

Monetary policy and the krone exchange rate

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Oslo, 9 November 2023



The krone has depreciated

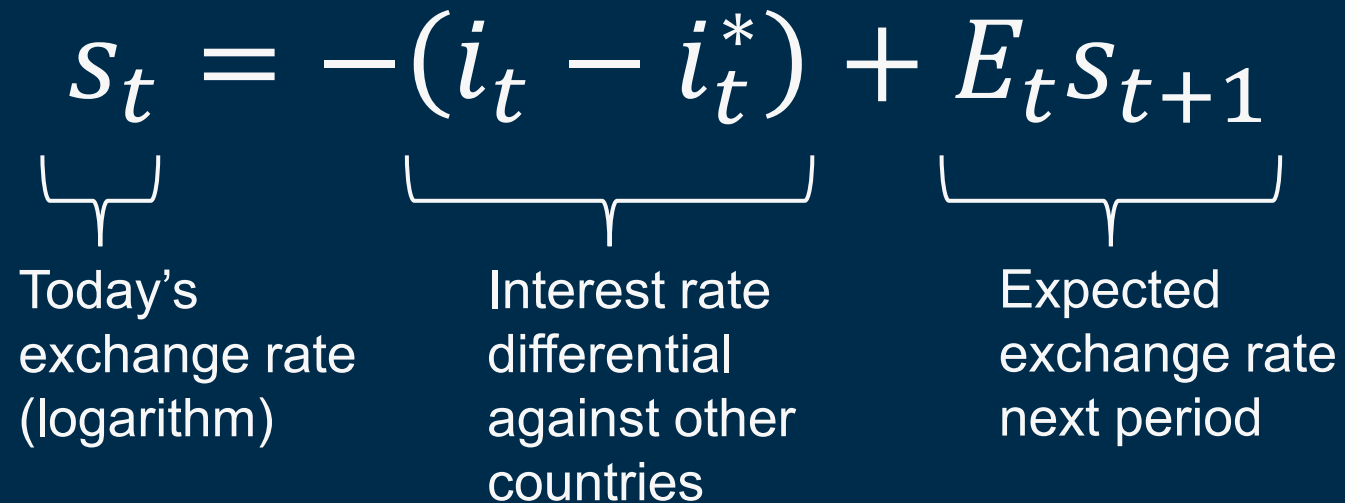
Source: Norges Bank



What influences the krone exchange rate?

Uncovered interest parity

$$s_t = - (i_t - i_t^*) + E_t s_{t+1}$$

The diagram shows the equation $s_t = -(i_t - i_t^*) + E_t s_{t+1}$ with three brackets underneath. The first bracket is under s_t and is labeled 'Today's exchange rate (logarithm)'. The second bracket is under $(i_t - i_t^*)$ and is labeled 'Interest rate differential against other countries'. The third bracket is under $E_t s_{t+1}$ and is labeled 'Expected exchange rate next period'.

Today's exchange rate (logarithm)

Interest rate differential against other countries

Expected exchange rate next period

What influences the krone exchange rate?

Uncovered interest parity with risk premium

$$s_t = - (i_t - i_t^*) + E_t s_{t+1} + \lambda_t$$

Today's exchange rate (logarithm)

