FOREIGN EXCHANGE RESERVES

Management of Norges Bank's foreign exchange reserves

1 | 2020 MAY 2020

REPORT FOR FIRST QUARTER 2020



CONTENTS

Management of the foreign exchange reserves	. 3
Foreign exchange reserves	4
Fixed income investments	4
Equity investments	5
Petroleum buffer portfolio	6
Financial risk	7
International commitments	7
Key figures	. 9

NORGES BANK

QUARTERLY REPORT

1 | 2020

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 France, Germany,

Japan, the UK and the US. The equity portfolio's benchmark index is a taxadjusted 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.

NORGES BANK

QUARTERLY REPORT 1 | 2020

MANAGEMENT OF NORGES BANK'S FOREIGN EXCHANGE RESERVES

Main points from 2020 Q1

- The market value of Norges Bank's foreign exchange reserves was NOK 688.7bn at the end of 2020 Q1, an increase of NOK 141.6bn during the quarter.
- The return on the reserves was -2.6% in Q1, in international currency terms. The return on equity investments was -19.6%, while the return on fixed income investments was 2.5%. In NOK terms, the return on the foreign exchange reserves was 15.0%.
- > The size and liquidity of the foreign exchange reserves are regarded as sufficient for meeting Norges Bank's commitments.

Table 1 Key figures

Table I Key figures				
		2020 Q1		
				Foreign exchange reserves
In billions of NOK				
Market value (opening)	423.4	127.3	-3.5	547.2
Market value (closing)	510.3	120.8	57.6	688.7
Change in market value	87.0	-6.5	61.1	141.6
Net transfers	-2.4	0.0	61.4	59.1
Return in NOK terms	89.3	-6.5	-0.3	82.5

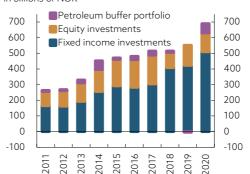
Table 2 Details of fixed income and equity investments

Table 2 Details of fixed income and equity investments				
	2020	2020 Q1		
	investments	investments	Total	
In billions of NOK				
Return in NOK terms	89.3	-6.5	82.8	
Return in international currency terms	11.1	-26.4	-15.3	
Movements in the krone exchange rate	78.2	19.9	98.1	
In percent				
Return in NOK terms	21.02	-5.12	14.99	
Return in international currency terms	2.53	-19.61	-2.58	
Relative return in international currency terms	-0.01	-0.05	-	
Expected relative volatility in NOK terms (annualised)	0.07	0.07	-	

Foreign exchange reserves

The market value of the foreign exchange reserves was NOK 688.7bn at the end of 2020 Q1. The value increased by NOK 141.6bn during the quarter. A weaker krone increased the value by NOK 98.1bn, while net transfers totalled NOK 59.1bn. Return in international currency terms reduced the value by NOK 15.3bn.

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



NORGES BANK

QUARTERLY REPORT 1 | 2020

MANAGEMENT OF NORGES BANK'S FOREIGN EXCHANGE RESERVES

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. Therefore, unless stated otherwise, return will henceforth be measured in international currency. The petroleum buffer portfolio, which is not held for the purpose of crisis management, is excluded from the measurement of return.

Fixed income investments

The market value of the fixed income investments at the end of 2020 Q1 was NOK 510.3bn, an increase of NOK 87.0bn during the quarter. The depreciation of the krone contributed to an increase of NOK 78.2bn in the value. The return in international currency terms increased the value by NOK 11.1bn, equivalent to 2.5%. Net outflows from the fixed income portfolio amounted to NOK 2.4bn for the quarter.

US government bond yields fell considerably throughout 2020 Q1. The shortest yields fell by close to 150 basis points. Two-year yields fell by 135 basis points, somewhat more than ten-year yields. In March, the Federal Reserve Bank announced a number of accommodative measures that contributed to the decline in yields, including lowering the target range for the federal funds rate by 150 basis points and large-scale asset purchases. Investments denominated in USD accounted for 50% of the fixed income portfolio and earned a return of 4.6% in domestic currency terms, primarily owing to the decline in yields.

