return on fixed income investments was 3.5%. In NOK terms, the return on the foreign exchange reserves was 2.2%.
- The size and liquidity of the foreign exchange reserves are regarded as sufficient for meeting Norges Bank's contingency needs and international commitments.
- Norges Bank's equity is regarded as sufficient to fulfil the Bank's purpose.

## 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 692.1bn at the end of 2023 Q4. The value was reduced by NOK 10.4bn in Q4. The return in international currency terms increased the value by NOK 32.7bn, while a stronger krone reduced the value by NOK 19.5bn. Net transfers amounted to negative NOK 23.5bn, primarily from the petroleum buffer portfolio. In 2023, the value of the foreign exchange reserves increased by NOK 77.7bn.

Table 1-1 Market value

	2023 Q4			Foreign exchange reserves	2023			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)	505.0	134.2	63.3	702.5	472.0	110.4	32.0	614.4
Market value (closing)	511.3	143.1	37.7	692.1	511.3	143.1	37.7	692.1
<b>Change in market value</b>	<b>6.3</b>	<b>9.0</b>	<b>-25.6</b>	<b>-10.4</b>	<b>39.3</b>	<b>32.7</b>	<b>5.7</b>	<b>77.7</b>
Net transfers	1.1	0.0	-24.6	-23.5	-2.0	0.0	-3.1	-5.1
Return in NOK terms	5.2	9.0	-1.0	13.2	41.3	32.7	8.8	82.9

Table 1-2 Details of fixed income and equity investments

	2023 Q4		Total	2023		Total
	Fixed income investments	Equity investments		Fixed income investments	Equity investments	
<i>In billions of NOK</i>						
<b>Return in NOK terms</b>	<b>5.2</b>	<b>9.0</b>	<b>14.2</b>	<b>41.3</b>	<b>32.7</b>	<b>74.0</b>
Return in international currency terms	18.5	14.2	32.7	21.6	30.2	51.8
Movements in the krone exchange rate	-13.3	-5.2	-18.5	19.8	2.5	22.2
<i>In percent</i>						
Return in international currency	3.5	10.1	4.9	4.3	25.0	8.2
Return in NOK terms	1.0	6.7	2.2	8.8	29.6	12.7
Relative return in NOK terms	0.00	-0.01	-	0.03	0.01	-
Expected relative volatility in NOK terms (annualised)	0.02	0.05				

Chart 1-1 Change in market value. In billions of NOK

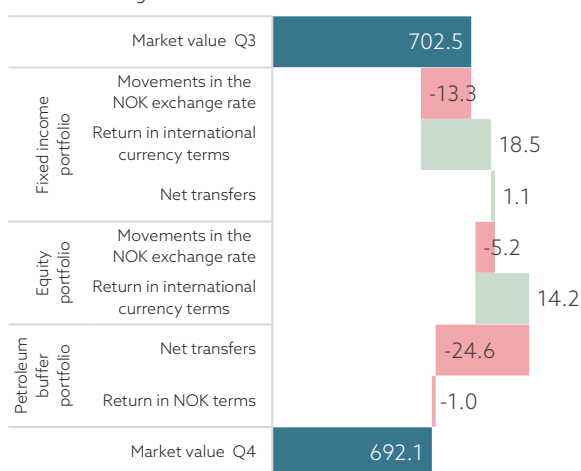
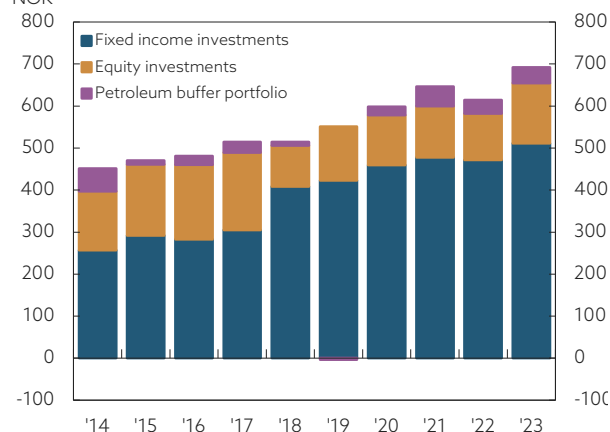


Chart 1-2 Composition of foreign exchange reserves. In billions of NOK



## Fixed income investments

The market value of the fixed income portfolio was NOK 511.3bn at the end of 2023 Q4, an increase of NOK 6.3bn from the previous quarter. The return in international currency terms increased the value by NOK 18.5bn, equivalent to 3.5%. A stronger krone reduced the value by NOK 13.3bn. Net transfers to the fixed income portfolio amounted to NOK 1.1bn, reflecting transactions with the IMF.