Interest rate differential against other countries

Expected exchange rate next period

Risk premium

The real exchange rate

$$Q_t = S_t \cdot \frac{P^*}{P}$$

Price
abroad

Real
exchange
rate

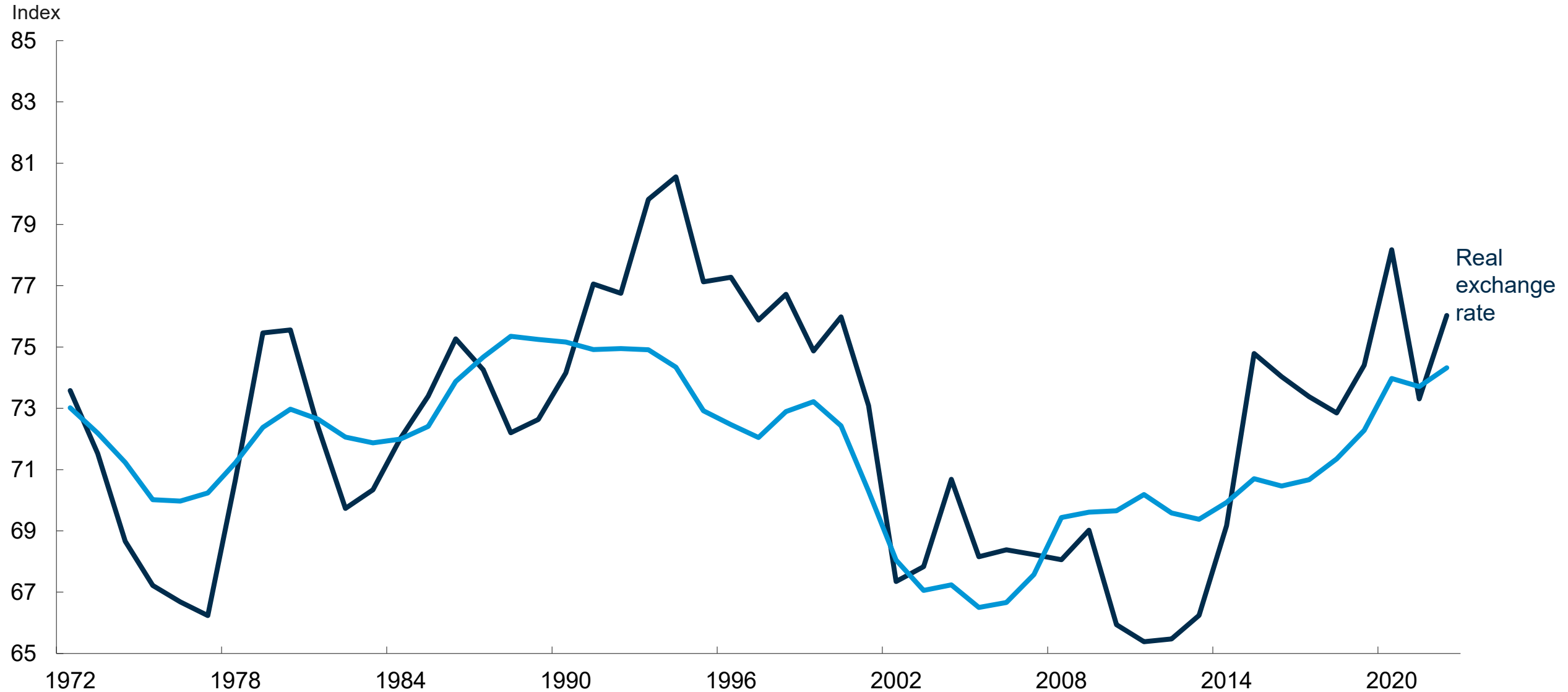
Nominal
exchange
rate

Price in
Norway
rate



The real exchange rate has changed considerably over time

