

The how and why of a negative interest rate for the deposit facility

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Introduction

During the summer of 2014, the Eurosystem cut its inflation projections for the euro area up to 2016. In particular, the projected rise in the harmonised index of consumer prices (HICP) dropped below 1 % for 2014 and is expected to revert very slowly to an inflation rate close to 2 %, i.e. a level compatible with the definition of price stability adopted by the Governing Council of the European Central Bank (ECB). During August, the financial markets also indicated a significant fall in medium-term inflation expectations. Moreover, the decline in current inflation and the fall in other business cycle indicators, including GDP, showed that the euro area's economic recovery was losing momentum. Faced with the risks that a prolonged period of low inflation might present for the maintenance of price stability and, more generally, the revival of activity, the Governing Council decided at its meetings in June and September 2014 to take a significant package of measures. These measures included, among others, two reductions in the key interest rates (taking one of them into negative territory), the targeted longer-term refinancing operations and the asset-backed securities and covered bonds purchase programmes⁽¹⁾.

For some, the striking feature of this series of measures is that the Eurosystem becomes the first central bank of a large currency area to take its deposit rate into negative territory⁽²⁾. The deposit facility rate, which had stood at 0 % since July 2012, thus declined to -0.1 % from 11 June 2014 before being cut to -0.2 % from 10 September 2014. In simple terms, the negative interest rate means that banks have to pay in order to deposit their excess liquidity with the Eurosystem. It is all the more important to understand this move into uncharted waters

since the current financial environment of the euro area features a liquidity surplus on the money market and persistent fragmentation of the banking system.

In that context, this article specifically aims to offer an overall analysis, shedding light on the whys and wherefores behind the decision to remunerate Eurosystem deposits at a negative interest rate. For that purpose, section 1 dwells on the exact scope of the negative interest rate in force since June 2014 and on the role played by the deposit facility rate in the implementation of monetary policy in the euro area. Section 2 then examines the main reasons for choosing this means of easing monetary policy. In the light of the many questions raised by the decision, the last two sections deal with the following specific issues: "Does the negative interest rate penalise savers?" and "Does the negative interest rate entail a cost for the banking sector?".

1. The role of the deposit facility rate

The Governing Council decided to make two cuts in the Eurosystem key interest rates in the summer of 2014, in June and September respectively. First, the interest rate on the main refinancing operations – the weekly open market operations – was cut from 0.25 to 0.15 %, before being reduced to 0.05 % in September. That rate also

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⁽¹⁾ For more details on all the measures that the Governing Council adopted in June and September 2014, see the ECB press releases.

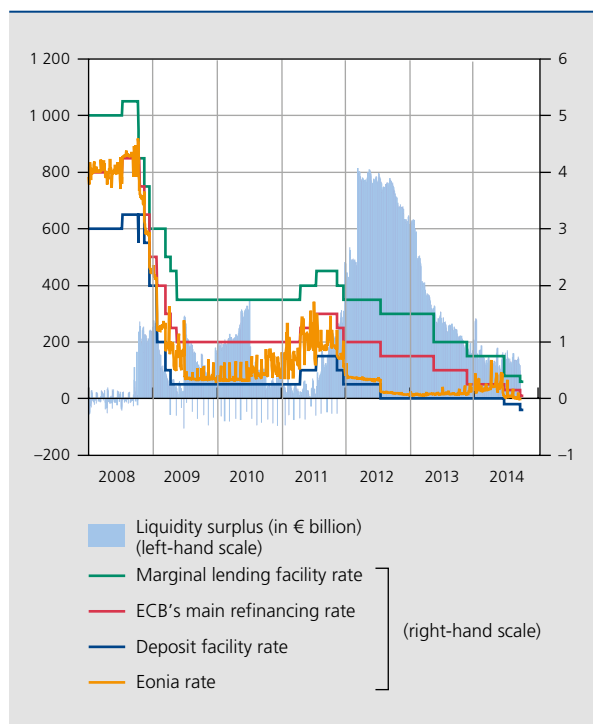
⁽²⁾ There are three precedents for the negative deposit rate policy in Europe: in Switzerland in the 1970s, in Sweden in 2009, and in Denmark from July 2012 to April 2014.

determines the cost of longer-term refinancing operations (targeted or not). Next, the marginal lending facility rate at which banks can borrow liquidity overnight was reduced from 0.75 to 0.4%, then established at 0.3%. Finally, the rate of remuneration on the deposit facility, which enables banks to place their liquidity with the central bank overnight, was cut from 0 to -0.1%, and then to -0.2%. In order to avoid arbitrage, the negative interest rate also applies in practice to banks' current account holdings with the Eurosystem over and above their required reserves. Taking the two components mentioned, it is therefore the liquidity surplus as a whole that gives rise to a custody fee.

