

FOREIGN EXCHANGE RESERVES

Management of the foreign exchange reserves

3 | 2021

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REPORT FOR THIRD
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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 (GPFG). 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 Q3

- The market value of Norges Bank's foreign exchange reserves was NOK 645.9bn, an increase of NOK 2.4bn since 2021 Q2.
- The return on the foreign exchange reserves was 0.1% in international currency terms. The return on equity investments was 0.8%, while the return on fixed income investments was -0.1%. In NOK terms, the return on the foreign exchange reserves was 0.7%.
- 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 645.9bn at the end of 2021 Q3. The value increased by NOK 2.4bn from the previous quarter. A weaker krone increased the value by NOK 3.7bn, while return in international currency terms increased the value by NOK 0.9bn. Net outflows amounted to NOK 2.3bn. So far in 2021, the market value of the foreign exchange reserves has increased by NOK 47.4bn, of which net inflows accounted for NOK 35.8bn.

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

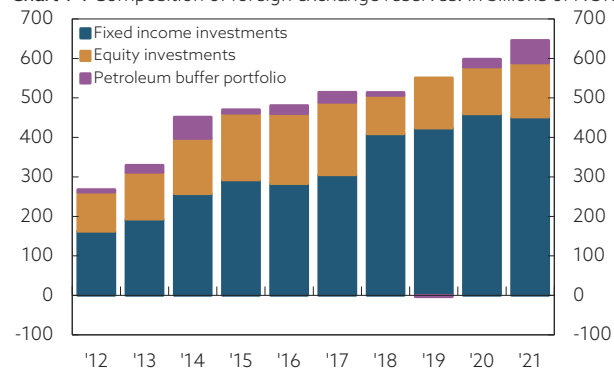


Table 1-1 Market value

	2021 Q3			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)	451.2	135.0	57.3	643.5	459.8	118.6	20.0	598.4
Market value (closing)	451.4	137.3	57.2	645.9	451.4	137.3	57.2	645.9
Change in market value	0.2	2.2	-0.1	2.4	-8.4	18.6	37.2	47.4
Net transfers	-1.5	0.0	-0.8	-2.3	-1.1	0.0	36.9	35.8
Return in NOK terms	1.6	2.2	0.7	4.6	-7.3	18.6	0.3	11.6

Table 1-2 Details of fixed income and equity investments

	2021 Q3			Total	2021			Total
	Fixed income investments	Equity investments			Fixed income investments	Equity investments		
<i>In billions of NOK</i>								
Return in NOK terms		1.6	2.2	3.9	-7.3	18.6		11.3
Return in international currency terms		-0.3	1.2	0.9	-4.6	18.1		13.5
Movements in the krone exchange rate		1.9	1.1	3.0	-2.7	0.5		-2.2
<i>In percent</i>								
Return in international currency terms		-0.1	0.8	0.1	-1.0	15.4		2.4
Return in NOK terms		0.4	1.7	0.7	-1.6	15.7		1.7
Relative return in NOK terms		0.01	0.08	-	0.01	0.19		-
Expected relative volatility in NOK terms (annualised)		0.03	0.09	-	0.03	0.09		-

Fixed income investments

The market value of the fixed income investments was NOK 451.4bn, an increase of NOK 0.2bn from the previous quarter. The krone depreciation increased the value by NOK 1.9bn. The return in international currency terms reduced the value by NOK 0.3bn, equivalent to -0.1%. Net outflows from the fixed income portfolio amounted to NOK 1.5bn.