The effects of the large-scale measures implemented by the European Central Bank contributed to the marked decline in long-term German yields during 2020 Q1. Long-term French yields, deemed less safe and liquid than German government bond yields, fell by less in the same period. Yields at the shortest maturities have risen in the same period in both countries. Investments denominated in EUR accounted for 34% of the fixed income portfolio and earned a return of 0.4%, primarily owing to the decline in yields.

Measures implemented by the Bank of England, such as policy rate cuts and asset purchases, contributed to a marked decline in UK yields in 2020 Q1. The decline in yields is the main reason why GBP-denominated investments, which account for 8% of the fixed income portfolio, generated a return of 1.9% in domestic currency terms.

Japanese yields have remained broadly unchanged since the end of 2019. JPY-denominated investments, which account for 8% of the fixed income portfolio, earned a return of 0.0% in JPY terms during the period.

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

Total	510.3	100.00	3.64	0.02
EUR	169.1	33.14	4.01	-0.48
GBP	40.0	7.83	4.01	0.16
JPY	40.7	7.97	4.14	-0.14
USD	260.6	51.06	3.27	0.34

Table 4 Return on fixed income investments

	2020 Q1
In international currency terms	
Return (percent)	2.53
Return (millions of NOK)	11 097
In NOK terms	
Return (percent)	21.02
Return (millions of NOK)	89 137

Table 5 Relative return on fixed income investments

	2020 Q1	
In international currency terms		
Relative return (percentage points)	-0.01	
Relative return (millions of NOK)	-68	

Chart 2 Principal and coupon due per year at the end of Q1. In billions of NOK

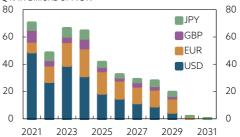


Chart 3 Return measured in international currency terms. Fixed income investments. Percent



Chart 4 Relative return in international currency terms.



BENCHMARK INDEX

The benchmark index for fixed income investments is provided by Bloomberg and is a market value-weighted index of all nominal government bonds with a residual maturity of between one month and 10 years issued by France, Germany, Japan, the UK and the US. The currency weighting in the fixed income index is 50% USD, 34% EUR, 8% GBP and 8% JPY.

Equity investments

The market value of the equity investments at the end of 2020 Q1 was NOK 120.8bn, a decline of NOK 6.5bn since the end of 2019. This primarily reflects declining equity markets, which generated a negative return of NOK 26.4bn or -19.6%. A weaker krone pulled the market value up by NOK 19.9bn.

In 2020 Q1, global equity markets experienced a marked fall but recovered somewhat towards the end of the quarter. Volatility was substantial throughout the quarter.

European equities posted the weakest return at -23.1%. North American and Asian equities posted returns of -18.6% and -15.9%, respectively. The healthcare sector posted the strongest return in 2020 Q1, -10.3%, while equities related to oil and gas posted the weakest returns of -40.7%.

NORGES BANK

QUARTERLY REPORT 1 | 2020

Table 6 Equity investments excluding cash funds by industry at end-2020 Q1. In billions of NOK

	Market value	Share (%)
Oil and gas	3.7	3.1
Materials	4.1	3.4
Industrials	14.2	11.8
Consumer goods	13.5	11.2
Health care	17.9	14.9
Consumer services	14.2	11.8
Telecommunications	3.4	2.8
Utilities	3.5	2.9
Financials	22.1	18.3
Technology	23.8	19.8

Table 8 Return on equity investments

Table of Retain on equity investments			
	2020 Q1		
In international currency terms			
Return (percent)	-19.61		
Return (in millions of NOK)	-26 431		
In NOK terms			
Return (percent)	-5.12		
Return (in millions of NOK)	-6 516		

Table 9 Relative return on equity investments

2020 Q1	
-0.05	
-73	
	-0.05

Table 7 Equity investments by currency at end-2020 O1. In billions of NOK

	Market value	Share (%)
AUD	2.4	2.0
CAD	3.1	2.6
CHF	4.5	3.8
DKK	0.9	0.8
EUR	12.9	10.7
GBP	6.1	5.1
JPY	11.8	9.8
SEK	1.3	1.0
USD	77.6	64.3

Chart 5 Return in international currency terms. Equity



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



BENCHMARK INDEX

The benchmark index for equity investments is a tax-adjusted version of the FTSE All-World Developed Market Index, limited to euro area countries, the US, Japan, the UK, Canada, Australia, Switzerland, Sweden and Denmark.