The consolidated balance sheet of the Eurosystem permits a better understanding of the source of the liquidity surplus. As we just said, that surplus corresponds to the liquidity that banks hold with the Eurosystem, either on the deposit facility or on their current account, over and above their required reserves (see the balance sheet items outlined in green in chart 2). According to an alternative view, the liquidity surplus is also the difference between the net provision of liquidity by the Eurosystem for monetary policy purposes (see the balance sheet items

outlined in blue in chart 2) and the consolidated liquidity need of the banking sector (see the balance sheet items outlined in red in chart 2)⁽¹⁾. Before the financial crisis (see 2007 in chart 2), there was virtually zero liquidity surplus because the banks readily traded their surpluses and deficits between themselves and therefore did not require Eurosystem refinancing except in the sum of their consolidated need. However, in the wake of the financial turmoil, the banks became reluctant to lend to one another. The Eurosystem therefore substantially increased its supply of liquidity so that banks in deficit could obtain refinancing under more generous conditions⁽²⁾, while those in surplus could place their excess liquidity in the deposit facility or on their current account over and above their required reserves. This implies that the banking sector has more central bank reserves than necessary if the interbank market is operating properly (see September 2014 in chart 2). In the current circumstances, the liquidity surplus can therefore be seen as an indicator of friction between the banks, and is in fact a sign of a need for intermediation via the Eurosystem balance sheet⁽³⁾. As a result of the easing of financial tensions once the sovereign debt crisis in the euro area had passed its peak, there was a sharp decline in the liquidity surplus from mid-2012. This tendency was due more particularly to the volume of early repayments of amounts borrowed via the two three-year longer-term refinancing operations.

CHART 1 KEY INTEREST RATES, MONEY MARKET RATE AND LIQUIDITY SURPLUS IN THE EURO AREA
(daily data, % per annum, unless otherwise stated)



Sources: Thomson Reuters Datastream, ECB.

Interestingly, the above analysis highlights the first function of the deposit facility rate, as the consolidated Eurosystem balance sheet shows that euro area banks are always able to deposit liquidity with the central bank. Moreover, the Eurosystem currently also lends funds to the banks to enable them, at the very least, to finance their consolidated liquidity need. The deposit facility rate combined with the rates at which banks borrow from the central bank therefore determines the Eurosystem's intermediation margin, which is analogous with the intermediation margin of commercial banks. In practice, it should be noted that the difference between the rate on the main refinancing operations and the deposit facility rate is the most relevant yardstick for measuring the Eurosystem's intermediation margin. That is particularly true in a system of fixed-rate tenders with full allotment. However, the difference between the marginal lending facility rate and the main refinancing rate is still a factor determining the volatility of money market rates. Moreover,

(1) The consolidated liquidity need arises because liquidity-absorbing autonomous factors outweigh the liquidity-increasing autonomous factors. It is also accentuated by the existence of the reserve requirements. For more details, see Boeckx and Ide (2012).
(2) These more generous conditions apply in terms of quantity, price and maturity, but also collateral. See in particular the Bank's latest annual reports for more details on the measures taken by the Eurosystem during the crisis.
(3) This interpretation is valid only if changes in the liquidity surplus are determined by demand, but no longer applies if the central bank controls the level of excess liquidity, e.g. via massive asset purchases.

