

FOREIGN EXCHANGE RESERVES

Management of the foreign exchange reserves

4 | 2021

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REPORT FOR FOURTH
QUARTER 2021

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 2021 Q4

- The market value of Norges Bank's foreign exchange reserves was NOK 646.5bn, an increase of NOK 0.6bn since 2021 Q3.
- The return on the foreign exchange reserves was 1.5% in international currency terms. The return on equity investments was 8.4%, while the return on fixed income investments was -0.4%. In NOK terms, the return on the foreign exchange reserves was 1.8%.
- The size and liquidity of the foreign exchange reserves are regarded as sufficient for meeting Norges Bank's commitments.
- Rebalancing of the equity and fixed income portfolio to strategic weighting.

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 646.5bn at the end of 2021 Q4. The value increased by NOK 0.6bn in Q4. Return in international currency terms increased the value by NOK 8.7bn, while a weaker krone increased the value by NOK 3.3bn. Net outflows amounted to NOK 11.4bn. As a consequence of rebalancing back to strategic weighting, NOK 27.7bn was transferred from the equity portfolio to the fixed income portfolio in Q4. In 2021, the market value of the foreign exchange reserves increased by NOK 48.0bn, of which net inflows accounted for NOK 24.4bn.

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

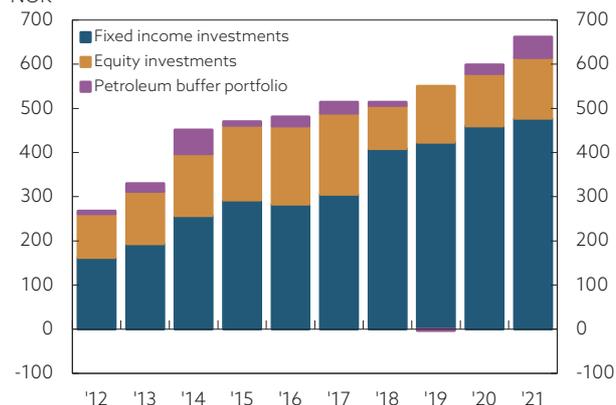


Table 1-1 Market value

	2021 Q4			Foreign exchange reserves	2021			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)	451.4	137.3	57.2	645.9	459.8	118.6	20.0	598.4
Market value (closing)	477.7	122.0	46.8	646.5	477.7	122.0	46.8	646.5
Change in market value	26.3	-15.3	-10.4	0.6	17.9	3.4	26.8	48.0
Net transfers	27.0	-27.7	-10.7	-11.4	25.9	-27.7	26.2	24.4
Return in NOK terms	-0.8	12.4	0.3	12.0	-8.1	31.0	0.6	23.6

Table 1-2 Details of fixed income and equity investments

	2021 Q4			Total	2021			Total
	Fixed income investments	Equity investments			Fixed income investments	Equity investments		
<i>In billions of NOK</i>								
Return in NOK terms		-0.8	12.4	11.6	-8.1	31.0		22.9
Return in international currency terms		-1.9	10.6	8.7	-7.0	28.8		21.8
Movements in the krone exchange rate		1.2	1.8	2.9	-1.1	2.3		1.2
<i>In percent</i>								
Return in international currency terms		-0.4	8.4	1.5	-1.5	25.1		3.8
Return in NOK terms		-0.1	9.1	1.8	-1.7	26.2		3.8
Relative return in NOK terms		-0.01	0.04	-	0.00	0.25		-
Expected relative volatility in NOK terms (annualised)		0.02	0.08	-	0.02	0.08		-

Fixed income investments

The market value of the fixed income investments was NOK 477.7bn, an increase of NOK 26.3bn from the previous quarter. The krone depreciation increased the value by NOK 1.2bn. The return in international currency terms reduced the value by NOK 1.9bn, equivalent to -0.4%. Net inflows to the fixed income portfolio amounted to NOK 27.0bn, primarily owing to the rebalancing of the fixed income and equity portfolio.

