

## Box 1

# Liquidity conditions and monetary policy operations in the period from 22 July to 27 October 2015

**This box describes the ECB's monetary policy operations during the fifth and sixth reserve maintenance periods of 2015, which ran from 22 July to 8 September 2015 and from 9 September to 27 October 2015 respectively.**

During this period, the interest rates on the main refinancing operations (MROs), the marginal lending facility and the deposit facility remained unchanged at 0.05%, 0.30% and -0.20% respectively.<sup>1</sup> On 30 September 2015, the fifth targeted longer-term refinancing operation (TLTRO) was settled for an amount of €15.5 billion, compared with €73.8 billion in the previous operation in June. This brought the total amount allotted in the first five TLTROs to €399.6 billion.<sup>2</sup> In addition, the Eurosystem continued buying public sector securities, covered bonds and asset-backed securities as part of its expanded asset purchase programme (APP), with a targeted rate of €60 billion per month.<sup>3</sup>

### Liquidity needs

**In the period under review, the average daily liquidity needs of the banking system, defined as the sum of autonomous factors and reserve requirements, stood at €646.5 billion, an increase of €38.4 billion compared with the previous review period (i.e. the third and fourth maintenance periods of the year).**

That was due mainly to an increase in average autonomous factors, which rose by €36.7 billion to stand at €533.5 billion (see the table).

**The increase in average autonomous factors was mainly a result of decreases in average liquidity-supplying factors – both net foreign assets and net assets denominated in euro.** Net foreign assets averaged €623.2 billion, €26.5 billion less than in the previous review period. The appreciation of the euro against the US dollar in the period under review led to a devaluation of net foreign assets. In addition, net assets denominated in euro averaged €519.3 billion, down €24.8 billion from the previous review period. Net assets denominated in euro declined on account of the devaluation of financial assets held by the Eurosystem for purposes other than

<sup>1</sup> MROs continued to be conducted as fixed-rate tender procedures with full allotment. The same procedure remained in use for the three-month longer-term refinancing operations (LTROs). The interest rate in each LTRO was fixed at the average of the rates on the MROs over the relevant LTRO's lifetime. TLTROs continued to be conducted as fixed-rate tender procedures with an interest rate equal to the MRO rate.

<sup>2</sup> For information on the amounts allotted in TLTROs, see similar boxes in previous issues of the Bulletin or the ECB's website: [www.ecb.europa.eu/mopo/implement/omo/html/index.en.html](http://www.ecb.europa.eu/mopo/implement/omo/html/index.en.html).

<sup>3</sup> Detailed information on the expanded APP is available on the ECB's website: [www.ecb.europa.eu/mopo/implement/omt/html/index.en.html](http://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html).