CHART 2 CONSOLIDATED AND SIMPLIFIED EUROSISTEM BALANCE SHEET
(billions of euro)

| Assets | | | Liabilities | | |
|---|---------------------|----------------|---|---------------------|----------------|
| | 2007 ⁽¹⁾ | 5 Sept. 2014 | | 2007 ⁽¹⁾ | 5 Sept. 2014 |
| Liquidity-increasing autonomous factors | | | Liquidity-absorbing autonomous factors | | |
| Net external assets | 323.7 | 584.2 | Banknotes in circulation | 629.6 | 972.6 |
| Other autonomous factors (net) | 106.5 | -8.8 | Government deposits | 52.5 | 70.7 |
| Monetary policy instruments | | | Current account holdings | | |
| Main refinancing operations | 263.6 | 111.2 | Required reserves | 187.4 | 105.2 |
| Longer-term refinancing operations | 183.3 | 381.4 | Current account holdings in excess of required reserves | 1.9 | 88.5 |
| Covered Bonds Purchase Programmes and Securities Market Programme | 0.0 | 195.4 | Monetary policy instruments | | |
| Marginal lending facility | 0.2 | 0.1 | Fixed-term deposits | 0.0 | 0.0 |
| Total | 877.3 | 1 263.6 | Fine-tuning operations (net) | 5.4 | 0.0 |
| | | | Deposit facility | 0.5 | 26.7 |
| | | | Total | 877.3 | 1 263.6 |

Source: ECB.
(1) 2007 average.

it was specifically in order to limit the variability of the Eonia rate, i.e. the overnight interbank rate in the euro area, that the Governing Council cut the marginal lending facility rate from 0.75 to 0.4% in June, thus reducing the differential in relation to the main refinancing rate from 50 to 25 basis points.

Apart from its role at the level of the Eurosystem inter-mediation margin, the deposit facility rate has a second key function: it is the lower limit of fluctuations in the Eonia rate, since no bank will agree to lend overnight to another bank at a lower rate than it can obtain from the Eurosystem. Importantly, this limit becomes the benchmark for money market interest rates in an environment featuring substantial excess liquidity. In such circumstances, the Eonia rate in fact falls from a level close to the main refinancing rate – which prevails under the balanced liquidity conditions in normal times⁽¹⁾ – to a level close to the deposit facility rate.

In brief, the deposit facility rate has an important role in the implementation of Eurosystem monetary policy, particularly in times of crisis. However, it should be noted that there is a lower limit to this interest rate, as the holding of liquidity in the form of banknotes – always

“remunerated” at 0% – is the banks’ final alternative to the use of the deposit facility. A negative interest rate is therefore possible for this facility since there are costs and risks entailed in holding cash. Like any other asset, banknotes can be lost, stolen or destroyed. There are also costs associated with their transport and storage, particularly in view of the amounts involved in the euro area banking system. However, the lower the deposit facility rate, the more attractive it becomes for banks to switch to cash, making it potentially pointless to reduce the deposit facility rate any further. In fact, it is difficult to determine exactly the interest rate at which substitution in favour of banknotes begins to apply. However, at the press conference following the Governing Council meeting in September, ECB President Mario Draghi stated that the lower bound in terms of interest rates had been reached and no further technical adjustments could be envisaged. In other words, in the opinion of the Governing Council, 20 basis points below zero correspond to the effective lower bound of the deposit facility rate.

(1) See Aucremanne, Boeckx and Vergote (2007).

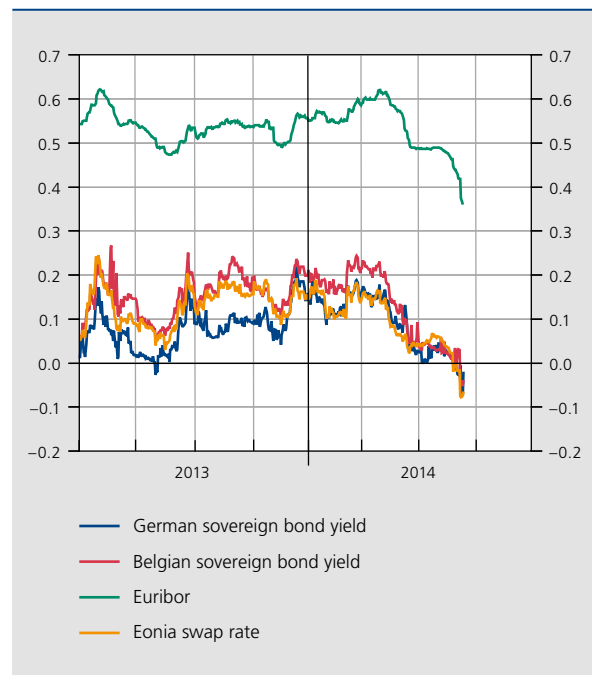
2. The reasons for introducing a negative interest rate