**Chart 1-3** Return in international currency terms. Fixed income investments. Percent



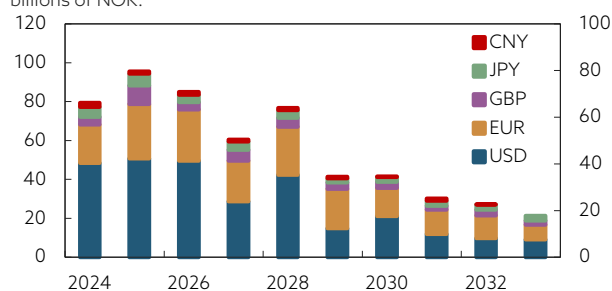
**Chart 1-4** Relative return in NOK terms. Fixed income investments. Basis points



**Table 1-3** Fixed income investments by currency at the end of 2023 Q4. Market value in billions of NOK

	Market value	Share	Duration	Yield
<b>Total</b>	<b>511.30</b>	<b>100.00 %</b>	<b>3.54</b>	<b>3.26</b>
CNY	10.25	2.00 %	3.63	2.35
EUR	173.27	33.89 %	3.91	2.40
GBP	35.88	7.02 %	3.78	3.73
JPY	35.96	7.03 %	4.11	0.17
USD	255.94	50.06 %	3.17	4.25

**Chart 1-5** Principal and coupon due per year at the end of 2023 Q4. In billions of NOK.



**USA** US government bond yields fell in 2023 Q4. Short- and long-term yields ended the quarter between 70 and 90 basis points lower. The Federal Reserve kept its monetary policy stance unchanged and signalled that the peak rate may have been reached. Investments denominated in USD earned a return of 3.6% in Q4.

**EUROPE** European government bond yields also fell again through Q4. Both short- and long-term yields ended the quarter down by around 80 basis points. The ECB kept its policy rate unchanged during Q4 but announced in December that reduction of the Pandemic emergency purchase programme (PEPP) would begin in July, six months earlier than signalled so far. Investments denominated in EUR earned a return of 4.1% in Q4.

**UK** UK government bond yields fell in 2023 Q4, driven primarily by lower policy rate expectations

resulting from key economic data showing lower inflation and lower wage growth. The Bank of England kept its monetary policy stance unchanged. Investments denominated in GBP earned a return of 4.6% in Q4.

**JAPAN** Short-term Japanese government bond yields ended the quarter approximately unchanged, while long-term yields fell by just over ten basis points, reflecting developments in international yields. Early in Q4, the Bank of Japan adjusted its yield curve control strategy, allowing the 10-year yield to rise somewhat more than previously before the central bank intervenes. Investments dominated in JPY earned a return of 0.6% in Q4.

**CHINA** Chinese yields fell by 10 basis points in Q4, reflecting continued sluggish development in the Chinese economy. Investments dominated in CNY earned a return of 1.1% in Q4.

## Equity investments

The market value of the equity portfolio was NOK 143.1bn at the end of 2023 Q4, an increase of NOK 9.0bn since the end of 2023 Q3. The return in international currency terms increased the market value by NOK 14.2bn, while a stronger krone, in isolation, reduced the value of the portfolio by NOK 5.2bn.

The return on the equity portfolio was 10.1% in 2023 Q4, in international currency terms. North

American equities posted a return of 10.5%, European equities, 9.7%, and Asian equities, 6.3%.

In Q4, equities related to real estate posted the strongest return, 16.6%. Equities in the technology sector made the largest contribution to the return on the portfolio, at 4.1 percentage point. Energy sector equities posted the weakest return in Q4, at -4.8%.

Chart 1-6 Return in international currency terms. Equity investments.