## Table

### Eurosystem liquidity situation

	22 July to 27 October 2015	22 April to 21 July 2015		Sixth maintenance period		Fifth maintenance period	
<b>Liabilities – liquidity needs (averages; EUR billions)</b>							
<b>Autonomous liquidity factors</b>	<b>1,675.7</b>	<b>(-14.6)</b>	<b>1,690.3</b>	<b>1,692.8</b>	<b>(+34.2)</b>	<b>1,658.6</b>	<b>(-37.6)</b>
Banknotes in circulation	1,053.9	(+19.4)	1,034.5	1,052.4	(-2.9)	1,055.3	(+12.6)
Government deposits	79.3	(-6.3)	85.6	95.2	(+31.8)	63.4	(-32.9)
Other autonomous factors	542.5	(-27.7)	570.2	545.2	(+5.4)	539.8	(-17.3)
<b>Monetary policy instruments</b>							
Current accounts	446.9	(+107.5)	339.4	465.3	(+36.9)	428.4	(+47.0)
Minimum reserve requirements	113.0	(+0.9)	111.2	113.2	(+0.5)	112.7	(+0.5)
Deposit facility	150.4	(+49.1)	101.3	152.8	(+4.7)	148.0	(+45.0)
Liquidity-absorbing fine-tuning operations	0.0	(+0.0)	0.0	0.0	(+0.0)	0.0	(+0.0)
<b>Assets – liquidity supply (averages; EUR billions)</b>							
<b>Autonomous liquidity factors</b>	<b>1,142.5</b>	<b>(-51.3)</b>	<b>1,193.8</b>	<b>1,135.7</b>	<b>(-13.6)</b>	<b>1,149.3</b>	<b>(-33.9)</b>
Net foreign assets	623.2	(-26.5)	649.8	619.1	(-8.3)	627.4	(-15.5)
Net assets denominated in euro	519.3	(-24.8)	544.1	516.7	(-5.2)	521.9	(-18.4)
<b>Monetary policy instruments</b>							
Open market operations	1,130.4	(+193.2)	937.2	1,175.5	(+90.2)	1,085.3	(+87.8)
Tender operations	533.4	(+20.2)	513.2	532.3	(-2.2)	534.5	(+8.8)
MROs	71.3	(-18.4)	89.7	70.2	(-2.2)	72.4	(-10.1)
Special-term refinancing operations	0.0	(+0.0)	0.0	0.0	(+0.0)	0.0	(+0.0)
Three-month LTROs	73.6	(-16.9)	90.5	69.2	(-8.9)	78.1	(-5.7)
Three-year LTROs	0.0	(+0.0)	0.0	0.0	(+0.0)	0.0	(+0.0)
Targeted LTROs	388.5	(+55.5)	333.0	393.0	(+8.9)	384.1	(+24.6)
Outright portfolios	597.0	(+173.0)	424.0	643.2	(+92.4)	550.8	(+79.0)
First covered bond purchase programme	22.2	(-2.2)	24.4	21.9	(-0.6)	22.5	(-0.8)
Second covered bond purchase programme	10.5	(-0.6)	11.1	10.4	(-0.3)	10.7	(-0.1)
Third covered bond purchase programme	114.9	(+27.8)	87.1	122.3	(+14.8)	107.6	(+12.4)
Securities Markets Programme	128.5	(-8.2)	136.6	127.1	(-2.7)	129.8	(-4.8)
Asset-backed securities purchase programme	11.9	(+4.4)	7.5	13.2	(+2.5)	10.7	(+1.9)
Public sector purchase programme	308.9	(+151.6)	157.4	348.3	(+78.6)	269.6	(+70.5)
Marginal lending facility	0.4	(+0.2)	0.2	0.1	(-0.5)	0.6	(+0.3)
<b>Other liquidity-based information (averages; EUR billions)</b>							
Aggregate liquidity needs	646.5	(+38.4)	608.0	670.7	(+48.5)	622.2	(-3.4)
Autonomous factors <sup>1)</sup>	533.5	(+36.7)	496.8	557.5	(+48.0)	509.5	(-3.8)
Excess liquidity	483.9	(+154.7)	329.2	504.8	(+41.6)	463.1	(+91.3)
<b>Interest rate developments (percentages)</b>							
MROs	0.05	(+0.00)	0.05	0.05	(+0.00)	0.05	(+0.00)
Marginal lending facility	0.30	(+0.00)	0.30	0.30	(+0.00)	0.30	(+0.00)
Deposit facility	-0.20	(+0.00)	-0.20	-0.20	(+0.00)	-0.20	(+0.00)
EONIA average	-0.130	(-0.022)	-0.107	-0.139	(-0.018)	-0.121	(-0.002)

Source: ECB.

Notes: Since all figures in the table are rounded, in some cases the figure indicated as the change relative to the previous period does not represent the difference between the rounded figures provided for these periods (differing by €0.1 billion).

1) Includes "items in course of settlement".

monetary policy, together with an increase in the liabilities held by foreign institutions with the national central banks. Previously, those foreign institutions had significantly reduced their cash holdings with the Eurosystem to avoid negative interest rates, but the review period saw them increase their holdings again, possibly owing to a decline in the number of attractive alternatives in the market.

**Liquidity-absorbing factors decreased in the period under review on account of a decline in other autonomous factors that was only partially offset by the usual seasonal increase in banknotes in circulation during the summer.** Other autonomous factors averaged €542.5 billion, down €27.7 billion from the previous review period, mainly reflecting a reduction in revaluation accounts. In addition,

average government deposits also contributed to the decline in liquidity needs, falling €6.3 billion to stand at €79.3 billion. That decline in government deposits represented a continuation of the overall downward trend observed since September 2014 (when the ECB's deposit facility rate was cut to -0.20%), partially offsetting the increase seen in the previous review period, when treasuries looking to place cash in the market had few alternatives. The decline in the period under review was related to a reduction in the rates of interest that some treasuries were prepared to accept when placing their excess liquidity in the market. On the other hand, banknotes in circulation rose over the summer, following the usual seasonal pattern, partially offsetting the decline in other liquidity-absorbing factors. Banknotes in circulation averaged €1,053.9 billion in the period under review, €19.4 billion higher than the average in the previous review period.

**The volatility of autonomous factors remained elevated during the period under review.** That volatility primarily reflected strong fluctuations in government deposits and the quarterly revaluation of net foreign assets and net assets denominated in euro. Such volatility was, however, weaker than in the previous review period, while the level of autonomous factors remained on an upward trend.