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



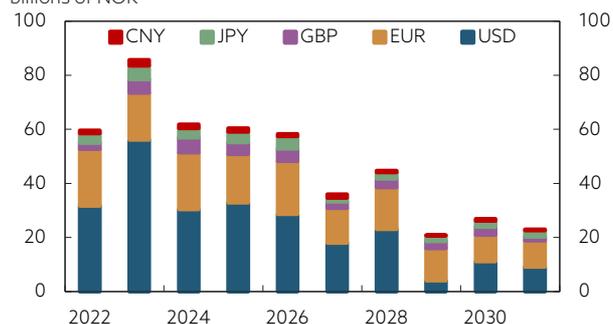
Chart 1-3 Relative return in NOK terms. Fixed income investments. Basis points



Table 1-3 Fixed income investments by currency at the end of 2021 Q4. Market value in billions of NOK

	Market value	Share	Duration	Yield
Total	477.65	100.00	3.83	0.40
CNY	9.64	2.02	3.37	2.38
EUR	162.56	34.03	4.24	-0.47
GBP	33.52	7.02	4.19	0.70
JPY	33.36	6.98	4.26	-0.06
USD	238.56	49.94	3.47	0.94

Chart 1-4 Principal and coupon due per year at the end of 2021 Q4. In billions of NOK



US US short-term government bond yields rose more than long-term yields in 2021 Q4. While two-year yields ended the quarter just under 50 basis points higher, long-term yields showed little change despite movements through the quarter. Investments denominated in USD earned a return of -0.5% in Q4. Current interest income offset some of the loss resulting from higher yields.

EUROPE European government bond yields fell in the first part of Q4 but rose markedly towards the end. In the quarter as a whole, both short- and long-term government bond yields rose by just under 10 basis points. Investments denominated in EUR earned a return of -0.4% in Q4.

UK Short-term UK yields rose in Q4 while long-term UK yields showed little change in the period.

Investments denominated in GBP earned a return of -0.2% in Q4, primarily owing to higher yields.

JAPAN Movements in Japanese government bond yields were minimal in Q4. Towards the end of Q4, long-term yields in particular rose in pace with international developments. Investments denominated in JPY earned a return of 0.0% in Q4.

CHINA In China, government bond yields fell along the entire yield curve by approximately 8 basis points. The Chinese 10-year government bond yield ended the quarter at just below 2.8%. Investments denominated in CNY earned a return of 1%. Current interest income accounted for slightly less than two thirds of the positive return. The remaining one third can be attributed to the decline in yields.

Equity investments

The market value of the equity portfolio was NOK 122.0bn at the end of 2021 Q4, a decrease of NOK 15.3bn for the quarter. The return in international currency terms increased the market value by NOK 10.6bn, equivalent to 8.4%. A weaker krone, in isolation, increased the value of the portfolio by a further NOK 1.8bn. NOK 27.7bn was transferred from the equity portfolio to the fixed income portfolio in Q4.

North American equities posted a return of 10.6%, European equities, 5.7% and Asian equities, -4.4%. The technology sector posted the highest return in Q4, 13.7%, and also made the largest contribution to the return on the portfolio. Equities in the telecommunications sector posted the weakest return in Q4, -1.7%.

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



Chart 1-6 Relative return in international currency terms. Equity investments. Basis points



Table 1-4 Equity investments by sector and relative to the benchmark index. At the end of 2021 Q4. In billions of NOK

	Market value	Share
Materials	4	3 %
Consumer discretionary	20	16 %
Consumer staples	7	6 %
Energy	3	3 %
Financials	16	13 %
Health care	16	13 %
Industrials	16	13 %
Real estate	3	3 %
Technology	31	25 %
Telecommunications	4	3 %
Utilities	3	2 %

Table 1-5 Equity investments by currency and relative to the benchmark index. At the end of 2021 Q4. In billions of NOK

	Market value	Share
AUD	3	2 %
CAD	3	2 %
CHF	4	3 %
DKK	1	1 %
EUR	13	10 %
GBP	5	4 %
JPY	9	7 %
SEK	1	1 %
USD	84	69 %