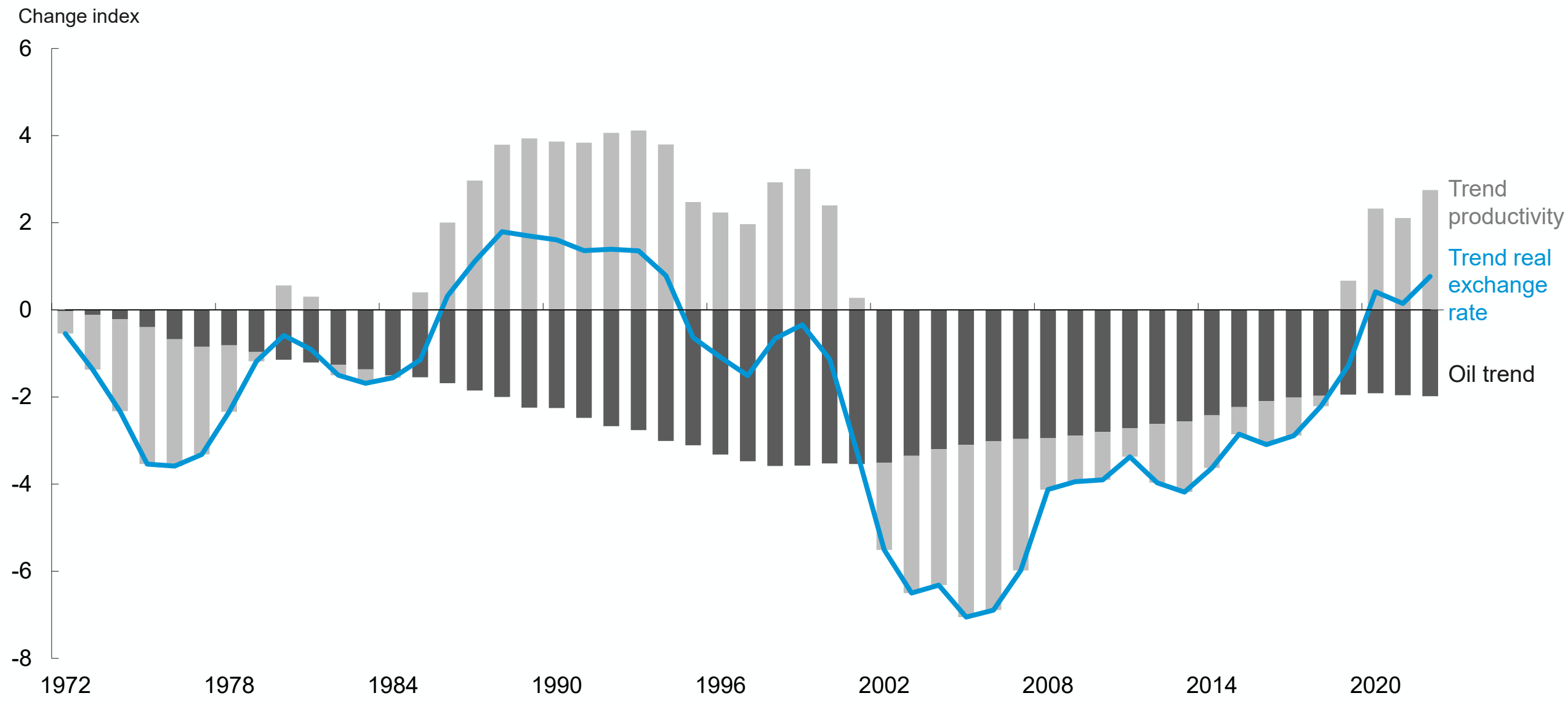
Sources: LSEG Datastream
and Norges Bank



Trends in the oil sector and relative productivity explain the real exchange rate

Sources: LSEG Datastream and Norges Bank

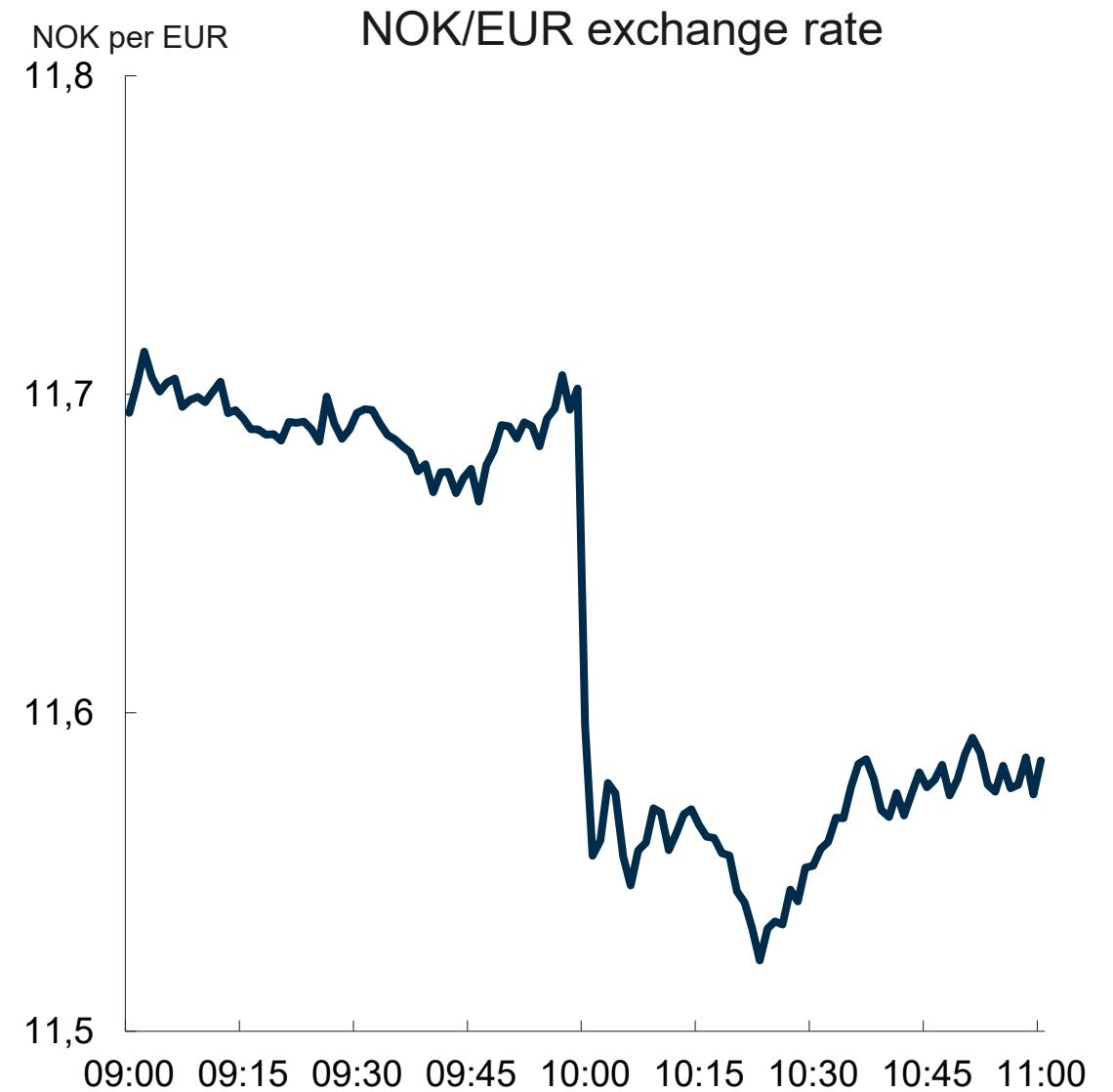
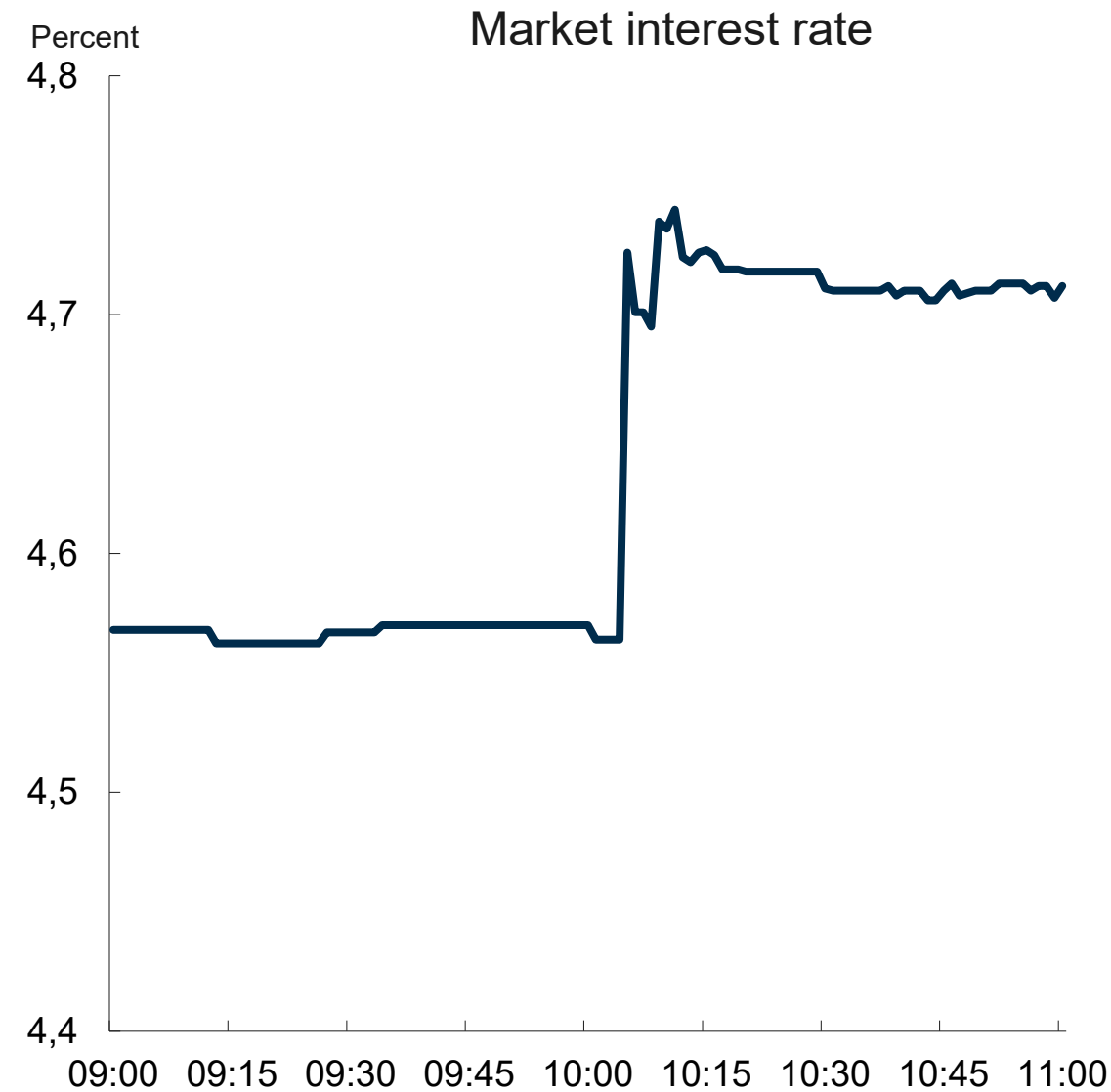
Decomposition of estimated trend in the real exchange rate



