

FOREIGN EXCHANGE RESERVES

Management of the foreign exchange reserves

1 | 2022
MAY 2022

REPORT FOR
FIRST QUARTER 2022

1 MANAGEMENT OF THE 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-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 Q1

- The market value of Norges Bank's foreign exchange reserves was NOK 602.4bn, a reduction of NOK 44.1bn since 2021 Q4.
- The return on the foreign exchange reserves was -3.5% in international currency terms. The return on equity investments was -5.2%, while the return on fixed income investments was -3.1%. In NOK terms, the return on the foreign exchange reserves was -5.4%.
- 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 602.4bn at the end of 2022 Q1. The value fell by NOK 44.1bn in Q1. Return in international currency terms reduced the value by NOK 21.0bn, while a stronger krone reduced the value by a further NOK 14.3bn. Net outflows amounted to NOK 8.8bn.

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

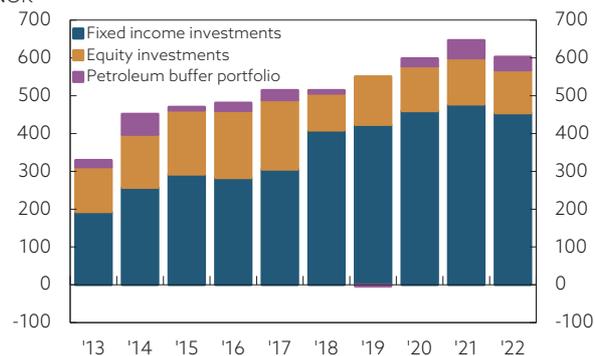


Table 1-1 Market value

	2022 Q1			Foreign exchange reserves
	Fixed income investments	Equity investments	Petroleum buffer portfolio	
<i>In billions of NOK</i>				
Market value (opening)	477.7	122.0	46.8	646.5
Market value (closing)	454.2	113.9	34.3	602.4
Change in market value	-23.5	-8.1	-12.5	-44.1
Net transfers	1.0	0	-9.8	-8.8
Return in NOK terms	-24.5	-8.1	-2.8	-35.3

Table 1-2 Details of fixed income and equity investments

	2022 Q1		Total
	Fixed income investments	Equity investments	
<i>In billions of NOK</i>			
Return in NOK terms	-24.5	-8.1	-32.5
Return in international currency terms	-14.6	-6.4	-21.0
Movements in the krone exchange rate	-9.9	-1.7	-11.5
<i>In percent</i>			
Return in international currency terms	-3.1	-5.2	-3.5
Return in NOK terms	-5.1	-6.6	-5.4
Relative Return in NOK terms	0.02	0.03	-
Expected relative volatility in NOK terms (annualised)	0.03	0.06	-

Fixed income investments

The market value of the fixed income investments was NOK 454.2bn, a decline of NOK 23.5bn from the previous quarter. The return in international currency terms reduced the value by NOK 14.6bn, equivalent to -3.1%. A stronger krone decreased the value by NOK 9.9bn. Net inflows to the fixed income portfolio amounted to NOK 1.0bn, 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

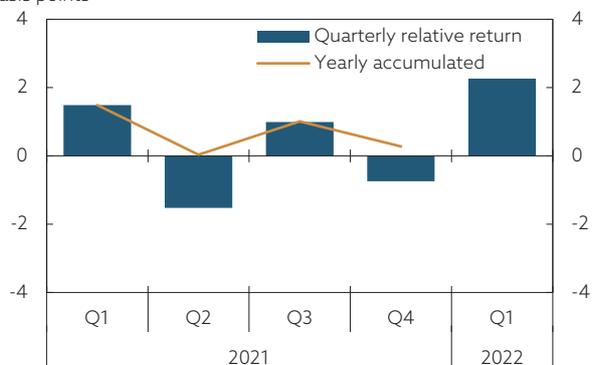
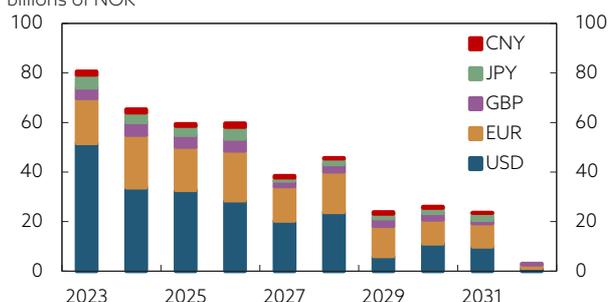


