

# FOREIGN EXCHANGE RESERVES

## Management of the Foreign Exchange Reserves

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# Contents

<b>1 MANAGEMENT OF THE FOREIGN EXCHANGE RESERVES</b>	<b>1</b>
Foreign Exchange Reserves	2
Fixed Income Investments	3
Equity Investments	4
Petroleum Buffer Portfolio	5
Financial Risk	5
<b>2 COMMITMENTS TO THE IMF</b>	<b>7</b>
<b>KEY FIGURES</b>	<b>10</b>

# 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 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 2020 Q3

- The market value of the Norges Bank's foreign exchange reserves was NOK 638.7bn, a reduction of NOK 16.4bn since Q2.
- The return on the reserves was 1.6% in international currency terms. The return on equity investments was 7.0%, while the return on fixed income investments was 0.1%. In NOK terms, the return on the foreign exchange reserves was 0.4%.
- The size and liquidity of the foreign exchange reserves are regarded as sufficient for meeting Norges Bank's commitments.

## Foreign Exchange Reserves

The market value of the foreign exchange reserves was NOK 638.7bn at the end of 2020 Q3. The value decreased by NOK 16.4bn from the previous quarter. A stronger krone reduced the value by NOK 7.2bn, while net transfers amounted to NOK -19.2bn. Return in international currency terms increased the value by NOK 9.9bn. Return in international currency terms increased the value by NOK 9.9bn.

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

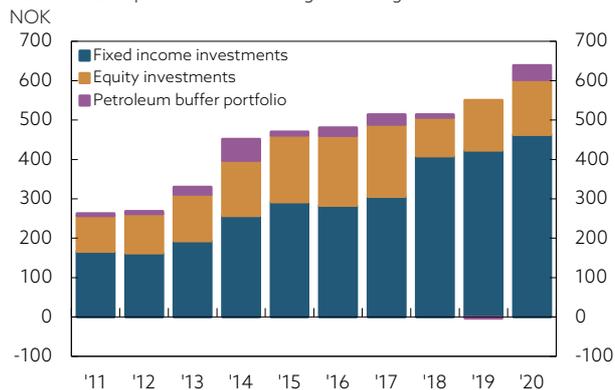


Table 1-1 Market value

	2020 Q3			Foreign Exchange Reserves	2020			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)	468.8	133.1	53.4	655.2	423.4	127.3	-3.5	547.2
Market value (closing)	462.5	139.9	36.4	638.7	462.5	139.9	36.4	638.7
<b>Change in market value</b>	<b>-6.3</b>	<b>6.8</b>	<b>-17.0</b>	<b>-16.4</b>	<b>39.1</b>	<b>12.6</b>	<b>39.9</b>	<b>91.6</b>
Net transfers	-2.1	0.0	-17.1	-19.2	-10.5	0.0	43.5	32.9
Return in NOK terms	-4.2	6.8	0.1	2.8	49.7	12.6	-3.6	58.6

Table 1-2 Details of fixed income and equity investments

	2020 Q3			Total	2020		Sum
	Fixed income investments	Equity investments			Fixed income investments	Equity investments	
<i>In billions of NOK</i>							
<b>Return in NOK terms</b>	<b>-4.2</b>	<b>6.8</b>	<b>2.6</b>	<b>49.7</b>	<b>12.6</b>	<b>62.2</b>	
Return in international currency terms	0.6	9.3	9.9	13.8	5.4	19.3	
Movements in the krone exchange rate	-4.7	-2.5	-7.2	35.8	7.1	43.0	
<i>In percent</i>							
Return in NOK terms	-0.88	5.11	0.44	11.54	9.87	11.21	
Return in international currency terms	0.12	7.04	1.65	3.11	2.39	2.98	
Relative return in international currency terms	-0.01	-0.03	-	0.01	-0.06	-	
Expected relative volatility in NOK terms (annualised)	0.02	0.07	-	0.02	0.07	-	

### 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 was NOK 462.5bn, a decline of NOK 6.3bn from the previous quarter. A stronger krone reduced the value by NOK 4.7bn. The return in international currency terms increased the value by NOK 0.6bn, equivalent to 0.1%. Net outflows from the fixed income portfolio amounted to NOK 2.1bn for the quarter.