Petroleum buffer portfolio

The market value of the petroleum buffer portfolio was NOK 46.8bn at the end of 2021 Q4, a decline of NOK 10.4bn since the end of Q3. During Q4, NOK 109.6bn worth of foreign exchange was purchased from the State's Direct Financial Interest (SDFI), and NOK 74.8bn worth of foreign exchange was transferred to the GPF from the petroleum buffer portfolio. At the same time, Norges Bank sold NOK 45.5bn 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 2021 Q4, excluding exchange rate movements, was 19.3% and 2.1%, respectively. This corresponds to an expected annual fluctuation in value of approximately NOK 23.5bn and NOK 10.0bn, respectively. At the same time, expected relative volatility for equity and fixed income investments was 0.08 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 ± 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

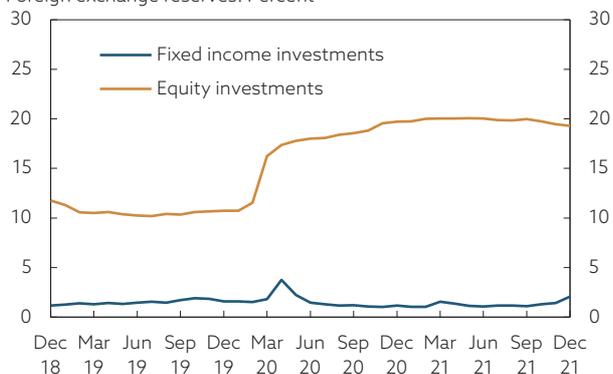


Chart 1-8 Relative volatility, including exchange rate movements. Foreign exchange reserves. Basis points



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) totalled SDR 10 673m at 31 December 2021. At the end of 2021 Q4, the IMF had drawn SDR 1 367m. The total remaining amount that can be drawn under these arrangements is SDR 9 640m¹. 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	
				2021 Q4	2021
Total lending programmes	10 673 080	1 366 637	9 639 729	-21 068	-58 723
Quota	3 754 700	987 140	2 767 560	0	27 311
NAB	3 933 380	46 211	3 887 169	-10 000	-38 100
Bilateral agreements	2 585 000	0	2 585 000	0	0
PRGT	400 000	333 286	400 000	-11 068	-47 934
	SDR allocations	SDR holdings	Remaining voluntary purchases		
SDR holdings	5 161 781	5 354 533	2 388 138	73 699	3 830 548

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.

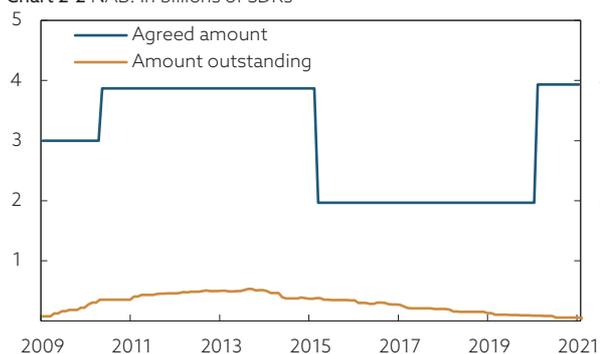
QUOTA SUBSCRIPTIONS are the IMF's primary source of funding and reflect the member country's relative size in the global economy. Norway's quota subscription is SDR 3 755m³. The amount drawn⁴ was unchanged during 2021 Q4 (Table 2-1 and Chart 2-1).

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. Norges Bank's commitments under the NAB amount to SDR 3 933m. Total outstanding drawings were reduced by SDR 10m during Q4 (Table 2-1 and Chart 2-2).

Chart 2-1 IMF 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 and has a SDR 2 585m borrowing facility. At the end of 2021 Q4, 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, Chart 2-3 and Chart 2-4). Repayments made under the 2010 agreement in 2021 Q4 totalled SDR 11m. In 2020, an additional borrowing agreement for SDR 400m was entered into. At the end of Q4, this agreement had not been drawn on. Norges Bank is the agent for PRGT loans and administers the commitments.