Chart 1-7 Relative return in NOK terms. Equity investments. Basis points



Table 1-4 Equity investments by sector and deviations from the benchmark index. At the end of 2023 Q4. In billions of NOK

	Market value	Share
Basic materials	5	3 %
Consumer discretionary	21	15 %
Consumer staples	8	5 %
Energy	5	3 %
Financials	20	14 %
Health care	18	12 %
Industrials	19	13 %
Real estate	4	2 %
Technology	38	27 %
Telecommunications	3	2 %
Utilities	3	2 %

Table 1-5 Equity investments by currency and deviations from the benchmark index. At the end of 2023 Q4. In billions of NOK

	Market value	Share
AUD	3	2 %
CAD	3	2 %
CHF	4	3 %
DKK	1	1 %
EUR	13	9 %
GBP	5	4 %
JPY	11	7 %
SEK	2	1 %
USD	101	70 %

## Petroleum buffer portfolio

The market value of the petroleum buffer portfolio was NOK 37.7bn at the end of 2023 Q4, a decrease of NOK 25.6bn for the quarter (Table 1-7). During Q4, NOK 79.7bn worth of foreign exchange was purchased from the State's Direct Financial Interest (SDFI), and NOK 176.9bn worth of foreign exchange was transferred to the GPF. At the same time, Norges Bank purchased NOK 72.6bn worth of foreign exchange in the market.<sup>1</sup> The return on the portfolio came to NOK -1.0bn, primarily owing to a stronger krone.

<sup>1</sup> These cash flows are a part of the petroleum fund mechanism. More information on the petroleum fund mechanism can be found on Norges Bank's website: <https://www.norges-bank.no/en/topics/liquidity-and-markets/Foreign-exchange-purchases-for-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 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 2023 Q4, excluding exchange rate movements, was 15.9% and 3.0%, respectively. Both equity and fixed income portfolios are managed to track the benchmark closely. At the end of Q4, expected relative volatility for equity and fixed income investments was 0.05 and 0.02 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  $\pm 50$  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 1-8 Expected absolute volatility, excluding exchange rate movements. Foreign exchange reserves. Percent

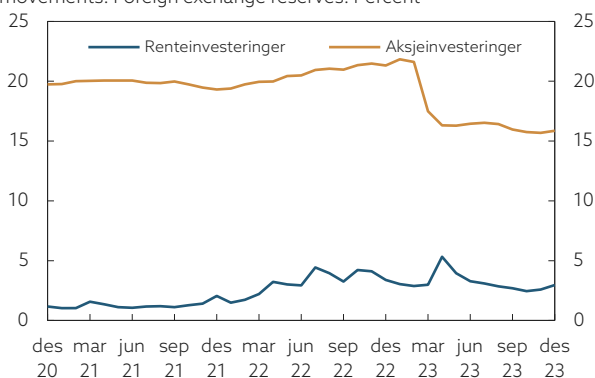
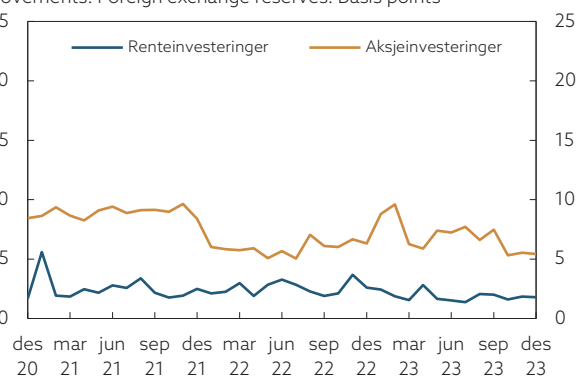


Chart 1-9 Expected relative volatility, including exchange rate movements. Foreign exchange reserves. Basis points



# 2 COMMITMENTS TO THE IMF

Pursuant to the Central Bank Act, Norges Bank shall administer Norway's rights and fulfil the corresponding obligations 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).<sup>2</sup> totalled SDR 10 823m.<sup>3</sup> on 31 December 2023. At the end of the quarter, the IMF had drawn SDR 1 658m. The total remaining amount that can be drawn under these arrangements is SDR 9 465m. 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. Amounts in thousands of SDRs

	Agreed amount	Amount drawn	Amount remaining	Change in amount drawn	
				2023 Q4	2023
<b>Total</b>	<b>10 823 080</b>	<b>1 658 372</b>	<b>9 464 708</b>	<b>-23 872</b>	<b>215 629</b>
Quota	3 754 700	1 060 085	2 694 615	-9 134	-32 796
NAB	3 933 380	3 962	3 929 418	-7 400	-14 800
Bilateral agreements	2 585 000	0	2 585 000	0	0
PRGT <sup>2</sup>	550 000	594 325	255 675	-7 338	263 224

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

	SDR allocations	SDR holdings	Remaining voluntary purchases	Change in SDR holdings	
				2023 Q4	2023
<b>SDR-holdings</b>	<b>5 161 781</b>	<b>5 469 661</b>	<b>2 273 010</b>	<b>-29 591</b>	<b>-4 136</b>

## INTEREST RATE ON THE ARRANGEMENTS

Norges Bank receives SDR interest payments on the reserve position,<sup>4</sup> 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 sharing.<sup>5</sup> 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.