**USA** US government bond yields remained stable throughout the quarter and showed relatively little change. Overall, movements in both short- and long-term government bond yields remained below five basis points although the yield curve steepened somewhat. The Federal Reserve maintained its accommodative monetary policy stance and announced that it will pursue a strategy of flexible average inflation-targeting ahead. The US Treasury Department also increased its bond issuance in 2020 Q3. Investments denominated in USD earned a return of 0.2% in domestic currency terms, driven by current interest income and the decline in government bond yields with shorter maturities.

**EUROPE** Movements in both German and French government bond yields remained within relatively narrow intervals throughout Q3. The decline in long-term yields was somewhat more pronounced than in short-term yields, and the decline in French yields was somewhat more pronounced than in German yields. The ECB maintained its policy stance during the period but has expressed the possibility of further easing if necessary. During summer, EU countries agreed on a EUR 750bn recovery fund, of which EUR 390bn will be provided as grants, while the remaining EUR 360 will be provided as loans with favourable terms. Investments denominated in EUR earned a return of 0.1% in Q3, primarily owing to the decline in French yields.

**UNITED KINGDOM** UK government bond yields rose by a few basis points during 2020 Q3. The UK economy recovered somewhat following the severe impact of the Covid-19 outbreak in Q2. Investments denominated in GBP earned a return of -0.1%, primarily owing to the rise in yields.

**JAPAN** Japanese yields remained very stable through Q3. The ten-year yield remained close to the target of 0% for the Bank of Japan's yield curve control strategy throughout Q3. The Japanese government has increased its issuance of government securities to finance higher expenditures related to the Covid-19 pandemic but the higher issuance volume is being absorbed by increased asset purchasing by the Bank of Japan. Investments denominated in JPY generated a return of 0.0% in JPY terms during the period.

**Table 1-4** Fixed income investments by currency at the end of Q3. Market value in billions of NOK.

	Market value	Share	Duration	Yield
<b>Total</b>	<b>462.5</b>	<b>100.00</b>	<b>3.86</b>	<b>-0.10</b>
EUR	157.2	33.98	4.39	-0.61
GBP	37.0	8.00	4.20	-0.01
JPY	37.0	8.00	4.08	-0.11
USD	231.3	50.02	3.40	0.24

**Table 1-3** Return on fixed income investments

	2020 Q3	2020
<i>In NOK terms</i>		
Return (percent)	-0.88	11.54
Return (millions of NOK)	-4 185	49 415
<i>In international currency terms</i>		
Return (percent)	0.12	3.11
Return (millions of NOK)	561	13 837
Relative return (percentage points)	-0.01	0.01
Relative return (millions of NOK)	-39	46

**Chart 1-2** Principal and coupon due per year at the end of Q3. In billions of NOK

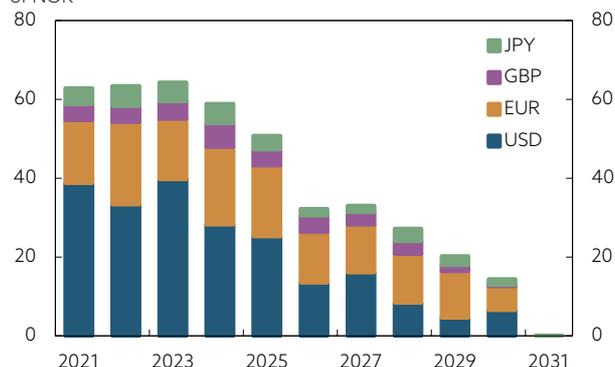


Chart 1-3 Return measured in international currency terms. Fixed income investments. Percent



Chart 1-4 Relative return in international currency terms. Fixed income investments. Basis points



### BENCHMARK INDEX FOR THE FIXED INCOME PORTFOLIO

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

At the end of 2020 Q3, the market value of the equity portfolio was NOK 139.9bn, an increase of NOK 6.8bn since Q2. The return in international currency terms increased the market value by NOK 9.3bn, while a stronger krone, in isolation, reduced the value of the portfolio by NOK 2.5bn.