The first aim of the Governing Council in cutting the deposit facility rate is to make the monetary policy stance still more accommodative. As already explained, the deposit facility rate is the benchmark interest rate on the money market in the context of excess liquidity prevailing since the financial crisis. By reducing that rate, the Eurosystem therefore exerted direct pressure on the Eonia rate, which is the starting point for the monetary transmission mechanism. The overnight interbank rate thus averaged 0.04 % between the beginning of June and mid-September 2014, compared to 0.21 % between February and May of the same year. At the end of August and the beginning of September, it dropped just below zero for the first time in its history. At the same time, the longer-term interest rates on the money market had been falling since the May Governing Council meeting (after which the possibility of additional measures was suggested). Moreover, they dipped into negative territory from the end of August, in anticipation of the new easing measures in September. Thus, at the beginning of September, the one-year Eonia swap rate stood around 6 basis points below zero. In addition, yields on some government securities of core euro area countries also became negative, as in the case of Germany and Belgium.

In the process through which monetary policy decisions affect the economy, the impact of the negative interest rate on money market rates is only the first step of a mechanism comprising several channels. In the present context, the Eurosystem expects the monetary stimulus to be transmitted to medium-term interest rates, reinforced by the forward guidance guaranteeing that the key interest rates will be held at their current level for an extended period of time. In addition, in an economic system such as that of the euro area, where businesses and households obtain funding mainly by the banks, the new financial market conditions should also exert downward pressure on bank lending rates. In particular, the other measures announced in June and September, including the targeted longer-term refinancing operations, are intended to ensure appropriate transmission to the banking system. In these circumstances, it is encouraging to see that, since May, there has been some reduction in bank lending rates for non-financial corporations, following months of virtually static rates. Ultimately, the general reduction in interest rates both on the financial markets and in the banking system should – all other things being equal – encourage business investment and household spending, eventually inducing a higher inflation rate.

Another important point is that the decision to introduce a negative deposit facility rate sends a potentially powerful

CHART 3 ONE-YEAR INTEREST RATES ON EURO AREA FINANCIAL MARKETS
(daily data, % per annum)



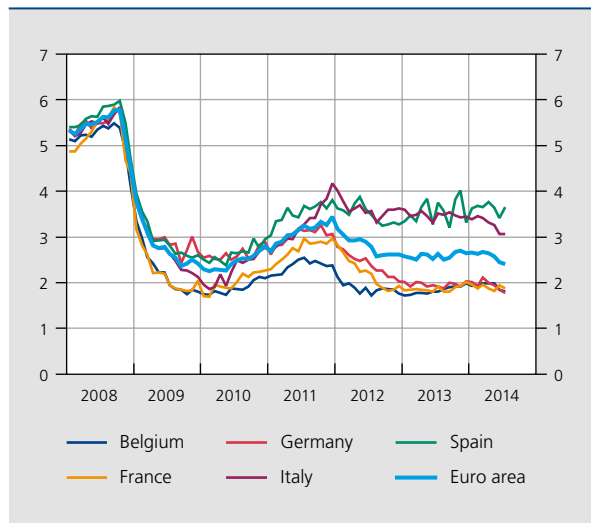
Source: Thomson Reuters Datastream.

signal to market operators, as the move emphasises that the Governing Council is ready to take all necessary steps – including the adoption of non-standard measures – to fight the risk of a protracted period of low inflation or even deflation. That signal should maintain the credibility of the central bank, thus helping to improve the anchoring of medium-term inflation expectations.