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



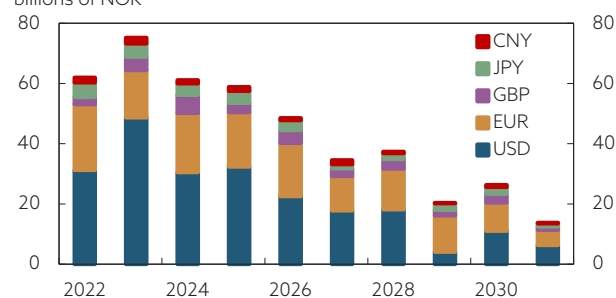
Chart 1-3 Relative return in NOK terms. Fixed income investments. Basis points



Table 1-3 Fixed income investments by currency at the end of 2021 Q3. Market value in billions of NOK

	Market value	Share	Duration	Yield
Total	451.37	100.00	3.89	0.23
CNY	9.37	2.08	3.41	2.51
EUR	153.06	33.91	4.42	-0.51
GBP	31.74	7.03	4.39	0.55
JPY	31.57	6.99	4.05	-0.08
USD	225.63	49.99	3.47	0.64

Chart 1-4 Principal and coupon due per year at the end of 2021 Q3. In billions of NOK



US US government bond yields were little changed at the end of the quarter, but showed some volatility during the period. Change was most pronounced in the 5-year segment, with a rise of approximately 10 basis points. Investments denominated in USD earned a return of 0.0% in Q3. Current interest income offset the loss resulting from somewhat higher yields.

EUROPE European government bond yields fell markedly in the first half of Q3 before rising again in the latter half. Overall, the changes in yields were minor. Investments denominated in EUR earned a return of -0.1% in Q3. Current interest income and a marginal rise in yields were the main reasons for the negative return.

UK UK government bond yields rose by just over 20 basis points in Q3. Investments denominated in GBP earned a return of -0.9% in Q3, primarily owing to higher yields.

JAPAN Japanese yields rose marginally in Q3. The rise was most pronounced for long-term yields. Investments denominated in JPY earned a return of 0.1% in Q3.

CHINA Government bond yields along the entire yield curve fell by approximately 20 basis points. The Chinese 10-year government bond yield ended the quarter at just below 2.9%. Investments denominated in CNY earned a return of 1.4%. Current interest income and the decline in yields each accounted for approximately half of the return.

Equity investments

The market value of the equity portfolio was NOK 137.3bn at the end of 2021 Q3, an increase of NOK 2.2bn for the quarter. The return in international currency terms increased the market value by NOK 1.2bn, equivalent to 0.8%. A weaker krone, in isolation, increased the value of the portfolio by a further NOK 1.1bn.

Asian equities posted a return of 4.9%, North American equities, 0.9% and European equities, -1.0%. The technology sector posted the highest return, 3.1%, and also made the largest contribution to the return on the portfolio. Equities in the materials sector posted the weakest return, -3.5%.

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 Q3. In billions of NOK

	Market value	Share
Materials	4	3%
Consumer discretionary	22	16%
Consumer staples	8	6%
Energy	4	3%
Financials	19	14%
Health care	18	13%
Industrials	19	14%
Real estate	4	3%
Technology	33	24%
Telecommunications	5	3%
Utilities	3	2%

Table 1-5 Equity investments by currency and relative to the benchmark index. At the end of 2021 Q3. In billions of NOK

	Market value	Share
AUD	3	2%
CAD	3	2%
CHF	4	3%
DKK	1	1%
EUR	14	11%
GBP	5	4%
JPY	11	8%
SEK	2	1%
USD	93	68%

Petroleum buffer portfolio

The market value of the petroleum buffer portfolio was NOK 57.2 at the end of 2021 Q3, a decline of NOK 0.1bn since the end of Q2. During Q3, NOK 59.4bn worth of foreign exchange was purchased from the State's Direct Financial Interest (SDFI), and NOK 52.0bn worth of foreign exchange was transferred from the GPF to the petroleum buffer portfolio. At the same time, Norges Bank sold NOK 112.2bn 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 Q3, excluding exchange rate movements, was 20.0% and 1.1%, respectively. This corresponds to an expected annual fluctuation in value of approximately NOK 27.4bn and NOK 5.0bn, respectively. At the same time, expected relative volatility for equity and fixed income investments was 0.09 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