Table 1-3 Fixed income investments by currency at the end of 2022 Q1. Market value in billions of NOK

	Market value	Share	Duration	Yield
Total	454.18	100.00	3.78	1.31
CNY	9.17	2.02	3.42	2.40
EUR	155.46	34.23	4.22	0.21
GBP	31.68	6.97	4.13	1.38
JPY	31.76	6.99	4.10	0.02
USD	226.11	49.78	3.40	2.20

Chart 1-4 Principal and coupon due per year at the end of 2022 Q1. In billions of NOK



USA US government bond yields rose sharply in 2022 Q1. Two-year yields rose by just over 160 basis points, while ten-year yields rose by 83 basis points. The US yield curve flattened considerably. Investments denominated in USD earned a return of -3.6% in Q1. The primary reason for the negative return was higher yields during the period.

EUROPE Both short- and long-term European government bond yields rose in 2022 Q1. Short-term yields are now at their high levels since 2015. Yields fell when Russia attacked Ukraine, although this was quickly reversed. Investments denominated in EUR earned a return of -3.1% in Q1, primarily owing to higher yields.

UK UK government bond yields rose along the entire yield curve through 2022 Q1. During Q1, the Bank of England's policy rate was raised twice

and is now 0.75%. Investments denominated in GBP earned a return of -2.5% in Q1, primarily owing to higher yields.

JAPAN Japanese yields rose slightly in 2022 Q1 and the ten-year yield rose to the upper limit of the Bank of Japan's yield curve control strategy. Investments denominated in JPY earned a return of -0.5% in Q1, primarily owing to higher yields.

CHINA In 2022 Q1, short-term Chinese government bond yields fell while long-term yields rose. The two-year yield fell by approximately six basis points. The Chinese 10-year yield ended the quarter just under 2.8%. Investments denominated in CNY earned a return of 0.6%, primarily owing to current interest income.

Equity investments

The market value of the equity portfolio was NOK 113.9bn at the end of 2022 Q1, a decrease of NOK 8.1bn since the end of 2021. The return in international currency terms reduced the market value by NOK 6.4bn. A stronger krone reduced the value of the portfolio by a further NOK 1.7bn.

The return on the equity portfolio was -5.2% in Q1, in international currency terms. North American equities posted a return of -4.9%, European equities, -7.6% and Asian equities, -5.8%. The technology sector posted the weakest return in Q1, -10.5%, and also made the largest contribution to the return on the portfolio. Energy sector equities posted the strongest return in Q1, 26.3%.

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



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



Table 1-4 Equity investments by sector and relative to the benchmark index. At the end of 2022 Q1. In billions of NOK

	Market value	Share
Materials	4	3%
Consumer discretionary	17	15%
Consumer staples	7	6%
Energy	4	3%
Financials	16	14%
Health care	15	13%
Industrials	15	13%
Real estate	3	3%
Technology	27	24%
Telecommunications	4	3%
Utilities	3	2%

Table 1-5 Equity investments by currency and relative to the benchmark index. At the end of 2022 Q1. In billions of NOK

	Market value	Share
AUD	3	3%
CAD	3	3%
CHF	3	3%
DKK	1	1%
EUR	11	9%
GBP	4	4%
JPY	8	7%
SEK	1	1%
USD	79	69%

Petroleum buffer portfolio

The market value of the petroleum buffer portfolio was NOK 34.3bn at the end of 2022 Q1, a decline of NOK 12.5bn for the quarter. During Q1, NOK 136.0bn worth of foreign exchange was purchased from the State's Direct Financial Interest (SDFI), and NOK 140.5bn worth of foreign exchange was transferred to the GPF from the petroleum buffer portfolio. At the same time, Norges Bank sold NOK 5.3bn 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 Q1, excluding exchange rate movements, was 19.9% and 2.2%, respectively. This corresponds to an expected annual fluctuation in value of approximately NOK 22.7bn and NOK 10.0bn, 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