Although the exchange rate is not in itself a target of the Eurosystem's monetary policy, the benefits of transmission of the negative interest rate via the relative value of the euro have also been frequently argued. From that angle, the general decline in financial market interest rates could discourage domestic and foreign investors from placing their liquidity in the euro area. All other things being equal, the subsequent flight of capital from the euro area to economies offering higher returns will foster an exchange rate depreciation and hence a quicker return to an inflation rate close to 2 %. Although the euro depreciated by around 7 % against the US dollar and about 4 % in effective terms between the beginning of May and 10 September 2014, it is hard to estimate exactly how much the introduction of the negative interest rate contributed towards this trend, since also other monetary policy measures were announced in June and September, such as the targeted longer-term refinancing operations and

CHART 4 BANK LENDING RATES IN SEVERAL EURO AREA COUNTRIES

(short-term cost of borrowing indicator for non-financial corporations⁽¹⁾, monthly data, % per annum)



Source: ECB.

(1) Calculated as a weighted average of the interest rate on loans up to one year (including long-term loans at floating rates with an initial interest rate fixation period up to one year) and on overdraft facilities granted by banks to non-financial corporations (see ECB, 2013).

the asset-backed securities and covered bonds purchase programmes. In addition, given the strong appreciation of the euro against other currencies from mid-2012, the exchange rate remains a major and legitimate concern in the current low inflation context.

As well as easing monetary policy, taking the deposit facility rate into negative territory also preserved the smooth functioning of the interbank market following the cuts in the main refinancing rate, as we shall now explain.

Since November 2013, the spread between the main refinancing rate and the deposit facility rate has stood at 25 basis points. As already mentioned, that spread measures the Eurosystem intermediation margin. In normal times, some central bank intermediation is a kind of by-product of the implementation of monetary policy. But in times of financial crisis, and especially in periods of extreme uncertainty on the interbank market, it becomes an integral part of that implementation and also makes a potentially decisive contribution to financial stability. However, if the central bank becomes too involved as an intermediary, it also reduces the incentives for intermediation by the private sector and the recovery of the interbank market.

(1) See Mercier and Papadia (2011).

To clarify that, the situation can be considered from the point of view of two representative banks: bank A, with excess liquidity, and bank B, with a deficit. In this simplified example, bank A has the choice between depositing its excess liquidity with the Eurosystem or lending it on the interbank market to bank B. Bank B also has the option of participating in the Eurosystem refinancing operations to obtain the funds that it lacks (provided it has the necessary collateral). There is therefore a link between the rate at which bank B can borrow liquidity from the central bank and the rate which it is prepared to pay to bank A to obtain it. Conversely, the difference between the latter rate and the deposit facility rate determines the decision by bank A on whether to take part in the interbank transaction. Hence, the narrower the corridor formed by the main refinancing rate and the deposit facility rate, the lower the relative cost of Eurosystem intermediation and, all other things being equal, the greater the decline in the number of interbank transactions⁽¹⁾.

According to these considerations, the two cuts in the deposit facility rate (and its descent into negative territory) in the summer of 2014 were justified as the Eurosystem wanted to lower the cost of the refinancing that it offered and stimulate the demand of banks for the targeted longer-term refinancing operations, but without reducing its intermediation margin. In other words, the deposit facility rate was also reduced because a corridor lower than 25 basis points resulting from the cut in the main refinancing rate alone was considered likely to have an excessively adverse impact on the interbank market.

Interestingly, the above analysis suggests that the reduction in the deposit facility rate to a negative level does not in itself boost activity on the interbank market. That results directly from the fact that the relative cost of Eurosystem intermediation for the banking sector has remained unchanged since June. Moreover, banks with excess liquidity have no more incentive to unload their excess liquidity (e.g. via interbank loans), as the new monetary conditions are in principle transmitted to all classes of assets and liabilities. In view of the economic and financial reality, however, that analysis needs to be qualified. In practice, there are various reasons why some banks may desire to avoid the custody fee introduced by the Eurosystem. Thus, some entities may have to take account of internal rules which prohibit them from holding assets at negative interest rates, so that they are specifically obliged to find alternatives to deposits with the Eurosystem. Moreover, it is possible that credit institutions might be less inclined to pass on the negative interest rate in the rates they pay on their customer deposits. In such circumstances, the difference between returns on their assets and liabilities encourages them to offload their excess

liquidity. In addition, there could be some non-linearity in the behaviour of market operators faced with negative interest rates. Ultimately, it is therefore possible that the negative deposit rate may stimulate the volume of inter-bank transactions. In the current context, however, that is difficult to assess, since other Governing Council decisions during the summer could also influence the banks' liquidity management.