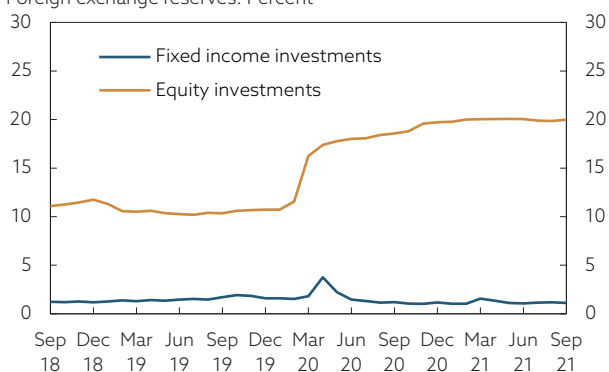
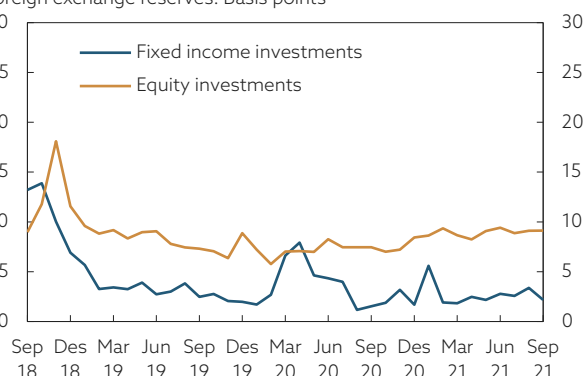


Chart 1-8 Relative volatility, including exchange rate movements. Foreign exchange reserves. Basis points



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 30 September 2021. At the end of 2021 Q3, the IMF had drawn SDR 1 388m. The total remaining amount that can be drawn under these arrangements is SDR 9 630m¹. In August, the Executive Board of the IMF approved an allocation of approximately SDR 456bn to members. For Norway, this meant that its SDR allocation increased from SDR 1 563m to SDR 5 162m. The size and liquidity of the foreign exchange reserves are assessed to be sufficient to meet Norges Bank's international commitments.

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 755m². At the end of 2021 Q3, the amount drawn³ totalled SDR 987m, which entails a reduction of SDR 3m from Q2 (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 (Chart 2-2). Total outstanding drawings were SDR 56m at the end of 2021 Q3.

Chart 2-1 IMF quota. In billions of SDRs

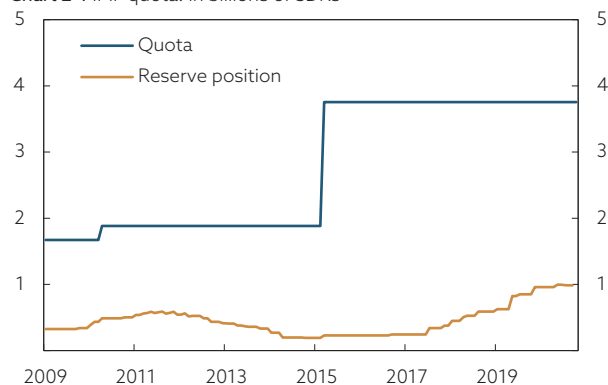
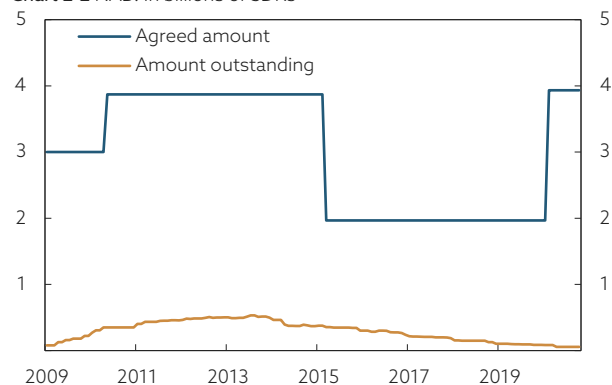


Chart 2-2 NAB. In billions of SDRs



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 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.

³ The amount drawn is equal to Norway's reserve position in the IMF.

