

## Box 4

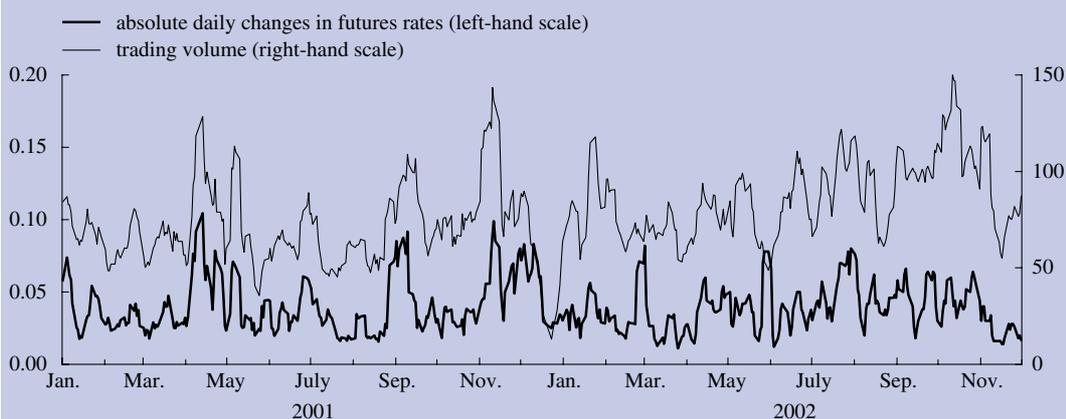
### Information content of the trading volume of EURIBOR futures

The patterns of prices and trading volumes in financial markets may provide information on how market participants react to economic news. In this box, the patterns of prices, trading volumes and volatility in the market for futures contracts on EURIBOR rates at the London International Financial Futures Exchange (LIFFE) are analysed.

In principle, the volume of transactions in financial futures contracts on money market rates can be expected to be high when economic information is released or when uncertainty becomes greater. In the first case, an increase in transactions would signal an adjustment of positions of market participants to the new information. In the second, an increase in transactions may signal a stronger demand for hedging through futures contracts and/or the attempt of speculators to profit from the greater uncertainty. Hence an analysis of trading patterns may provide an interesting insight into market participants' reactions to new information and changes in uncertainty surrounding the economic outlook.

#### Chart A: Daily trading volume on LIFFE and absolute daily changes in interest rates for three-month EURIBOR futures contracts

(basis points; thousands of contracts; five-day centred moving average)



Sources: Reuters and ECB calculations.

Note: The trading volume is calculated as the average of the four contracts closest to expiry, with the replacement of the closest contract half a month before it expires. The use of this average rather than rolling over a single contract reduces the time-to-maturity effect caused by the replacement of contracts (see also Box 2 entitled "Measures of implied volatility derived from options on short-term interest rate futures" in the section "Monetary and financial developments" of the May 2002 issue of the Monthly Bulletin).

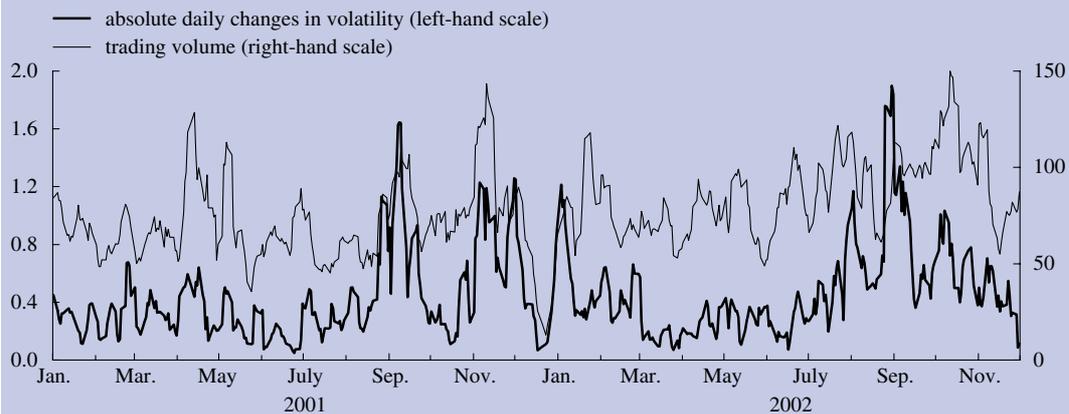
Chart A shows the daily trading volume and absolute daily changes in the interest rate for three-month EURIBOR futures contracts. Because of high variability in daily changes, both series have been smoothed as a centred average over five-day periods. The chart reveals a positive relationship between the trading volume and absolute changes in implied futures interest rates, with a correlation coefficient equal to 0.47. The relationship is particularly pronounced at peaks, suggesting that changes in futures rates, possibly reflecting the release of economic news, provide market participants with incentives to take new positions, regardless of whether the rates move up or down.

Chart B shows the daily trading volume and the smoothed absolute daily changes in implied volatility, as derived from interest rate options on the futures contracts. The latter can be regarded as an indicator of the future uncertainty attached to short-term money market rates. The relationship is positive, with a correlation coefficient equal to 0.32. Although the absolute changes in implied volatility are less correlated with the trading volume compared with the implied futures interest rate, a clear co-movement between them can be

identified, particularly at peaks. This reflects the fact that market participants react to changes in uncertainty by changing their positions in the market.

**Chart B: Daily trading volume on LIFFE and absolute daily changes in implied volatility derived from options on three-month EURIBOR futures contracts**

*(percentages per annum; thousands of contracts; five-day centred moving average)*



Sources: Reuters, Bloomberg and ECB calculations.  
Note: See Chart A for calculation of the trading volume.