A negative interest rate on the deposit facility remains a move into uncharted waters and therefore raises many questions. As the previous paragraph shows, its impact on the volume of interbank transactions is theoretically neutral, although some observers suggest that it has a major effect. In the next two sections, we shall examine two other questions relating to the effects of the decision to cut the deposit facility rate below zero: "Does the negative interest rate penalise savers?" and "Does the negative interest rate entail a cost for the banking sector?".

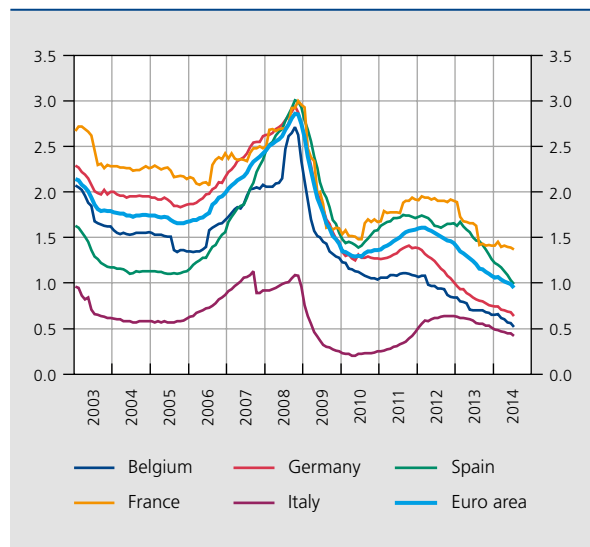
3. Does the negative interest rate penalise savers?

To assess the situation of savers in the euro area, it is natural to begin by analysing the trend in the remuneration of their deposits by financial institutions. Like other money market and financial market interest rates, the rates remunerating household bank deposits have fallen very considerably in most euro area countries, and have now reached historically low levels⁽¹⁾. More specifically, the steep declines in household deposit rates which began in the autumn of 2008 and in early 2012 mirror the cuts in the Eurosystem key interest rates. Moreover, in June and July 2014, there was a further fall in the average interest rate paid on household savings in the euro area. In short, these developments indicate that the Eurosystem decisions on interest rates following the crisis, including the negative deposit facility rate, exert genuine downward pressure on the return on savings. For the central bank, that is good news since the actual aim of easing monetary policy is to make savings less attractive (and credit more attractive) for economic agents. Thus, by reducing interest rates, the Eurosystem does not really mean to penalise savers but rather to encourage households and businesses to spend their money or invest today rather than tomorrow, since the diagnosis is that current savings are too high to permit economic recovery and a more rapid rise in prices.

(1) The interest rates shown come from the harmonised survey of monetary financial institution interest rates in the euro area (MFI Interest Rates – MIR). It should be noted that differences between countries in the level of the composite interest rates to some extent reflect preferences in terms of maturity and the various national institutional characteristics. They must therefore be interpreted with due caution.

(2) For more details on this principle, see in particular Taylor (1999).

CHART 5 INTEREST RATE ON HOUSEHOLD BANK DEPOSITS⁽¹⁾ IN SEVERAL EURO AREA COUNTRIES (monthly data, % per annum)

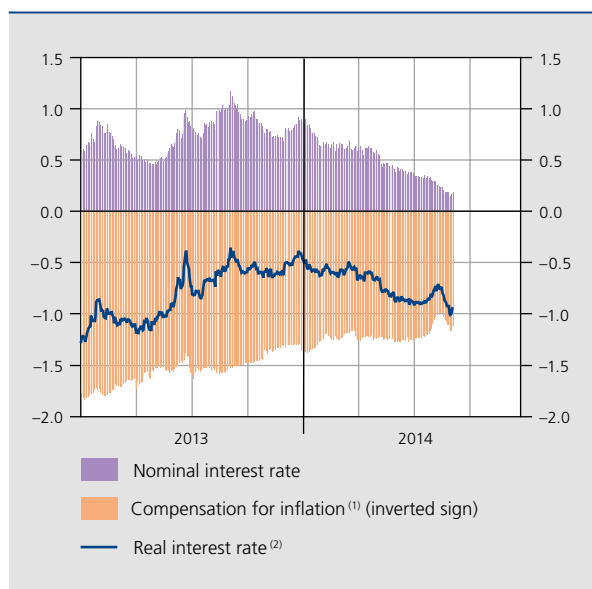


Sources: ECB, NBB.