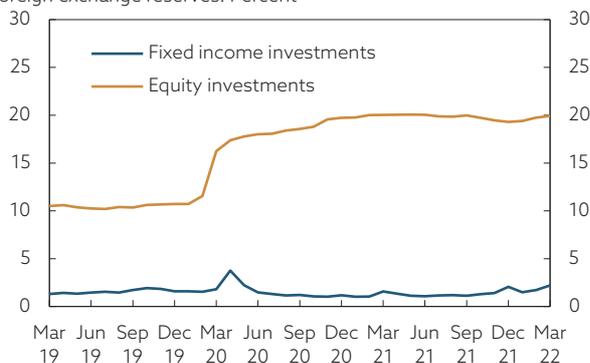
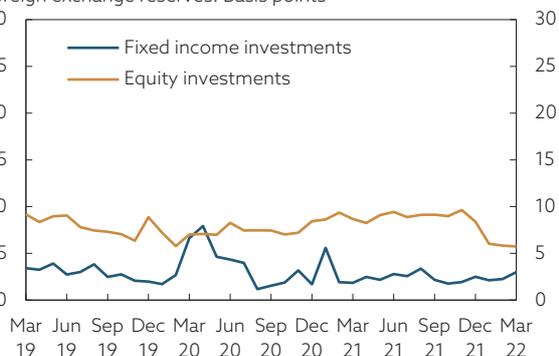


Chart 1-8 Relative volatility, including exchange rate movements. Foreign exchange reserves. Basis points



2 COMMITMENTS TO THE IMF

Pursuant to the Central Bank Act, Norges Bank shall 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 at 31 March 2022. At the end of 2022 Q1, the IMF had drawn SDR 1 387m. The total remaining amount that can be drawn under these arrangements is SDR 9 619m. 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 Q1	2022
Total	10 673 080	1 386 932	9 619 229	20 295	20 295
Quota	3 754 700	1 015 140	2 739 560	28 000	28 000
NAB	3 933 380	38 711	3 894 669	-7 500	-7 500
Bilateral agreements	2 585 000	0	2 585 000	0	0
PRGT	400 000	333 081	400 000	-205	-205

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

	SDR allocations	SDR holdings	Remaining voluntary purchases	Change in SDR holdings	
				2022 Q1	2022
SDR holdings	5 161 781	5 254 785	2 487 887	-99 748	-99 748

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 28m during 2022 Q1 (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. Norges Bank's commitments under the NAB amount to SDR 3 933m. Total outstanding drawings were reduced by SDR 7.5m during Q1 (Table 2-1 and Chart 2-2).

Chart 2-1 Quota. In billions of SDRs

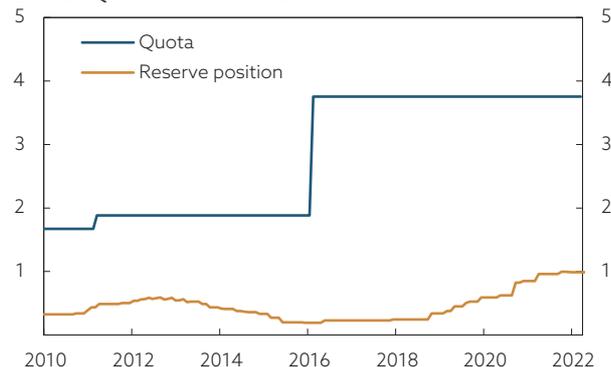
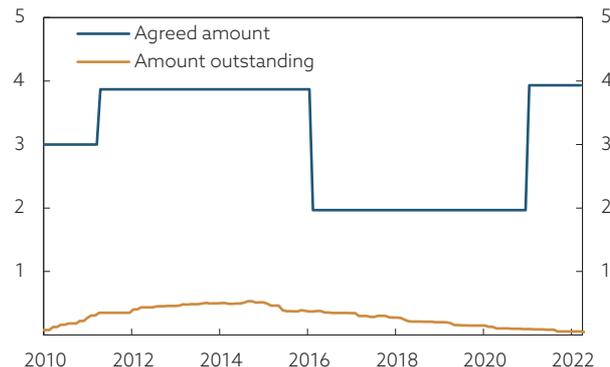