<sup>2</sup> The commitments include the 2020 and 2022 arrangements 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 drawn includes all arrangements.

<sup>3</sup> Special Drawing Right (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. At 31 December 2023, SDR 1 = NOK 13.65.

<sup>4</sup> The reserve position is equal to the amount drawn on Norway's quota and corresponds to the difference between the quota and the IMF's krone deposit with Norges Bank.

<sup>5</sup> 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 755m. The amount drawn was reduced by SDR 9m in 2023 Q4 (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 7m in 2023 Q4. (Table 2-1 and Chart 2-2).

Chart 2-1 Quota. In billions of SDRs

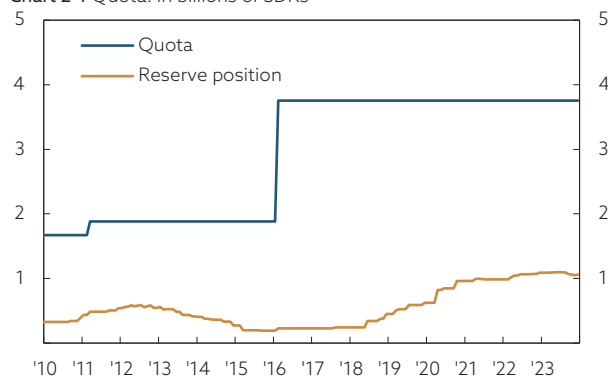
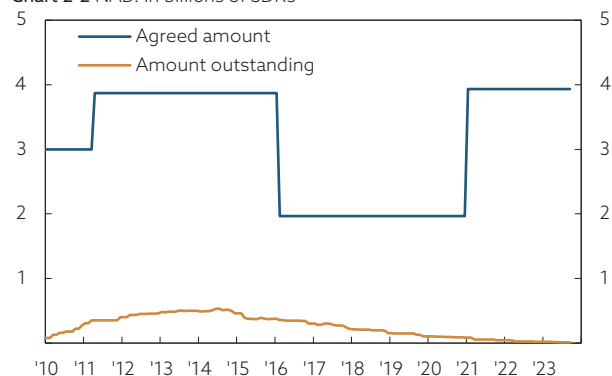


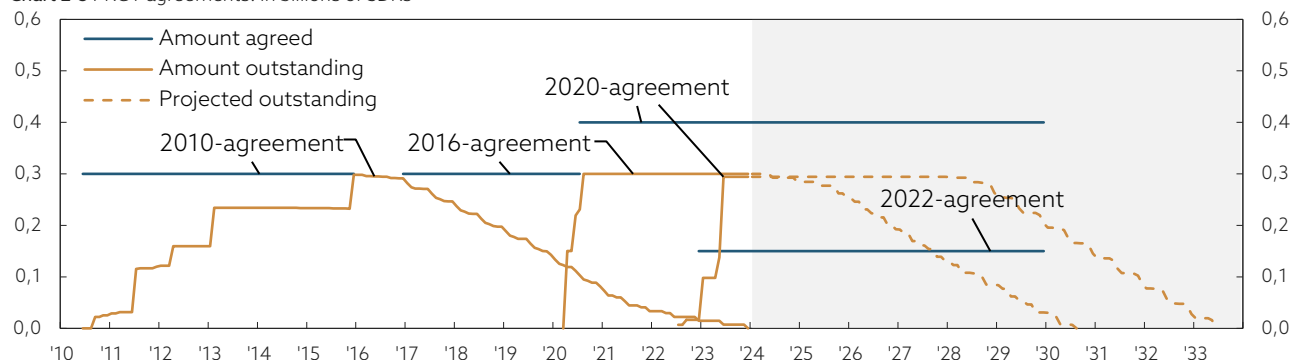
Chart 2-2 NAB. In billions of SDRs



**BILATERAL AGREEMENTS** serve as the IMF's third line of defence after quota subscriptions and the NAB. The current agreement entered into force on 1 January 2021 is for a SDR 2 585m borrowing facility. In August, the agreement was extended by one year, until 31 December 2024. At the end of 2023 Q4, 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, 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). The last principal payment on the 2010-agreement was made in December 2023. In 2020, a borrowing agreement for SDR 400m was entered into. No amount was drawn under this agreement in 2023 Q4. In December 2022, an additional borrowing agreement for SDR 150m was entered into. This agreement had not been drawn on at the end of Q4. Norges Bank is the agent for PRGT loans and administers the commitments.