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 Q3, 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, Sub-section 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 (Charts 2-3 and 2-4). Repayments made under the 2010 agreement in 2021 Q3 totalled SDR 8m. In 2020, an additional borrowing agreement for SDR 400m was entered into. At the end of Q3, 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

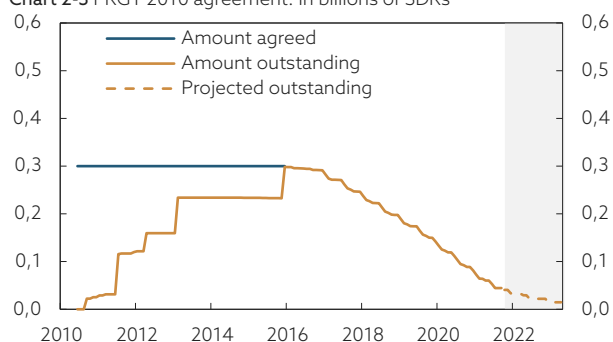
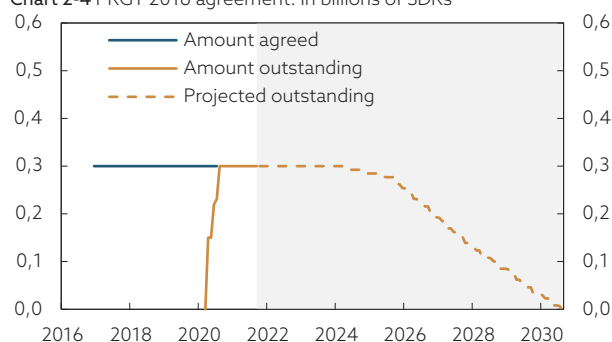


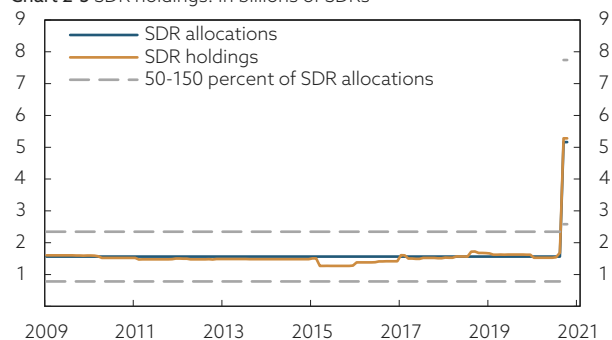
Chart 2-4 PRGT 2016 agreement. In billions of SDRs



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 and given the SDR 3 599m allocation in August, 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.

Disregarding the allocation mentioned above, SDR holdings increased by around SDR 142m in 2021 Q3. At the end of Q3, Norway's holdings amounted to SDR 5 281m (Chart 2-5).

Chart 2-5 SDR holdings. In billions of SDRs



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 sharing⁴. 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.

⁴ 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.

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	6.81	4.79	5.00	5.35
<i>Fixed income investments</i>				
Return on fixed income investments	-0.88	1.99	0.95	2.17
Return on the benchmark index	-0.87	2.01	0.96	2.15
Relative return	-0.01	-0.02	-0.01	0.02
<i>Equity investments</i>				
Return on equity investments	37.54	15.59	15.81	12.63
Return on benchmark index	37.40	15.56	15.72	12.46
Relative return	0.13	0.02	0.08	0.17

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

	2021 Q3	2021 Q2	2021 Q1	2020 Q4	2020 Q3
Duration	3.89	3.84	3.88	3.86	3.86
CNY	3.41	3.35	3.35	3.25	0.00
EUR	4.42	4.40	4.47	4.36	4.39
GBP	4.39	4.25	4.38	4.56	4.20
JPY	4.05	4.09	4.02	3.96	4.08
USD	3.47	3.40	3.41	3.40	3.40
Yield	0.23	0.20	0.19	-0.08	-0.10
CNY	2.51	2.70	2.81	2.47	0.00
EUR	-0.51	-0.47	-0.54	-0.68	-0.61
GBP	0.55	0.31	0.35	-0.03	-0.01
JPY	-0.08	-0.11	-0.08	-0.10	-0.11
USD	0.64	0.59	0.59	0.30	0.24