(1) Composite interest rates based on weighted average rates paid on overnight deposits, deposits redeemable at notice, and term deposits.

In this connection, it should be noted that while the Eurosystem has a direct lever for influencing nominal interest rates, it is in principle real interest rates that are relevant for consumption and investment decisions. The real interest rate corresponds to the nominal rate less compensation for expected inflation. It is therefore possible that a reduction in nominal rates (perhaps below zero) in the face of a general decline in inflation expectations may leave real rates unchanged or even above their original level. Moreover, in practice, since April 2013, real interest rates have come under some upward pressure owing to the pronounced fall in inflation expectations, despite a number of cuts in the key interest rates during that period. More specifically, during the spring and summer of 2013, the rise in the real interest rate was due to an increase in the nominal rate and some decline in inflation expectations. Between November 2013 and April 2014, the real interest rate was more or less stable, as the nominal interest rate reductions were offset by a fall in inflation expectations over the same horizon. According to the Taylor principle – which states that a central bank faced with a fall/rise in inflation expectations has to implement a more than proportionate reduction/increase in the nominal interest rate in order to make the real interest rates move in the right direction and restore economic stability⁽²⁾ – this finding is enough in itself to justify the package of measures announced in June and reinforced in September, which did indeed lead to a fall in the real interest rate.

CHART 6 BREAKDOWN OF THE REAL INTEREST RATE ON FIVE-YEAR EONIA SWAPS
(daily data, % per annum)



Sources: Thomson Reuters Datastream, NBB.

- (1) Measured on the basis of swap contracts covering the inflation risk in the euro area for a five-year period.
(2) Calculated as the difference between the nominal interest rate and compensation for inflation.

To sum up, from a general macroeconomic point of view, the reduction in interest rates is justified by the resulting conditions which are favourable to activity and inflation. In other words, the current low remuneration on savings facilitates an economic recovery in the medium term, and ultimately encourages higher interest rates⁽¹⁾. To that extent, and taking a long-term view, the lower deposit facility rate does not seem to justify the current concerns or fears of savers.

4. Does the negative interest rate entail a cost for the banking sector?

While some banks may, for one reason or another, want to avoid the negative interest rate on the deposit facility (see above), at the level of the banking system as a whole – which is a closed circuit – the liquidity surplus always has to return to the Eurosystem in one way or another. In other words, for a given level of liquidity surplus, the system cannot avoid the “charge” resulting from a negative deposit rate in the Eurosystem. In this section of the

(1) For more details on the causes and effects of low interest rates, see Boeckx, Cordemans and Dossche (2013).

(2) This calculation takes account of the fact that the reserve requirements are remunerated at the main refinancing rate. It also assumes that the interest rate applicable to the longer-term refinancing operations is the rate on the main refinancing operations.

article, we focus on examining in more detail the extent to which the payment of a custody fee may represent a cost for the banking sector.

As already explained, the Eurosystem acts in some ways as a bank for credit institutions: the latter deposit their liquidity there, but they also continuously borrow funds from the Eurosystem. Therefore, in a desire to take account of the overall position of the banking sector, the cost that results from the key *credit* interest rate (on the deposit facility) falling below zero is insolubly linked to the gain resulting from the simultaneous reduction in the key *debit* interest rates (on the refinancing operations and marginal lending facility). If we look at the Eurosystem’s consolidated balance sheet presented in the first section of the article, it is immediately apparent that the banking sector is a net borrower in relation to the Eurosystem. In other words, the amount that it borrows via the refinancing operations and the marginal lending facility exceeds the liquidity placed with the Eurosystem over and above the required reserves. That situation always applies – i.e. not just in times of crisis – in that there is a consolidated liquidity deficit which can only be made up by borrowing from the Eurosystem (see above). In such a context, reducing the key interest rates’ corridor (including taking the deposit facility rate into negative territory) benefits the banking sector as a whole. For example, using the figures from the consolidated balance sheet of the Eurosystem dated 5 September 2014, the combination of key interest rates prevailing from mid-September (-0.2 %, 0.05 % and 0.3 %) implies, on an annual basis, that bank refinancing via the Eurosystem has a net cost of € 0.42 billion, compared to € 0.97 billion with the corridor applicable at the beginning of June (0 %, 0.25 % and 0.75 %)⁽²⁾.