Uncertainty related to Covid-19 continued to affect financial markets. Nevertheless, equity markets earned solid returns in Q3, particularly driven by US technology companies.

North American equities posted the strongest return at 8.4%. European and Asian equities posted returns of 3.7% and 5.6%, respectively. Consumer goods sector posted the strongest returns in Q3, 11.5%, while equities related to oil and gas posted the weakest returns, -14.2%.

Table 1-5 Return on equity investments

	2020 Q3	2020
<i>In NOK terms</i>		
Return (percent)	5.11	9.87
Return (millions of NOK)	6 801	12 568
<i>In international currency terms</i>		
Return (percent)	7.04	2.39
Return (millions of NOK)	9 303	5 423
Relative return (percentage points)	-0.03	-0.06
Relative return (millions of NOK)	-37	-73

### BENCHMARK INDEX FOR THE EQUITY PORTFOLIO

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.

**Table 1-6** Equity investments excluding cash funds by industry at end-2020 Q3. In billions of NOK

	Market value	Share (%)
Oil and gas	3	2%
Materials	5	4%
Industrials	17	12%
Consumer goods	15	11%
Health care	19	14%
Consumer services	18	13%
Telecommunications	3	2%
Utilities	3	2%
Financials	23	16%
Technology	32	23%

**Table 1-7** Equity investments by currency at end-2020 Q3. In billions of NOK

	Market value	Share (%)
AUD	3	2%
CAD	3	2%
CHF	5	3%
DKK	1	1%
EUR	15	10%
GBP	6	4%
JPY	12	9%
SEK	2	1%
USD	93	67%

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



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



## Petroleum Buffer Portfolio

The market value of the petroleum buffer portfolio was NOK 36.4bn, a decline of NOK 17.0bn. During Q3, NOK 21.4bn worth of foreign exchange was purchased from the State's Direct Financial Interest (SDFI). At the same time, Norges Bank sold NOK 143.5bn worth of foreign exchange in the market. A total of NOK 105bn was transferred from the GPF to the petroleum buffer portfolio (Table 2-12).

## 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.

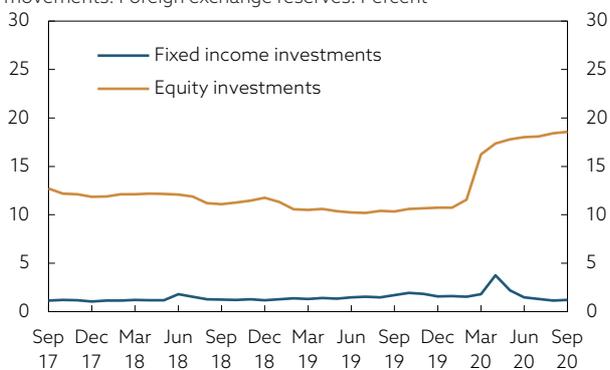
### EXPECTED RELATIVE VOLATILITY

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.

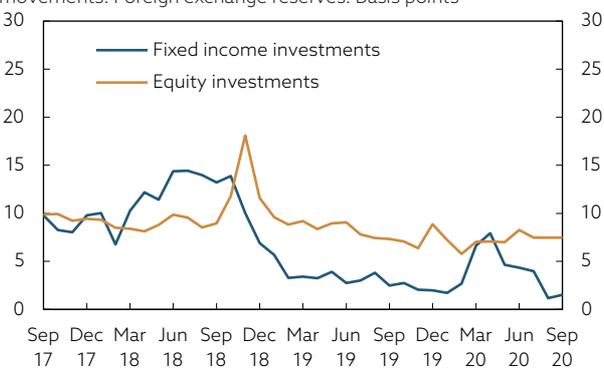
The foreign exchange reserves' market risk is determined by the composition of investments and movements in equity prices, interest rates and credit spreads. For equity and fixed income investments, expected absolute volatility at the end of 2020 Q3 excluding exchange rate movements was 18,6% and 1,2%, respectively. This corresponds to an expected annual fluctuation in value of approximately NOK 26.0bn and NOK 6.0bn, respectively. At the same time, expected relative volatility for equity and fixed income investments was 0.07 and 0.02 percentage point, respectively.