The exchange rate reacts to policy rate surprises

Source: Refinitiv Tick History

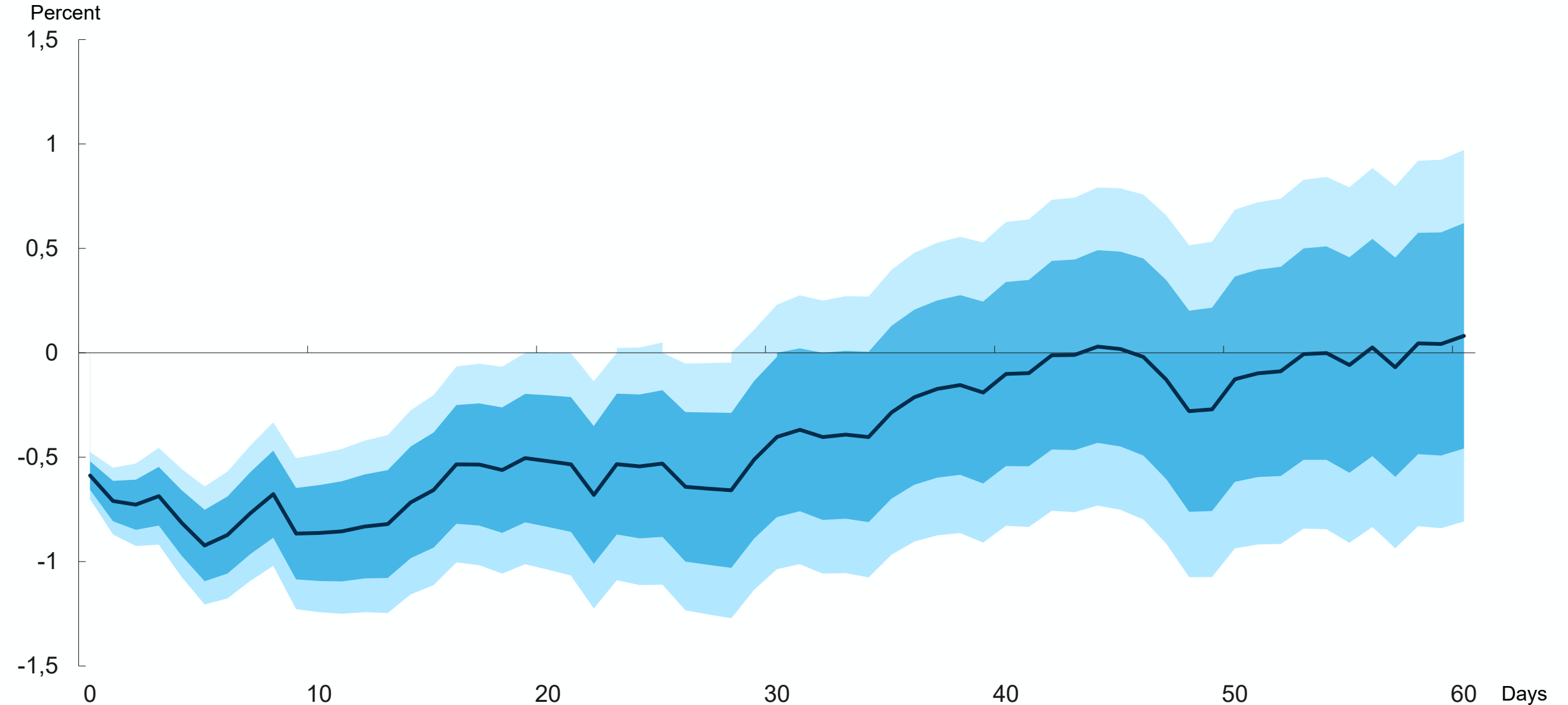
Example from the monetary policy meeting on 22 June 2023