Petroleum buffer portfolio

At the end of 2020 Q1, the market value of the petroleum buffer portfolio was NOK 57.6bn, an increase of NOK 61.1bn. During Q1, NOK 37.6bn worth of foreign exchange was purchased from the State's Direct Financial Interest (SDFI). At the same time, Norges Bank sold NOK 43.0bn worth of foreign exchange in the market. During Q1, a total of NOK 66.8bn was transferred from the GPFG to the petroleum buffer portfolio.

¹ See Management of Norges Bank's foreign exchange reserves: Report for Q4 2019.

Owing to a sharp increase in transfers to the GPFG in December 2019, the petroleum buffer portfolio was issued a loan of NOK 10bn from the fixed income portfolio. Without the loan, the petroleum buffer portfolio would not have been sufficient to cover the upwardly revised transfer amount at the end of 2019. The loan was repaid on 31 March 2020.

NORGES BANK

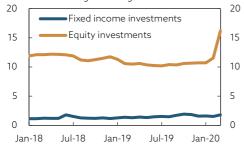
QUARTERLY REPORT 1 | 2020

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 major 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,

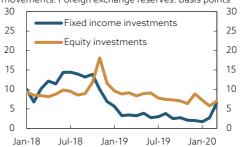
Chart 7 Absolute volatility, excluding exchange rate movements. Foreign exchange reserves. Percent



expected absolute volatility at the end of 2020 Q1 excluding exchange rate movements was 12.4% and 1.8%, respectively. This corresponds to an expected annual fluctuation in value of approximately NOK 15bn and NOK 9.2bn, respectively. At the same time, expected relative volatility was 0.07 percentage point for both equity and fixed income investments.

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, were equivalent to AAA for the German government, AA+ for the US government, AA for the French government, AA- for the UK government and A for the Japanese government.

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



EXPECTED RELATIVE VOLATILITY

Under the Executive Board's principles for the foreign exchange reserves, maximum expected relative volatility is set at 0.5 percentage point for both fixed income and equity portfolios. Relative volatility of 50 basis points means that the excess return is expected to be within ± 0.5 percentage point in two out of three years.

International commitments

Pursuant to the Norges Bank Act, Norges Bank shall meet the commitments ensuing from membership of the IMF. This membership entails a standing commitment to furnish foreign exchange for IMF loans to other member countries. See page 8 for an overview of Norges Bank's commitments to the IMF. The size and liquidity of the foreign exchange reserves are assessed to be sufficient to meet Norges Bank's international commitments.

NORGES BANK

QUARTERLY REPORT 1 | 2020

OVERVIEW OF NORGES BANK'S COMMITMENTS TO THE IMF

QUOTA SUBSCRIPTIONS are the IMF's primary source of funding and Chart 9 IMF quota. In billions of SDRs reflect the member country's relative size in the global economy. In 5 2010, the IMF approved the 14th General Review of Quotas, under which IMF quota subscriptions doubled with effect from 2016. Norway's quota subscription increased to SDR 3755m². At the end of 2020 Q1, the amount drawn³ totalled SDR 625m (Chart 9). The quota subscription has not been drawn upon in 2020 Q1.

The 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. At the same time as the quota increase, Norway's resource commitments under the NAB were reduced by approximately the same amount. Norges Bank's commitments under the NAB now amount to SDR 1967m (Chart 10). Total outstanding drawings were SDR 99m at the end of 2020 Q1. Repayments made under the NAB during the quarter totalled Chart 10 NAB. In billions of SDRs SDR 4m. Since the quota increase in 2016, the IMF funds all new loans by drawing on the quotas. The IMF's Executive Board must specifically decide to activate the NAB in order to fund new lending by drawing on the NAB. Payments for loans approved by the IMF before 26 February 2016 will continue to be partly funded by drawing on the NAB.