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 2-8** Expected absolute volatility, excluding exchange rate movements. Foreign exchange reserves. Percent



**Chart 2-9** Expected relative volatility, including exchange rate movements. Foreign exchange reserves. Basis points



# 2 COMMITMENTS TO THE IMF

Pursuant to the Norges 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 other member countries.

Loan resource commitments under the quota, NAB, bilateral agreements and the PRGT now total SDR 12 121m, of which the IMF had drawn SDR 1 330m at the end of 2020 Q3. The total remaining amount that can be drawn under these arrangements is SDR 11 184m<sup>1</sup>. 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. In 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 3 755m<sup>2</sup>. At the end of 2020 Q3, the amount drawn<sup>3</sup> totalled SDR 850m, unchanged 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. In unison with the quota increase in 2016, Norway's resource commitments under the NAB were reduced by approximately the same amount. Since the quota increase, the IMF only funds new loans by drawing on the quotas. 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 now amount to SDR 1 967m (Chart 2-2). Total outstanding drawings were SDR 88m at the end of 2020 Q3. Repayments made under the NAB during the quarter totalled SDR 6m.

Chart 2-1 IMF quota. In billions of SDRs

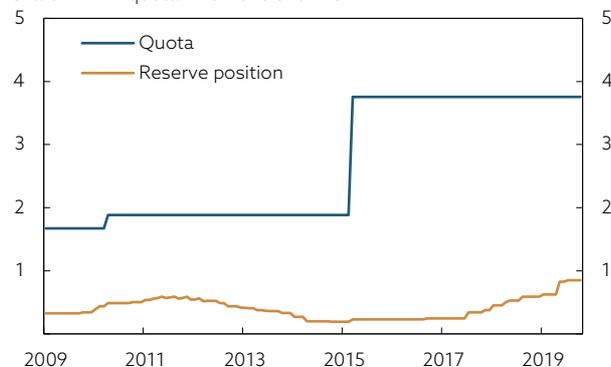
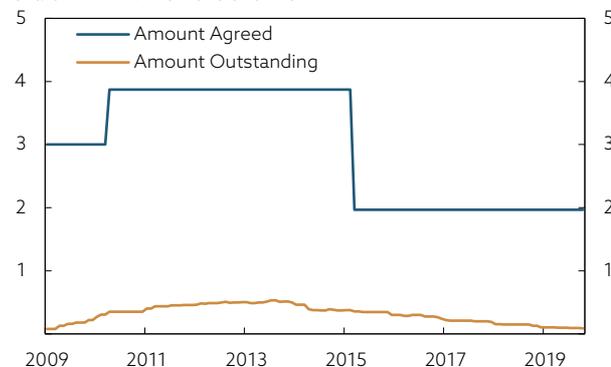


Chart 2-2 NAB. In billions of SDRs



<sup>1</sup> The obligations include the 2020 arrangement under PRGT, but not the 2010 and 2016 agreements, as they can no longer be drawn upon. The same applies for the total remaining amount that can be drawn. Amount drawn includes all arrangements.

<sup>2</sup> 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.

<sup>3</sup> 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. In 2009, Norges Bank provided the IMF with a borrowing agreement of SDR 3 000m, which was continued under the NAB. In 2012, Norges Bank provided the IMF with a borrowing facility under a bilateral borrowing agreement of SDR 6 000m. This agreement expired in November 2016 and was never drawn on. In April 2017, 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 2019, Norges Bank extended the agreement for one year. At the end of 2020 Q3, no amounts had been drawn on the new borrowing 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 Norges 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 for the PRGT are now fully drawn and under the agreements, only repayments will now be made (Charts 2-3 and 2-4). Repayments made under the 2010 agreement in 2020 Q3 totalled SDR 20m. In Q3, SDR 81m had been drawn on the 2016 agreement. With effect from 1 July 2020, an additional borrowing agreement was entered into (the 2020 agreement) under which Norway will provide the PRGT with SDR 400m. This agreement and administer the commitments. At the end of 2020 Q3, this agreement had not been drawn on. Norges Bank is the agent for the loans and administers the commitments.