The krone exchange rate reacts to policy rate surprises

Source: Norges Bank

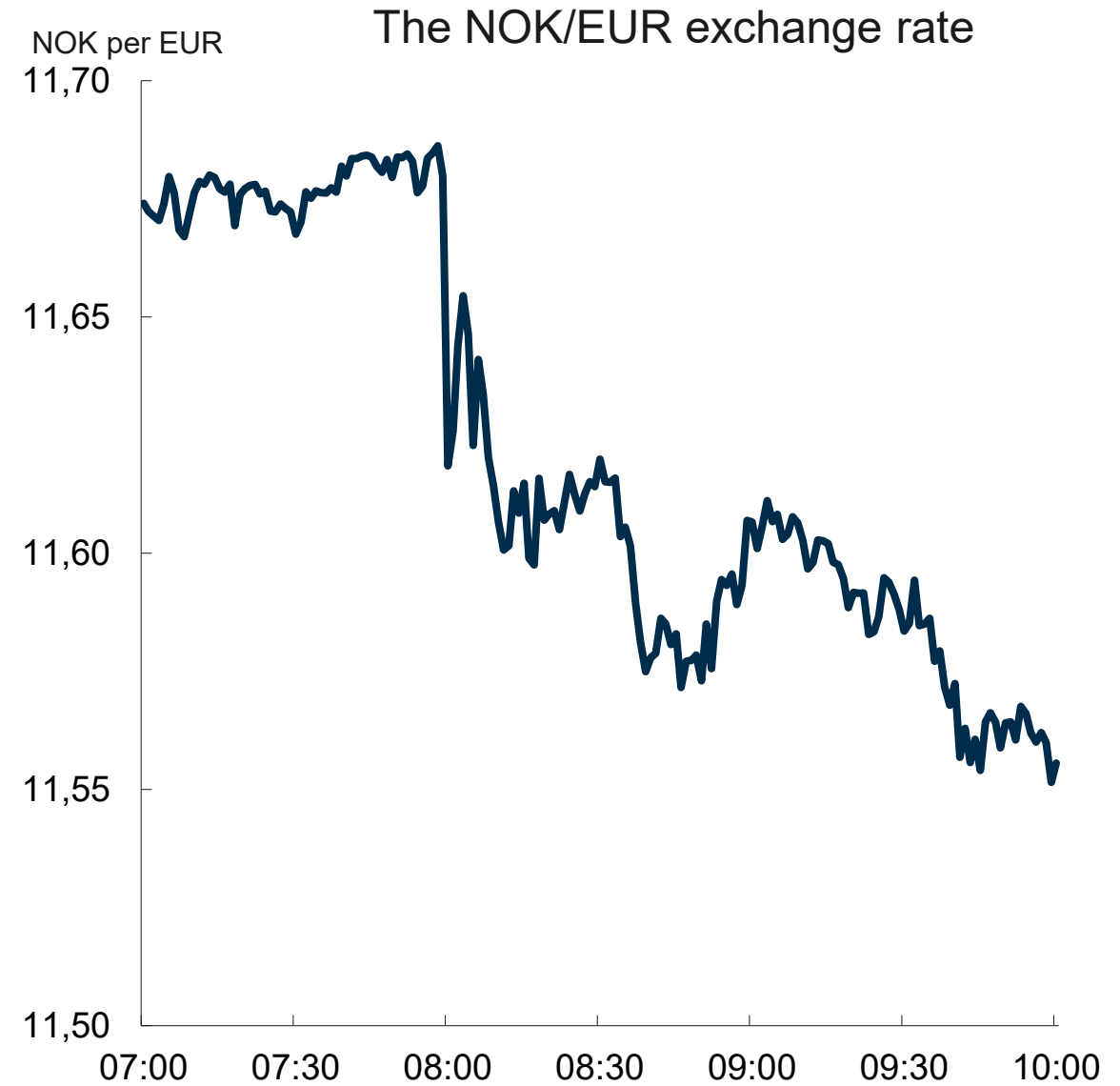
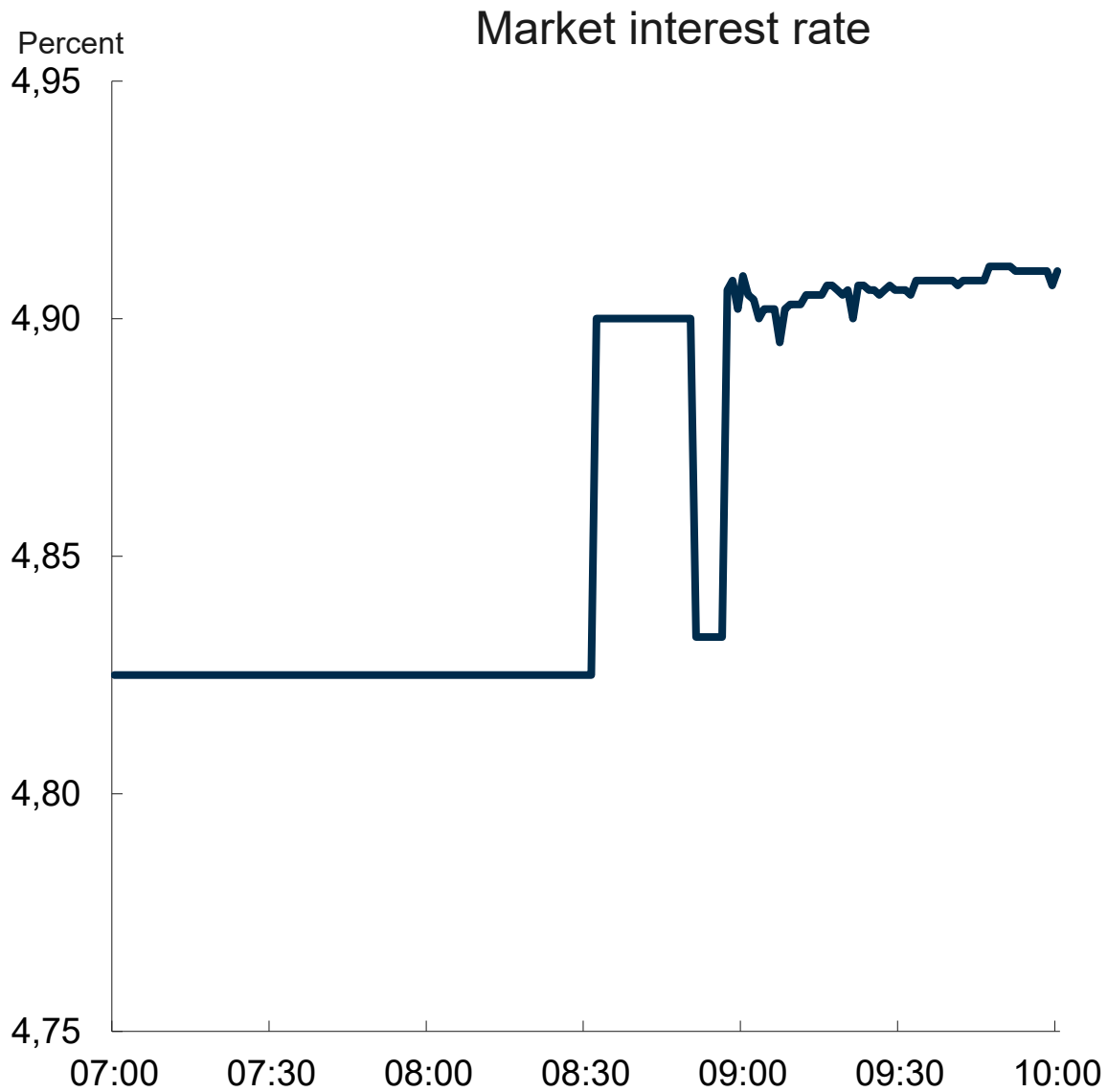
Estimated change in the krone exchange rate against the euro of an unexpected 0.25 percentage point increase in the policy rate