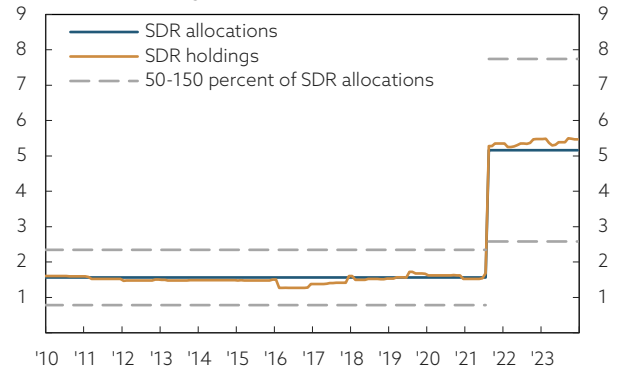
Chart 2-3 PRGT agreements. In billions of SDRs





**SDR HOLDINGS** are allocated by the IMF to member countries. Member countries, the IMF and prescribed holders.<sup>6</sup> may change their SDR holdings by purchasing from or selling to each other. Individual member countries and prescribed holders have entered 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 2023 Q3, SDR holdings fell by SDR 30m. At the end of Q4, Norway's holdings amounted to SDR 5 470m (Table 2-2 and Chart 2-4).

Chart 2-4 SDR holdings. In billions of SDRs



<sup>6</sup> Prescribed holders of SDRs are 20 official entities authorised by the IMF Executive Board to hold SDRs, although they do not receive SDR allocations. Prescribed holders consist of four currency union central banks (European Central Bank, Bank of Central African States, Central Bank of West African States, and Eastern Caribbean Central Bank), twelve development institutions (African Development Bank, African Development Fund, Asian Development Bank, Caribbean Development Bank, Development Bank of Latin America, European Bank for Reconstruction and Development, Inter-American Development Bank, International Bank for Reconstruction and Development, International Development Association, Islamic Development Bank, Nordic Investment Bank, and International Fund for Agricultural Development), and four international monetary institutions (Arab Monetary Fund, Bank for International Settlements, European Investment Bank and Latin American Reserve Fund).

# 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
<b>Return on the foreign exchange reserves</b>	<b>8.21</b>	<b>0.59</b>	<b>3.04</b>	<b>3.50</b>
<i>Fixed income investments</i>				
Return on fixed income investments	4.28	-1.67	0.15	0.95
Return on the benchmark index	4.25	-1.71	0.14	0.96
Relative return	0.03	0.03	0.01	-0.01
<i>Equity investments</i>				
Return on equity investments	25.03	9.19	13.93	10.43
Return on the benchmark index	25.02	9.07	13.86	10.32
Relative return	0.01	0.12	0.07	0.11

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

	2023 Q4	2023 Q3	2023 Q2	2023 Q1	2022 Q4
<b>Duration</b>	<b>3.54</b>	<b>3.54</b>	<b>3.58</b>	<b>3.61</b>	<b>3.59</b>
CNY	3.63	3.59	3.55	3.43	3.47
EUR	3.91	3.96	4.00	4.02	3.96
GBP	3.78	3.85	3.90	3.97	3.94
JPY	4.11	4.08	4.05	3.99	4.19
USD	3.17	3.13	3.18	3.23	3.21
<b>Yield</b>	<b>3.26</b>	<b>3.96</b>	<b>3.73</b>	<b>3.23</b>	<b>3.33</b>
CNY	2.35	2.42	2.29	2.48	2.49
EUR	2.40	3.19	2.95	2.63	2.61
GBP	3.73	4.46	5.04	3.69	3.52
JPY	0.17	0.24	0.04	0.05	0.19
USD	4.25	5.00	4.64	4.05	4.27