Chart 2-3 PRGT 2010 agreement. In billions of SDRs

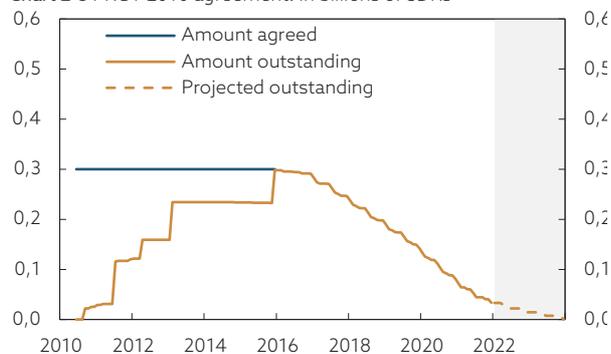
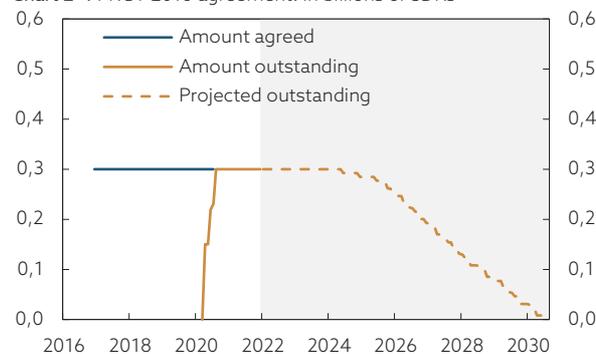


Chart 2-4 PRGT 2016 agreement. In billions of SDRs

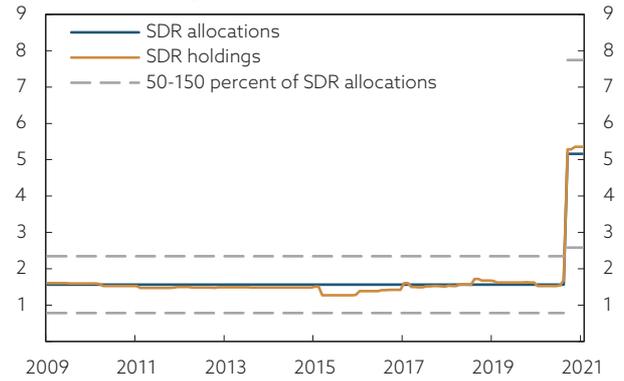


³ Special Drawing Right (SDR). The SDR is an instrument the IMF can use to allocate international liquidity. The value of the SDR is based on a basket of five currencies: USD, EUR, JPY, GBP and CNY.

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 2021 Q4, SDR holdings increased by around SDR 74m. At the end of Q4, Norway's holdings amounted to SDR 5 354m (Table 2-1 and Chart 2-5).

Chart 2-5 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	3.80	5.80	4.67	5.51
<i>Fixed income investments</i>				
Return on fixed income investments	-1.45	1.46	1.16	1.60
Return on the benchmark index	-1.46	1.48	1.17	1.53
Relative return	0.00	-0.02	-0.01	0.06
<i>Equity investments</i>				
Return on equity investments	25.08	22.63	15.31	14.62
Return on the benchmark index	24.83	22.56	15.27	14.45
Relative return	0.25	0.07	0.04	0.17

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

	2021 Q4	2021 Q3	2021 Q2	2021 Q1	2020 Q4
Duration	3.83	3.89	3.84	3.88	3.86
CNY	3.37	3.41	3.35	3.35	3.25
EUR	4.24	4.42	4.40	4.47	4.36
GBP	4.19	4.39	4.25	4.38	4.56
JPY	4.26	4.05	4.09	4.02	3.96
USD	3.47	3.47	3.40	3.41	3.40
Yield	0.40	0.23	0.20	0.19	-0.08
CNY	2.38	2.51	2.70	2.81	2.47
EUR	-0.47	-0.51	-0.47	-0.54	-0.68
GBP	0.70	0.55	0.31	0.35	-0.03
JPY	-0.06	-0.08	-0.11	-0.08	-0.10
USD	0.94	0.64	0.59	0.59	0.30