The monetary policy response pattern is known

Example from the release of inflation data on 10 July 2023

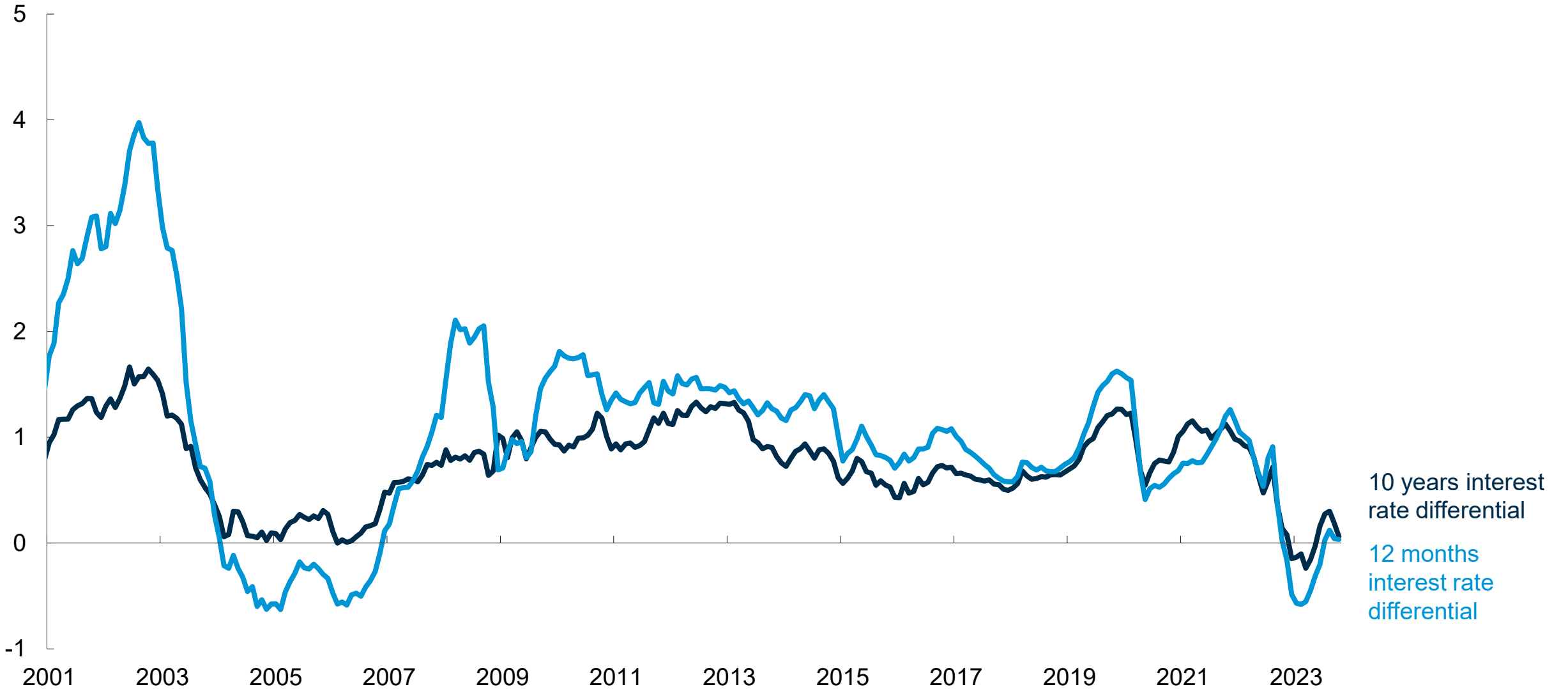
Source: Refinitiv Tick History



The interest rate differential against other countries is important

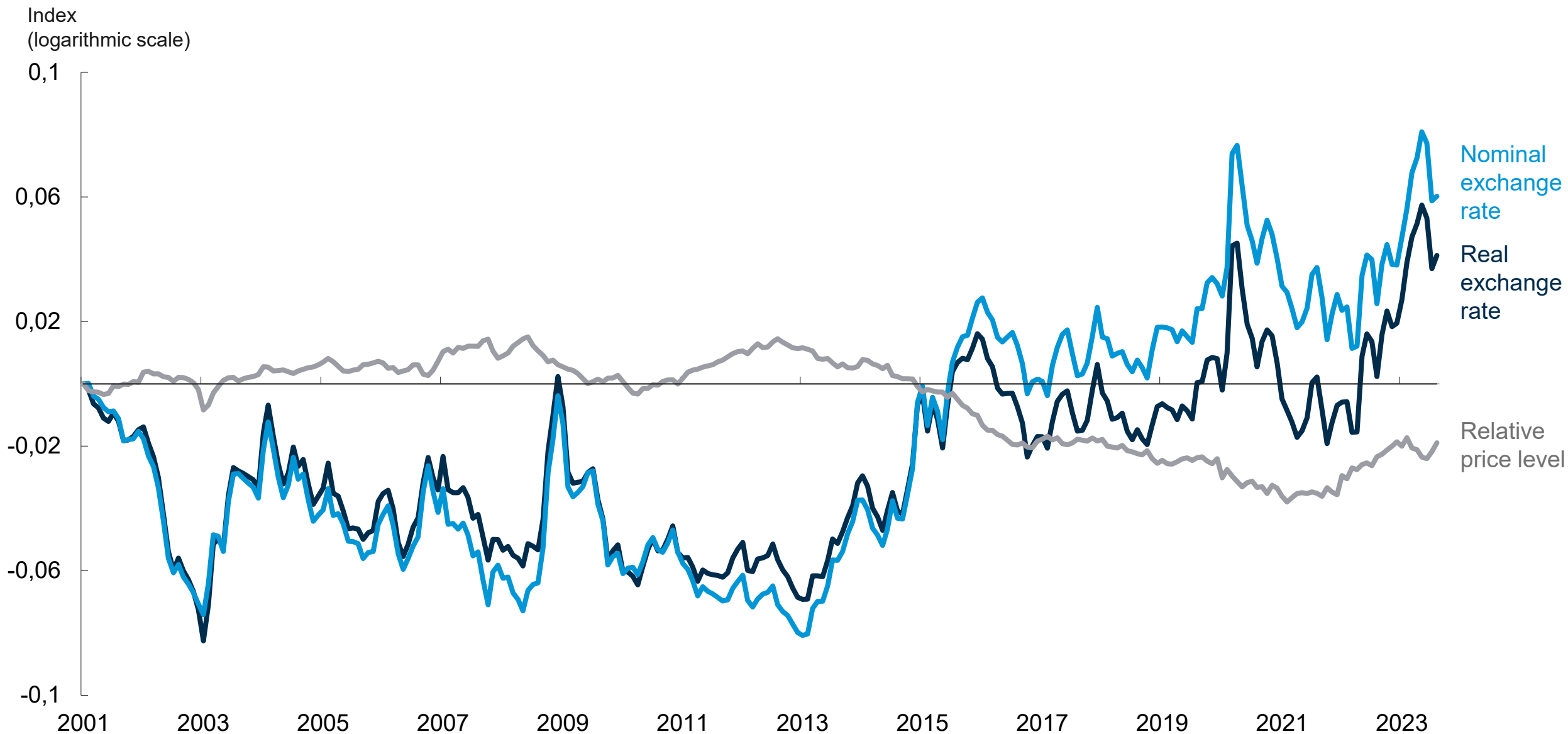
Source: Bloomberg

Percentage points



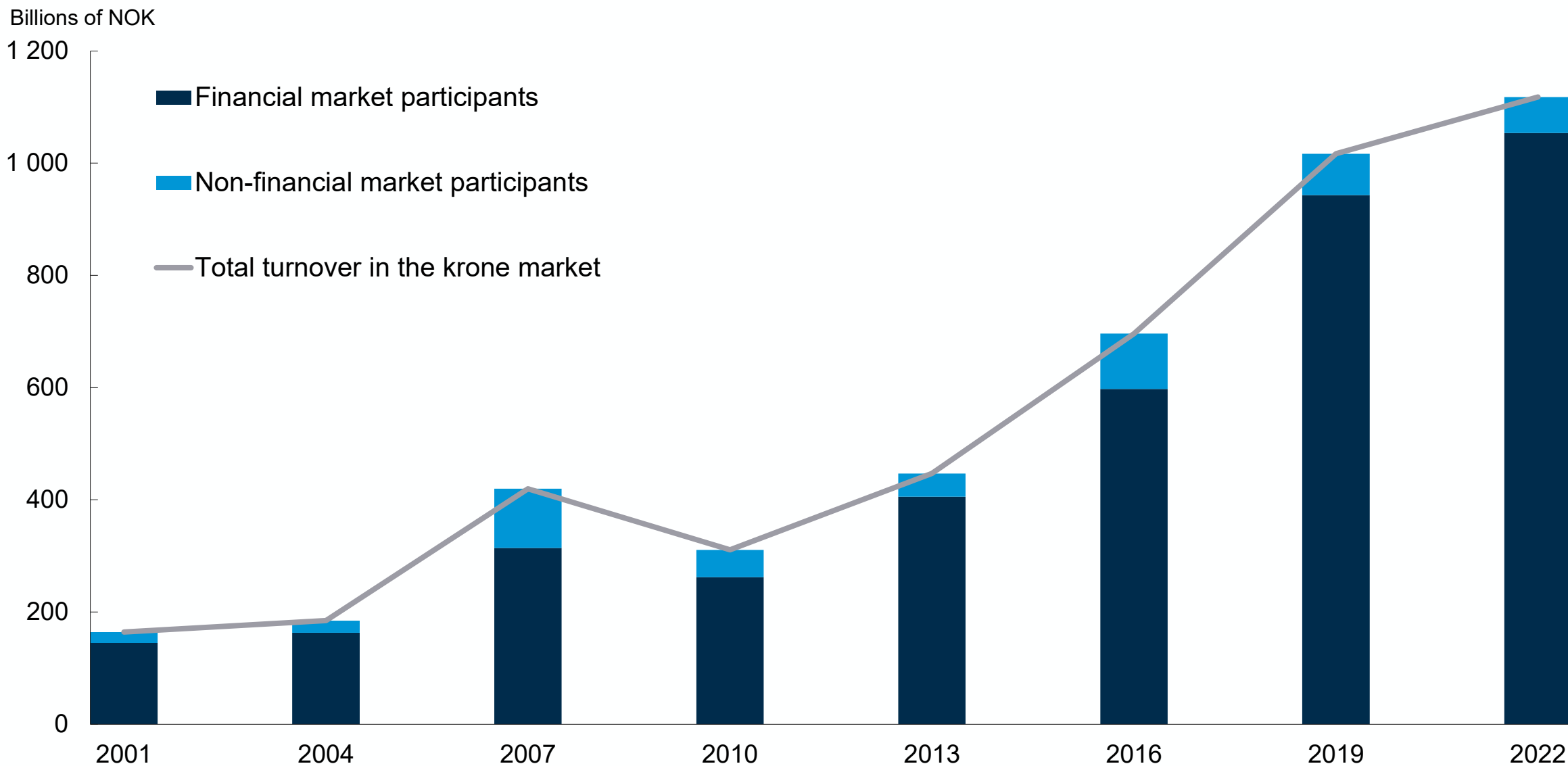
Changes in the real exchange rate occur through the nominal exchange rate