Of course, this accounting analysis concerns a simplified view of reality. This reasoning can thus be qualified in two ways.

First, the analysis presents an overall view of the banking sector’s position. Therefore, it is possible that the impact of the change in the corridor may vary from one bank to another, depending on whether the institution has a liquidity surplus or deficit. However, such considerations are beyond the scope of the article. That said, it should be noted that the mere fact that the Eurosystem offers to act as an intermediary benefits all banks. That is particularly true for the most vulnerable banks, but also for sound institutions with ample liquidity, as the latter benefited from the safe haven of the Eurosystem deposit facility, particularly at the height of the crisis. It should also be noted that they benefit greatly from the restoration of financial market stability, fostered partly by the massive refinancing of the most vulnerable banks by the central bank.

Second, the analysis based on the consolidated balance sheet is purely static. Taking a more dynamic view, the impact of the negative interest rate is more difficult to estimate. As we have already briefly mentioned in the second part of the article, that potential impact on bank profits arises because, when interest rates are low, banks may prefer not to pass on new rate cuts in their deposit interest rates in order to avoid threatening their deposit base. If, at the same time, bank lending rates and returns on other assets are adjusted downwards, that puts pressure on commercial banks' margins. Of course, the severity of the squeeze on margins depends on the institutional characteristics of the various national banking sectors, including the prevalence of loans granted at variable rates or the size of the margin available for further cuts in deposit interest rates. Alternatively, it is also conceivable that the banks may offset the pressure on their margins by increasing the rates charged on new loans. However, neither the recent figures on bank lending rates in the euro area nor the Danish experience of the negative deposit rate⁽¹⁾ would seem to confirm such a distortion in practice.

From the perspective of general equilibrium, it should likewise be noted that the economic stimulus triggered by a negative deposit facility rate (*monetary easing*) also supports the growth of bank profits. Thus, it is noteworthy that the very modest level of interest rates could stimulate household and business demand for loans. It is therefore possible that the growth in the volume of credit could more than offset the fall in bank lending rates. As a result of lower rates, it is also likely that the number of households and businesses in default on repayments will be considerably smaller than in a situation without monetary accommodation. In the end, it is interesting that a more marked favourable effect of monetary easing on bank profits via the channels mentioned above can therefore be expected in the presence of institutional factors encouraging a potentially adverse effect of the negative interest rate on bank margins (e.g. a high proportion of loans at variable rates).

Conclusion

In the package of measures announced in the summer of 2014, the ECB Governing Council moved into uncharted waters by applying remuneration at a negative interest rate to commercial banks' deposits with the Eurosystem over and above their required reserves.

Given its dual role in the implementation of monetary policy, the reduction in the deposit facility interest rate, taking it into negative territory, implies a more accommodative monetary policy stance and safeguards the incentives for interbank trading while reducing the cost of Eurosystem refinancing for the banks.

Although a negative deposit facility rate implies lower returns for savers, a cut in the real interest rate is warranted to support economic activity, and hence inflation. Furthermore, it will permit a return to higher interest rates in the future. The analysis also shows that the net costs of Eurosystem refinancing for the banking system have fallen since the beginning of June, even if the dynamic impact of the negative interest rate on bank profitability is harder to estimate.

Finally, it should be noted that the effectiveness of cutting the deposit facility rate below zero has to be assessed in real time, taking account of the effects of interaction with all the other monetary policy measures announced in June and September. In particular, the targeted longer-term refinancing operations launched in September 2014 should encourage efficient transmission of the negative interest rate to the real economy. In addition, combined with the asset-backed securities and covered bonds purchase programmes, to be launched in October, they should considerably increase the liquidity surplus on the money market, in accordance with ECB President Draghi's stated aim of increasing the Eurosystem's balance sheet to the levels prevailing at the beginning of 2012.

(1) See <http://www.bruegel.org/nc/blog/detail/article/1339-negative-deposit-rates-the-danish-experience/>.

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