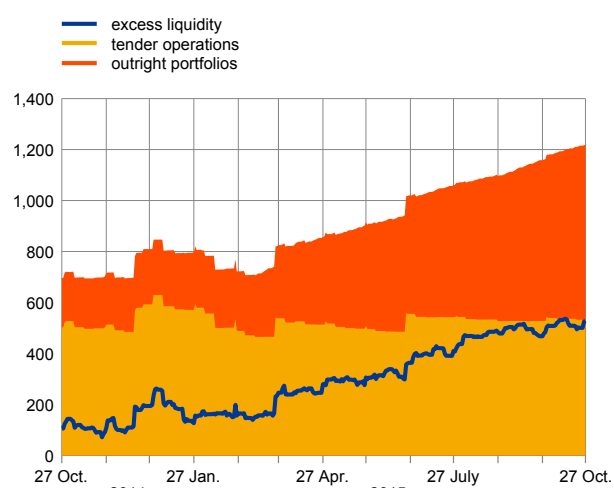
**The average absolute error in weekly forecasts of autonomous factors remained unchanged at €6.4 billion in the period under review and was due mainly to forecasting errors for government deposits.** Although forecasting errors for government deposits declined slightly, they were still the main source of error, as it remained difficult to anticipate the investment activities of treasuries in the presence of increasingly negative short-term money market rates and high levels of excess liquidity.

## Liquidity provided through monetary policy instruments

### Chart

Evolution of monetary policy instruments and excess liquidity

(EUR billions)



Source: ECB.

**The average amount of liquidity provided through open market operations – i.e. tender operations and outright asset purchases – increased by €193.2 billion to stand at €1,130.4 billion (see the chart).** Outright purchases accounted for 90% of that increase and stemmed mainly from the public sector purchase programme.

**Average liquidity provided through tender operations increased by €20.2 billion to stand at €533.4 billion, driven by the TLTROs.** Average liquidity provided by the MROs and the three-month LTROs decreased by €18.4 billion and €16.9 billion respectively, but that reduction was more than offset by the average liquidity provided by the TLTROs, which increased by €55.5 billion to stand at €388.5 billion. The fifth maintenance period was the main contributor to that increase, as the operation allotted in June had a significantly higher take-up than the operation allotted in September.

**Average liquidity provided through outright portfolios increased by €173.0 billion to stand at €597.0 billion, mainly on account of the public sector purchase programme.** The average liquidity provided by the public sector purchase programme, the third covered bond purchase programme and the asset-backed securities purchase programme rose by €151.6 billion, €27.8 billion and €4.4 billion respectively, more than offsetting the redemption of bonds held under the Securities Markets Programme and the previous two covered bond purchase programmes.

## Excess liquidity

**As a consequence of the developments detailed above, average excess liquidity rose by a further €154.7 billion to stand at €483.9 billion in the period under review (see the chart).** Most of that increase was recorded in the fifth maintenance period, when average excess liquidity rose by €91.3 billion on account of autonomous factors remaining virtually unchanged. In the sixth maintenance period, average excess liquidity rose less strongly, increasing by €41.6 billion. The relative weakness of that increase was driven mainly by the rise in autonomous factors, which partially absorbed the increase in the APP – further evidence that the volatility of autonomous factors is affecting developments in excess liquidity.

**That rise in excess liquidity was mostly reflected in higher average current account holdings, which increased by €107.5 billion to stand at €446.9 billion in the period under review.** That increase was fairly evenly distributed between the two maintenance periods, with average holdings rising by €47.0 billion and €36.9 billion in the fifth and sixth maintenance periods respectively. Average recourse to the deposit facility also increased, albeit to a lesser extent, rising by €49.1 billion to stand at €150.4 billion.

## Interest rate developments

**As in the previous review period, money market rates decreased further owing to the continued increase in excess liquidity and market participants' growing acceptance of trading at negative rates.** In the unsecured market, the EONIA averaged -0.130%, down from an average of -0.107% in the previous review period. The decline was most pronounced in the sixth maintenance period, when the EONIA averaged -0.139%, down 0.018 percentage point from the previous maintenance period. Secured overnight rates fell to levels close to the deposit facility rate. Indeed, rates on certain specific securities used as collateral<sup>4</sup> even fell below the deposit facility rate. Average overnight repo rates in the GC Pooling market<sup>5</sup> declined to -0.187% and -0.184% for the standard and extended collateral baskets respectively, down 0.007 and 0.014 percentage point compared with the previous review period.

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<sup>4</sup> See, for example, the "RepoFunds Rate": [www.repofundsrate.com](http://www.repofundsrate.com).

<sup>5</sup> The GC Pooling market allows repurchase agreements to be traded on the Eurex platform against standardised baskets of collateral.