

## Box 8

### YEAR-END AND QUARTER-END EFFECTS ON MONEY MARKETS

The end of the calendar year typically takes on a particular significance for financial institutions and it is also often associated with changes in the economic behaviour of other market participants. Events in the second half of 2007 created an environment of great uncertainty as the year-end approached and, as a consequence, tensions in money markets were much more acute than is usually the case at this time. This box offers a brief overview of typical year-end and quarter-end considerations.

In the run-up to year-ends or quarter-ends, or the end of any other important financial reporting period, non-financial and financial institutions often take the opportunity to improve their apparent financial health in preparation for public disclosure of their accounts. Commonly known as “window-dressing”, firms do this in order to improve their appearance to shareholders, analysts or, in the case of financial firms, even to ensure that regulatory requirements are fulfilled. For instance, financial firms may reduce their credit exposure and increase their liquidity positions, whilst also trimming the total size of their balance sheets. In the case of hedge funds, there is some evidence that average hedge fund returns are higher in December than during the rest of the year, and this cannot be fully explained by market developments at this time of the year.<sup>1</sup> One possible explanation is that incentive fees levied by hedge fund managers are often accrued through the year, but they are only paid out at the end of the year. Hence, in order to maximise these fees, there can be incentives to inflate returns at the year-end.

Window-dressing activities and concerns about them can lead to increased liquidity risks for some market participants, as many banks reduce their lending in the money market when engaged in these activities. One symptom of this is an increase in overnight rates as the year-end or quarter-end approaches. Those without access to the marginal lending facility, or those who prefer not to use it because of the possible “stigma” associated with it (see Box 9), are often willing to pay a significant forward or term premium for ensuring the adequacy of their liquidity positions at the turn of the year or quarter. This effect is not limited to only the last few days of the period in question, as banks reduce their money market participation gradually. Also, as there are typically just a few trading days between Christmas and New Year, opportunities for adjusting liquidity positions are limited in the days immediately preceding the year-end, not least because in most banks many senior staff are on holiday at that time.

In addition, cash demand and its flows among non-financial firms, households and banks are quite volatile during the Christmas shopping season. This introduces another source of uncertainty

<sup>1</sup> See V. Agarwal, N. Daniel and N. Naik (2007), “Why is Santa so kind to hedge funds? The December return puzzle!”, March, available at SSRN.

about an individual bank's liquidity position, since it is more difficult for banks to forecast their cash holdings and reserves at the central bank (the latter can be used to obtain cash from the central bank, while cash can be deposited with the central bank to increase reserve holdings that are used for interbank transfers).

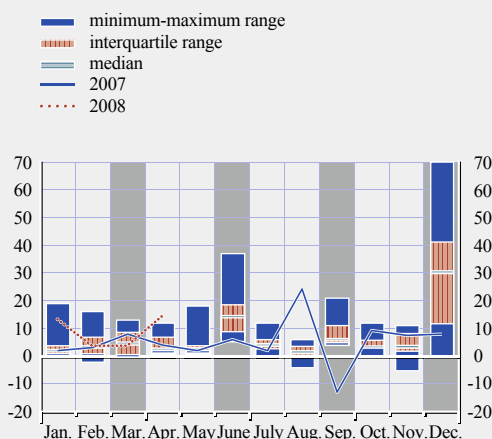
Although the most recent year-end was atypical, it serves as an effective illustration of end-of-period concerns. Higher term premiums were very evident in EURIBOR rates. For example, when the two-month EURIBOR crossed the year-end for the first time, it jumped by 29 basis points, while the same event caused the two-week EURIBOR to increase by 80 basis points. Calculating implied overnight interest rates from these levels gives interest rates of approximately 12% and 8% respectively, far in excess of the ECB's marginal lending facility. Similar effects can be seen with US rates.

As another example, Chart A shows the dispersion of EONIA changes over the last two days of the month. It clearly highlights end-of-reporting-period effects, particularly at the end of June and December. After August 2007, however, due to stabilising open market operations by the ECB these effects became less evident. The last time the year-end took on great significance in financial markets was at the end of 1999. Known as the Y2K problem, fears of liquidity shortages became acute on account of uncertainty about the capacity of computer systems to deal with the transition to the new millennium. It is notable that the concerns that prevailed towards the end of 2007 about counterparty risk were far more pronounced than were the concerns in 1999 (see Chart B).

All in all, there are important changes in the economic behaviour of various market participants at the end of each year, quarter or any other important reporting period. These seasonal effects are well known and anticipated by banks and other market participants, providing them with an opportunity to adjust their liquidity positions and risk management strategies accordingly. However, in times of stress such effects can far exceed historical patterns and may even require special measures to be taken by central banks in order to contain their negative impact on market functioning.

**Chart A Dispersion of month-end changes in the EONIA rate**

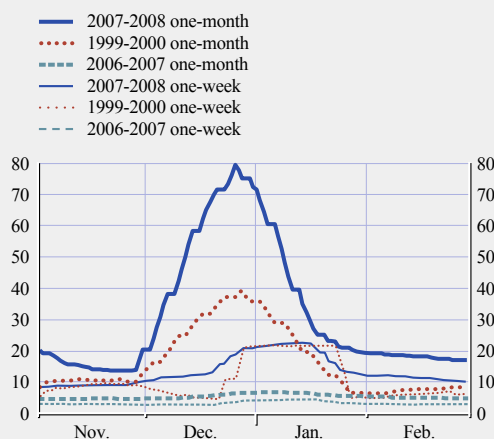
(Jan. 1999 – Apr. 2008; basis points; changes in the EONIA rate over the last two trading days of the month)



Sources: European Banking Federation, ECB and ECB calculations.  
Note: Dispersion ranges refer to the 1999-2006 period.

**Chart B Euro area spreads between unsecured interbank deposit and repo interest rates around the year-end**

(Nov. – Feb. of 1999-2000, 2006-2007 and 2007-2008; basis points; 20-day moving average)



Source: ECB.