Sources: LSEG Datastream and Norges Bank



Financial market participants dominate the NOK market

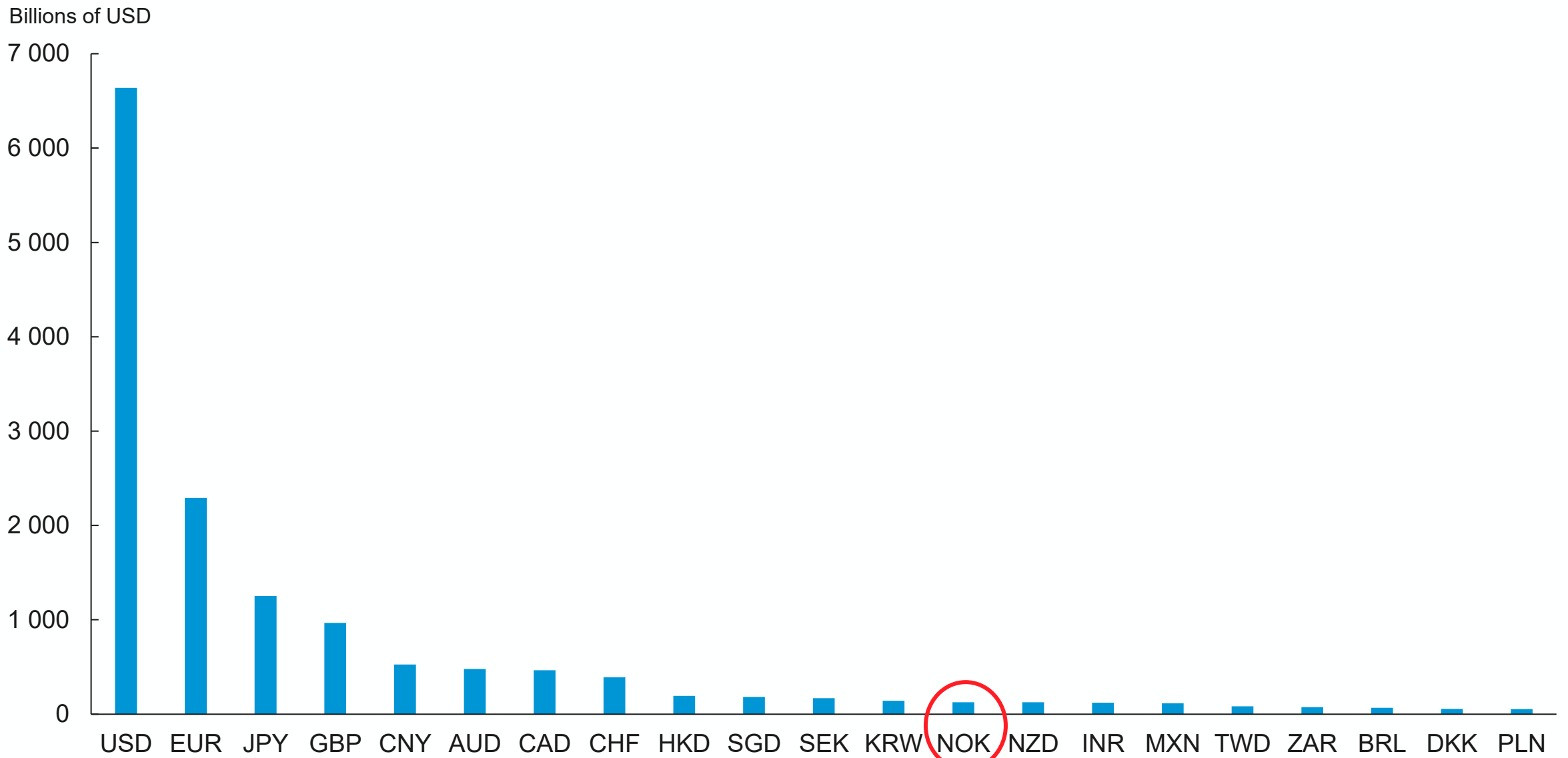
Sources: BIS and
Norges Bank



Minor currencies are more volatile

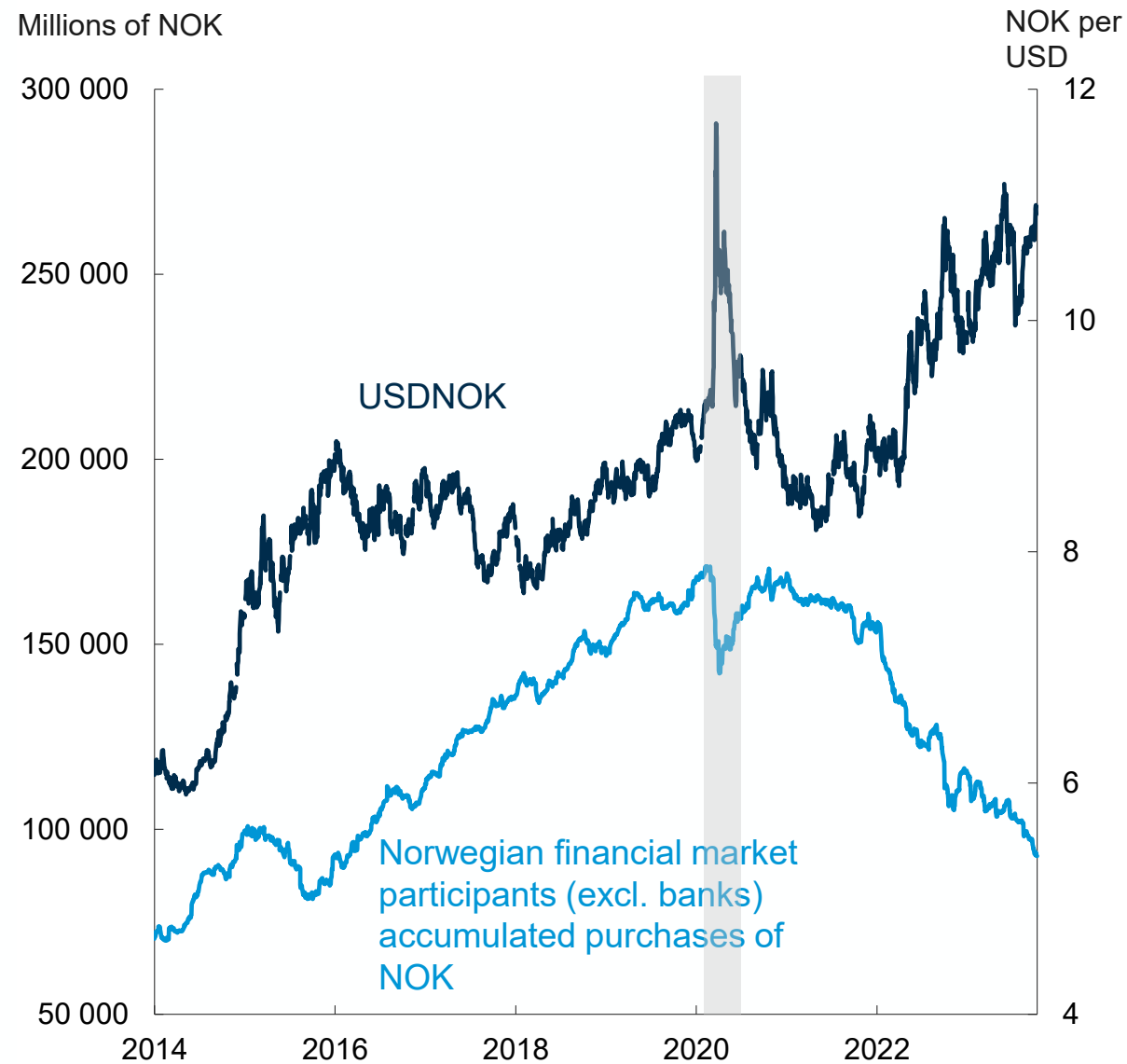
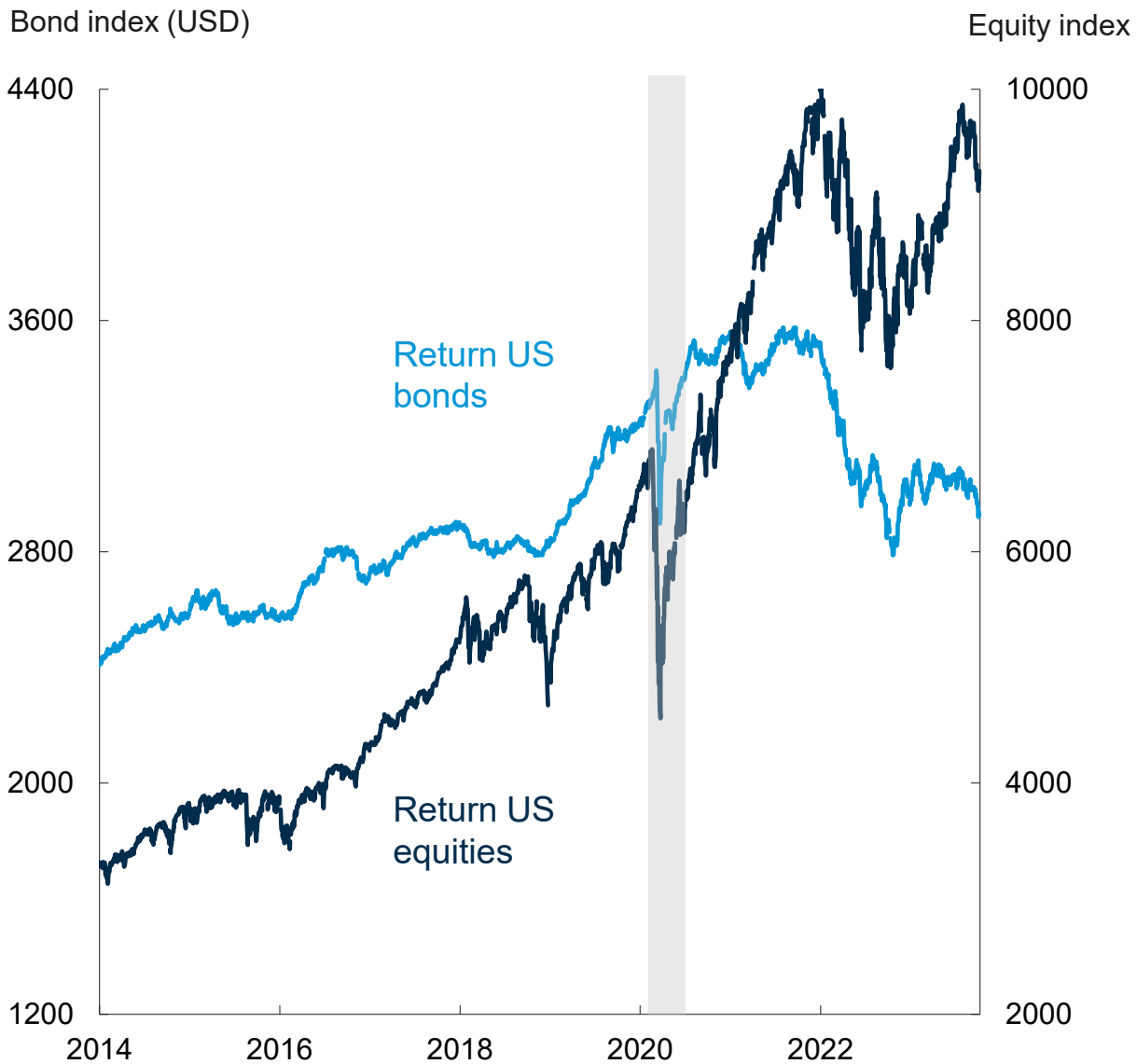
Daily, average turnover in a currency. 2022