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

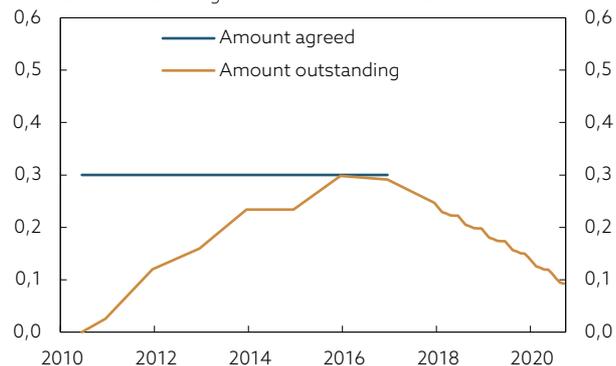
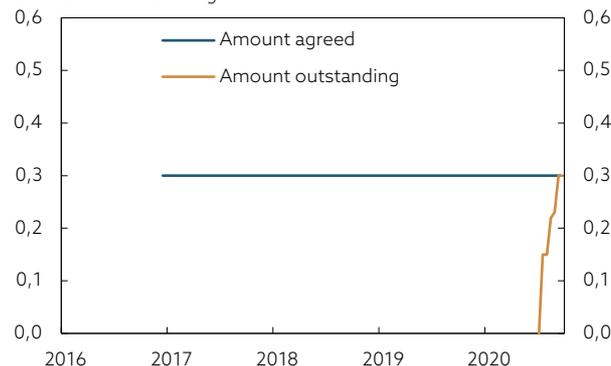
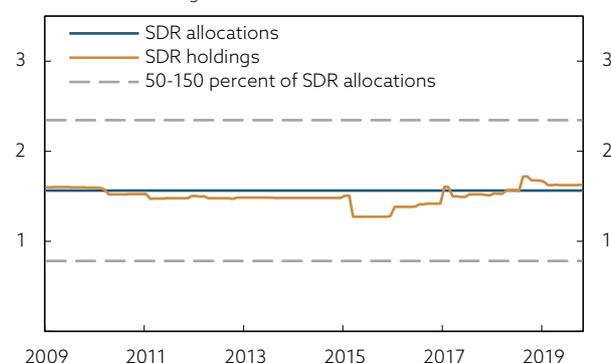


Chart 2-4 PRGT 2016 agreement. In billions of SDRs



**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, Norges Bank may have to increase holdings of SDRs to SDR 2 345m. 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 Q3, holdings of SDRs were SDR 1 627m, a reduction of approximately SDR 2m from the previous quarter (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 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>4</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. For the PRGT, Norges Bank receives a corresponding six-month government bond yield, with a floor of 0%. From 1 January, Norges bank will also receive the DSR interest rate for the PRGT.

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<sup>4</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.

# KEY FIGURES

**Table 1** Market value. In billions of NOK

	2020 Q3	2020 Q1-Q3	2019 Q3	2019 Q1-Q3
Market value of fixed income and equity investments	602.4	-	554.4	-
<b>Change in market value</b>	<b>0.5</b>	<b>51.7</b>	<b>29.9</b>	<b>48.1</b>
Net transfers	-2.1	-10.5	-1.6	-2.4
Return in NOK	2.6	62.2	31.5	50.5
<i>Return in international currency</i>	9.9	19.3	5.8	32.5
<i>Change due to movements in the krone exchange rate</i>	-7.2	43.0	25.7	18.0
Market value of the petroleum buffer portfolio	36.4	-	12.9	-
<b>Change in market value</b>	<b>-17.0</b>	<b>39.9</b>	<b>-4.4</b>	<b>5.1</b>
Net transfers	-17.1	43.5	-5.1	4.4
<i>Foreign exchange purchases from the SDFI</i>	21.4	77.4	29.2	111.1
<i>Foreign exchange purchases from the market</i>	-143.5	-310.7	-39.5	-103.0
<i>Transfers from the GPFG</i>	105.0	276.8	5.2	-3.8
Return in NOK	0.1	-3.6	0.7	0.7
Market value of the foreign exchange reserves	638.7	-	567.2	-