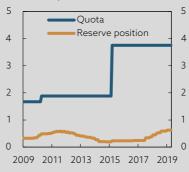
BILATERAL AGREEMENTS serve as the IMF's third line of defence after guota subscriptions and the NAB. In 2009, Norges Bank provided the IMF with a borrowing agreement of SDR 3000m, which was continued under the NAB. In 2012, Norges Bank provided the IMF with a borrowing facility under a bilateral borrowing agreement of SDR 6000m, to be drawn on only in very special circumstances. This agreement expired in November 2016 and was never drawn on. In April 2017, on behalf of the Ministry of Finance, Norges Bank signed a new bilateral agreement with the IMF for the same amount, which remained in effect until the end of 2019. In June Chart 11 PRGT. In hundreds of millions of 2019, the Ministry of Finance approved Norges Bank's extension of the SDRs agreement for one year. At the end of 2020 Q1, no amounts had been drawn on the new borrowing agreement.

The PRGT (Poverty Reduction and Growth Trust) is an agreement signed by the Ministry of Finance and the IMF under which Norway will furnish SDR 300m in loan resources to the IMF's programme for low-income countries. Norges Bank is the agent for the loan and administers the commitments. This facility is now fully drawn, and under the agreement from 2010, only repayments will now be made (Chart 11). Repayments made under the PRGT in 2020 Q1 totalled SDR 20m. In November 2016, a new borrowing agreement was signed under which Norway will provide the PRGT with an additional SDR 300m. At the end of 2020 Q1, no amounts had been drawn on the new borrowing agreement.

Loan resource commitments under the quota, NAB, bilateral agreements and the PRGT total SDR 12021m, of which the IMF had drawn SDR 724m at the end of 2020 Q1. A further SDR 11297m may thus be drawn under these arrangements (see Table 14 under Key figures for further details).

HOLDINGS OF SDRs 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 2345m. Purchases of SDRs are charged to the foreign exchange reserves. The agreement also gives Norges Bank the right to sell SDRs. At the end of 2020 Q1, holdings of SDRs were SDR 1567m (Chart 12).





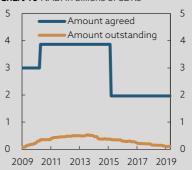
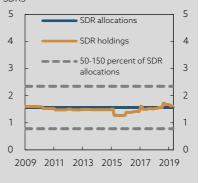




Chart 12 Holdings of SDRs. In billions of SDRs



NORGES BANK

QUARTERLY REPORT 1 | 2020

² 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.

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

Key figures

Table 10 Market value. In billions of NOK

	2020 Q1	2019 Q1	2019	
Market value of fixed income and equity investments	631.1	517.4	-	
Change in market value	80.4	11.1	44.4	
Net transfers	-2.4	-0.8	-2.5	
Return in NOK	82.8	11.9	46.8	
Return in international currency	-15.3	16.7	39.6	
Change due to movements in the krone exchange rate	98.1	-4.9	7.3	
Market value of the petroleum buffer portfolio	57.6	19.6	-	
Change in market value	61.1	11.8	-11.3	
Net transfers	61.4	11.9	-11.8	
Foreign exchange purchases from the SDFI	37.6	44.4	142.4	
Foreign exchange purchases from the market	-43.0	-29.3	-140.8	
Transfers from the GPFG	66.8	-3.3	-13.4	
Return in NOK	-0.3	-0.1	0.5	
Market value of the foreign exchange reserves	688.7	537.0	-	

Table 11 Return in international currency terms. Percent

	2020 Q1	2019 Q1	2019	
Return on fixed income investments	2.53	1.16	2.86	
Return on equity investments	-19.61	12.44	28.31	
Return on the foreign exchange reserves ¹	-2.58	3.33	7.78	
Return on benchmark index for fixed income investments	2.55	1.19	2.93	
Return on benchmark index for equity investments	-19.56	12.42	28.32	
Relative return on fixed income investments	-0.01	-0.03	-0.07	
Relative return on equity investments	-0.05	0.02	-0.01	