Source: BIS



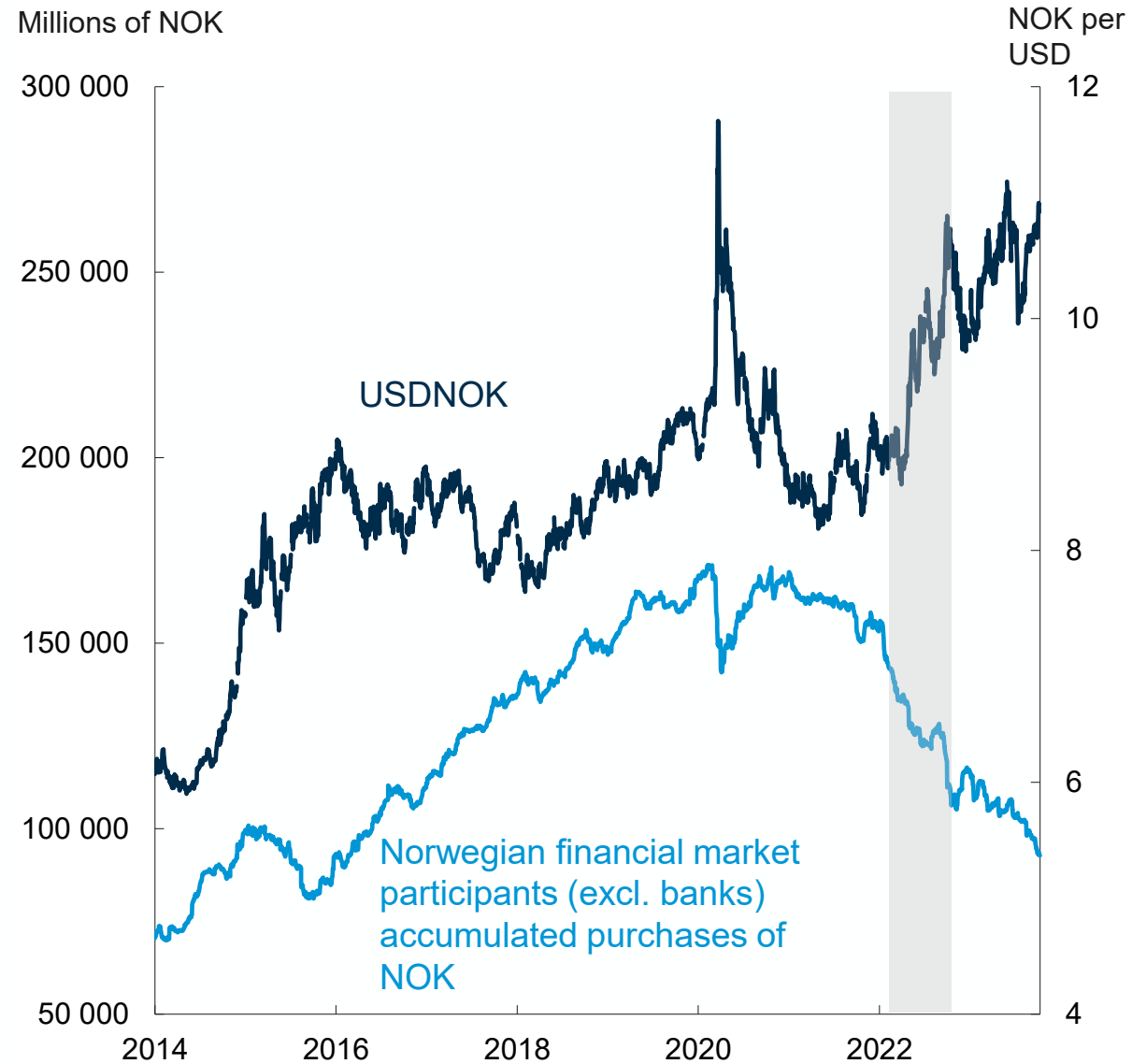
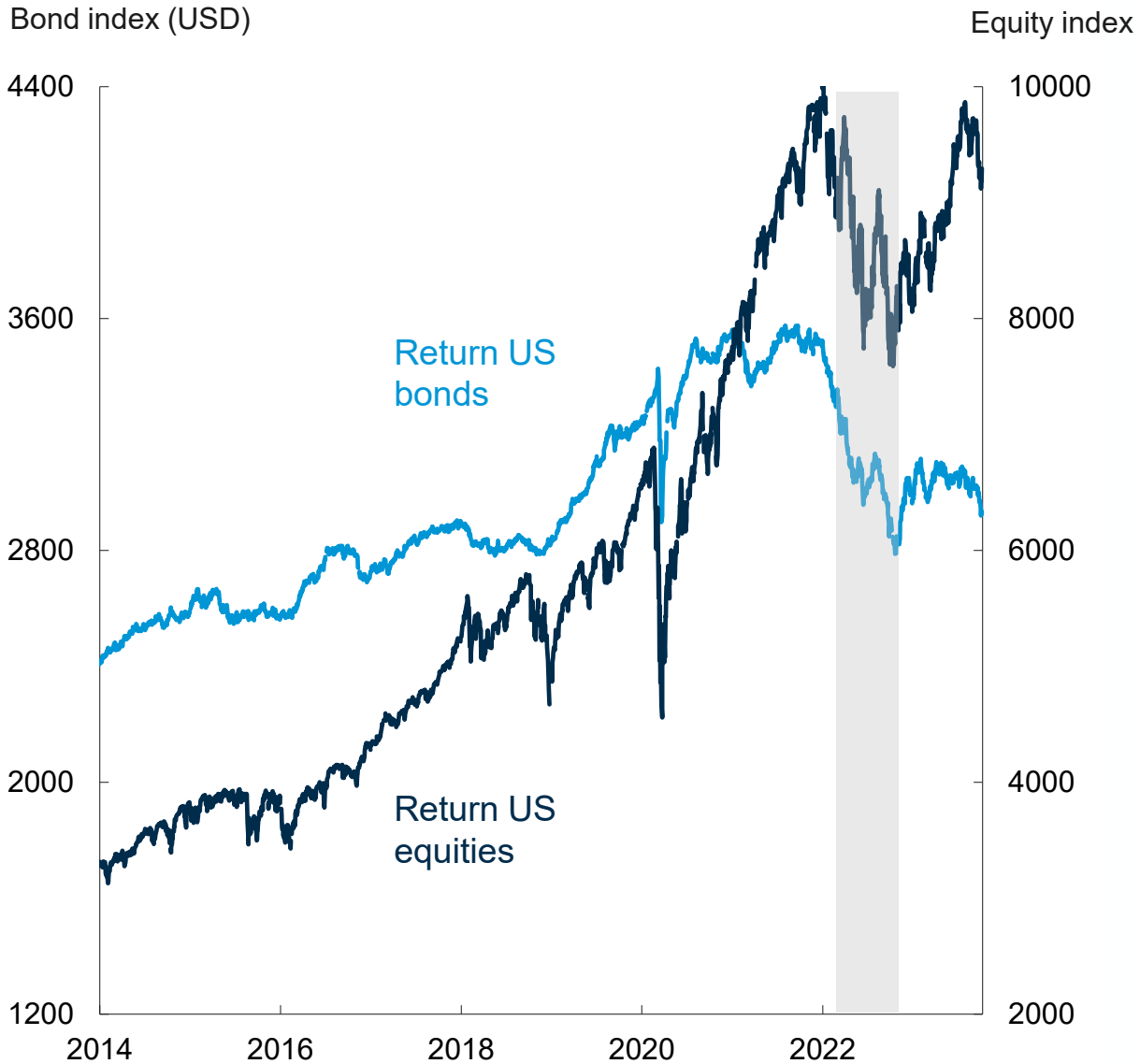
Currency hedge rebalancing may trigger krone selling (I)

Sources: Bloomberg and Norges Bank



Currency hedge rebalancing may trigger krone selling (II)

Sources: Bloomberg and Norges Bank



Exchange rate forecasts are uncertain

Source: Norges Bank