**Table 2** Return in international currency terms. Percent

	2020 Q3	2020 Q1-Q3	2019 Q3	2019 Q1-Q3
Return on fixed income investments	0.12	3.11	0.87	3.47
Return on equity investments	7.04	2.39	1.85	18.91
<b>Return on the foreign exchange reserves<sup>1</sup></b>	<b>1.65</b>	<b>2.98</b>	<b>1.08</b>	<b>6.45</b>
Return on the benchmark index for fixed income investments	0.13	3.10	0.88	3.54
Return on the benchmark index for equity investments	7.07	2.45	1.89	18.96
Relative return on fixed income investments	-0.01	0.01	-0.01	-0.07
Relative return on equity investments	-0.03	-0.06	-0.04	-0.05

<sup>1</sup>Excluding the petroleum buffer portfolio

**Table 3** Return in NOK terms. Percent

	2020 Q3	2020 Q1-Q3	2019 Q3	2019 Q1-Q3
Return on fixed income investments	-0.88	11.54	5.63	6.72
Return on equity investments	5.11	9.87	7.45	23.85
<b>Return on the foreign exchange reserves<sup>1</sup></b>	<b>0.44</b>	<b>11.21</b>	<b>6.02</b>	<b>10.02</b>
Return on the benchmark index for fixed income investments	-0.87	11.54	5.64	6.79
Return on the benchmark index for equity investments	5.14	9.94	7.49	23.90
Relative return on fixed income investments	-0.01	0.01	-0.01	-0.07
Relative return on equity investments	-0.03	-0.07	-0.04	-0.05

<sup>1</sup> Excluding the petroleum buffer portfolio

**Table 4** Key figures at quarter-end. Annualised data measured in international currency terms. Percent

	Past year	Past 3 years	Past 5 years	Past 10 years
<b>Return on the foreign exchange reserves</b>	<b>4.27</b>	<b>3.91</b>	<b>4.67</b>	<b>5.27</b>
<i>Fixed income investments</i>				
Return on fixed income investments	2.50	2.27	1.60	2.25
Return on the benchmark index	2.49	2.29	1.61	2.14
Relative return	0.00	-0.02	-0.01	0.12
Realised absolute volatility <sup>1</sup>	1.51	1.55	1.60	2.12
Realised relative volatility <sup>1</sup>	0.04	0.05	0.05	0.24
Information rate <sup>2</sup>	0.05	-0.44	-0.13	0.47
<i>Equity investments</i>				
Return on equity investments	10.49	8.78	11.38	11.13
Return on benchmark index	10.52	8.82	11.28	11.00
Relative return	-0.03	-0.05	0.10	0.13
Realised absolute volatility <sup>1</sup>	21.66	16.06	13.66	12.39
Realised relative volatility <sup>1</sup>	0.07	0.09	0.13	0.15
Information rate <sup>2</sup>	-0.37	-0.53	0.76	0.86

<sup>1</sup> Realised 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.

<sup>2</sup> Information 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).

**Table 5** Duration and yield for fixed income investment. Past five quarters

	2020 Q3	2020 Q2	2020 Q1	2019 Q4	2019 Q3
<b>Duration</b>	<b>3.86</b>	<b>3.82</b>	<b>3.64</b>	<b>3.72</b>	<b>3.74</b>
EUR	4.39	4.37	4.01	4.22	4.26
GBP	4.20	4.14	4.01	3.89	3.97
JPY	4.08	4.13	4.14	4.15	4.05
USD	3.40	3.35	3.27	3.29	3.31
<b>Yield</b>	<b>-0.10</b>	<b>-0.08</b>	<b>0.02</b>	<b>0.73</b>	<b>0.64</b>
EUR	-0.61	-0.54	-0.48	-0.43	-0.66
GBP	-0.01	-0.03	0.16	0.61	0.38
JPY	-0.11	-0.14	-0.14	-0.15	-0.37
USD	0.24	0.24	0.34	1.68	1.73