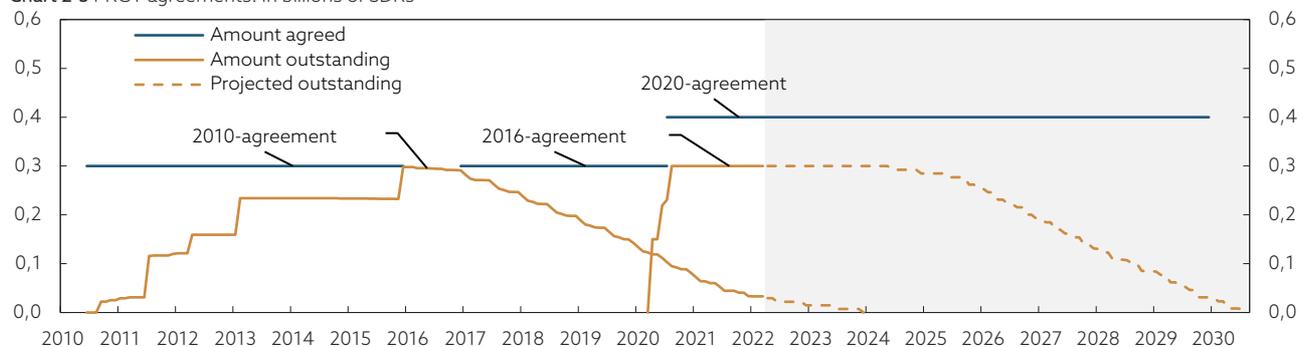
Chart 2-2 NAB. In billions of SDRs



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 Q1, no amounts had been drawn on this 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 Q1 totalled SDR 0.2m. 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 Q1. Norges Bank is the agent for PRGT loans and administers the commitments.

Chart 2-3 PRGT agreements. In billions of SDRs

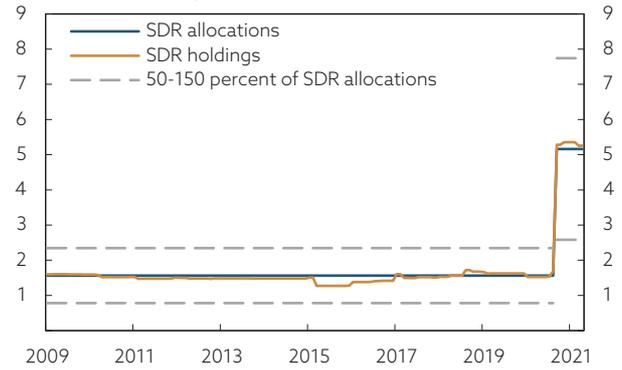


³ Special Drawing Right (SDR). The SDR is an instrument the IMF can use to allocate international liquidity. The value of the SDR is based on a basket of five currencies: USD, EUR, JPY, GBP and CNY.

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

SDR HOLDINGS 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 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 Q1, SDR holdings decreased by around SDR 100m. At the end of Q1, Norway's holdings amounted to SDR 5 255m (Table 2-2 and Chart 2-4).

Chart 2-4 SDR holdings. In billions of SDRs



ANNEX KEY FIGURES

Table I-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	-0.17	3.42	3.51	4.70
<i>Fixed income investments</i>				
Return on fixed income investments	-3.32	0.03	0.53	1.25
Return on the benchmark index	-3.33	0.03	0.54	1.23
Relative return	0.01	0.00	-0.01	0.02
<i>Equity investments</i>				
Return on equity investments	11.59	15.86	12.94	12.77
Return on the benchmark index	11.43	15.79	12.87	12.60
Relative return	0.16	0.07	0.06	0.17

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

	2022 Q1	2021 Q4	2021 Q3	2021 Q2	2021 Q1
Duration	3.78	3.83	3.89	3.84	3.88
CNY	3.42	3.37	3.41	3.35	3.35
EUR	4.22	4.24	4.42	4.40	4.47
GBP	4.13	4.19	4.39	4.25	4.38
JPY	4.10	4.26	4.05	4.09	4.02
USD	3.40	3.47	3.47	3.40	3.41
Yield	1.31	0.40	0.23	0.20	0.19
CNY	2.40	2.38	2.51	2.70	2.81
EUR	0.21	-0.47	-0.51	-0.47	-0.54
GBP	1.38	0.70	0.55	0.31	0.35
JPY	0.02	-0.06	-0.08	-0.11	-0.08
USD	2.20	0.94	0.64	0.59	0.59