¹Excluding the petroleum buffer portfolio

Table 12 Return in NOK terms. Percent

	2020 Q1	2019 Q1	2019	
Return on fixed income investments	21.02	0.12	4.20	
Return on equity investments	-5.12	11.67	30.60	
Return on the foreign exchange reserves ¹	14.99	2.34	9.29	
Return on benchmark index for fixed income investments	21.04	0.15	4.27	
Return on benchmark index for equity investments	-5.06	11.65	30.61	
Relative return on fixed income investments	-0.02	-0.03	-0.07	
Relative return on equity investments	-0.06	0.02	-0.01	

¹ Excluding the petroleum buffer portfolio

NORGES BANK

QUARTERLY REPORT 1 | 2020

Table 13 Key figures at quarter-end. Annualised data measured in international currency terms. Percent

Return on the foreign exchange reserves	1.61	2.97	2.91	4.95
Fixed income investments				
Return on fixed income investments	4.25	2.26	1.60	2.61
Return on the benchmark index	4.31	2.29	1.62	2.44
Relative return	-0.06	-0.03	-0.02	0.17
Realised absolute volatility ¹	1.93	1.62	1.63	2.20
Realised relative volatility ¹	0.04	0.05	0.05	0.29
Information rate ²	-1.59	-0.54	-0.38	0.58
Equity investments				
Return on equity investments	-8.26	2.72	4.19	8.43
Return on benchmark index	-8.18	2.71	4.09	8.23
Relative return	-0.08	0.00	0.10	0.19
Realised absolute volatility ¹	18.95	14.09	13.05	12.33
Realised relative volatility ¹	0.11	0.09	0.14	0.22
Information rate ²	-0.71	0.03	0.76	0.89

¹Realised volatility is a measure of the fluctuation in monthly return values, expressed here by the annualised empirical standard deviation. Absolute/relative volatility expresses risk related to absolute/relative return.

 $\textbf{Table 14} \ \textbf{Claims on and liabilities to the International Monetary Fund (IMF) at quarter-end. In millions of NOK and the liabilities of NOK are the liabilities of NOK and the liabilities of NOK are the l$

		Reco	Recognised in the balance sheet			
		Drawn on				
	commitments ²	commitments	Subscription ³	SDRs	amount	
Financial assets						
IMF subscription (quota) ¹	-	-	53 945	-	53 945	
Holdings of SDRs	-	-	-	23 353	23 353	
Loans to the IMF - NAB	28 235	1 423	-	-	1 423	
Loans to the IMF - Bilateral agreement	86 138	-	-	-	-	
Loans to the IMF - PRGT	8 614	1 768	-	-	1 768	
Claims on the IMF	-	3 192	53 945	23 353	80 490	
Financial liabilities						
Krone liability to the IMF	-	-	44 968	-	44 968	
Equivalent value of SDR allocations	-	-	-	22 457	22 457	
Liabilities to the IMF	-	-	44 968	22 457	67 426	
Net positions with the IMF	-	3 192	8 976	896	13 064	

¹ The IMF allocates quotas to member countries, which primarily reflect member countries' relative size in the world economy. The quota provides the basis for determining the member country's voting power in the IMF, the member's financial contribution to the IMF, the amount of financing the member can access in the event of balance of payment problems and the amount of SDRs the member is allocated.

NORGES BANK

QUARTERLY REPORT 1 | 2020

²Information rate (IR) is a risk-adjusted return measure. IR is the ratio between excess return and the portfolio's realised relative market risk (measured by relative volatility).

² Commitments giving the IMF a borrowing facility with Norges Bank up to an agreed amount. Only the portion drawn is recognised in the balance sheet. Norges Bank's commitments to the IMF are in SDRs; amounts have been translated into NOK.

³ The net position is referred to as the reserve tranche position (RTP) comprising Norway's IMF quota less Norway's krone liability to the IMF, ie the net amount at the bottom of the column.