

# Measures to Improve the Efficiency of the Operational Framework for Monetary Policy

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*This study shows that strong interest rate expectations can have a massive short-term impact on counterparties' bidding behavior if certain conditions for monetary policy operations are present. This increases the probability of an undesirable reaction of potentially more volatile short-term money market rates.*

*Therefore, during the first quarter of 2004 the Eurosystem took steps to counter such potential negative repercussions on signaling the monetary policy stance. The modifications are to make an important contribution toward increasing the efficiency of the operational framework for monetary policy.*

*In another area – the risk control framework for eligible assets – the Eurosystem implemented measures to increase the precision and transparency of the valuation of these assets and adopted a more precise definition of the criteria for certain credit standards.*

## 1 Introduction

The Eurosystem's principal monetary instruments are open market operations and standing facilities. Open market operations ensure that the European Central Bank (ECB), which always initiates these operations, provides refinancing to the financial sector on a regular basis. The most important type of open market operations is short-term tenders<sup>1</sup> (main refinancing operations, MROs).

The minimum bid rate for short-term tenders signals the Eurosystem's monetary policy stance. For the interbank market, the minimum bid rate is an important indicator for overnight rates, which as a rule do not deviate significantly from the former.<sup>2</sup>

In addition to providing central bank money on a regular basis, open market operations also serve as a tool to fine-tune liquidity conditions. In this way, the ECB reacts – if necessary – to imbalances in the money market, thus reducing the volatility of short-term money market interest rates.

Standing facilities, on the other hand, are available to credit institutions at their own initiative. Counterparties can use them to obtain short-term overnight liquidity (marginal lending facility) or to deposit liquidity surpluses (deposit facility).

An essential regulatory provision is that most credit institutions are required to maintain minimum reserves. To meet their minimum reserve requirements, credit institutions have to hold 2% of certain deposit categories on accounts with the national central banks. Compliance with reserve requirements is determined on the basis of the average of the end-of-calendar-day balances on the credit institutions' reserve accounts over a maintenance period. This allows credit institutions to smooth out liquidity fluctuations within their reserve management system, which eliminates the necessity of daily compensatory transactions in the money market. As a result, the number of transactions decreases, which in turn stabilizes short-term money market rates.

As has been the case in past years, the ECB's monetary policy decisions were implemented relatively smoothly and without major incidents in 2003:

- The average volatility of short-term money market interest rates over the course of the year, measured against the Euro OverNight Index Average (EONIA), i.e. the euro reference interest rate for overnight unsecured lending trans-

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<sup>1</sup> In these transactions, the ECB provides central bank money to the banking system in a predefined auction process.

<sup>2</sup> Short-term deviations from this general rule are possible in periods of temporary over- or underliquidity.

actions in the interbank market, was low. In particular, the spread between the minimum bid rate in ECB tender operations and the EONIA remained mostly stable at a low level. This suggests that in most cases the liquidity situation in the money market was balanced and that no serious tensions occurred.

- On average, recourse to both standing facilities – the deposit facility and the marginal lending facility – was at a low level. This is generally the case when credit institutions' liquidity is adequate to meet their needs, and the volatility of money market interest rates is insignificant.

Overall, the operational framework for monetary policy proved suitable to ensure a stable supply of central bank money to the banking sector also in 2003. At the same time, the structure turned out to be flexible enough to react quickly and effectively when faced with unforeseen situations; a fact that is also evidenced by the limited number of fine-tuning operations that had to be conducted.

Despite a very balanced and stable overall picture, there are occasional situations when temporary imbalances in the money market emerge. These may be caused when factors affecting liquidity (for instance, banknotes in circulation or certain central government transactions) take an unforeseen development. As a result, there is a temporary over- or undersupply of liquidity to the market, and short-term interest rates react accordingly.

In addition, it is also possible that interest rate speculation leads to bidding behavior on the part of credit institutions that does not correspond to their actual liquidity requirements.

Some such situations occurred in particular under the operational framework for monetary policy that was in effect up to February 2004. The section below presents a short analysis of some examples of such situations.

Another key factor within the operational framework for monetary policy is the fact that counterparties are only supplied with central bank liquidity against sufficient and adequate collateral. All collateral is subject to certain criteria in order to be eligible for use in Eurosystem monetary policy operations. In addition, the Eurosystem applies specific risk-control measures to prevent losses in the event that underlying assets have to be realized owing to the default of a counterparty. In recent years, these measures have been increasingly refined and adjusted to the requirements of modern financial markets. A further step in this direction came into effect in the first quarter of 2004 and is discussed in chapter 4 of this study.

## 2 Temporary Imbalances and Their Causes

It is important to note that this analysis focuses on the period following the switch to variable rate tenders in the MROs.<sup>3</sup>

Each national central bank submits a detailed set of data to the ECB on a daily basis, setting out the anticipated development of the autonomous liq-

<sup>3</sup> Particularly in 2000, severe overbidding situations occurred in the context of the volume tender procedure, which is based on a fixed interest rate, combined with strong market expectations of increasing interest rates. The fixed rate tender procedure does not involve market risk for the bidding bank. In response to this fact, the ECB decided to switch to a variable rate tender procedure.

uidity factors up to the end of the current minimum reserve maintenance period. Autonomous liquidity factors include, for example, banknotes in circulation or government activities affecting liquidity. On the basis of these factors, together with the current aggregate reserves of the credit institutions, the ECB calculates the liquidity needs for the entire Eurosystem. This calculation is used to determine the respective tender allotments.

An underbidding situation occurs when the calculated liquidity requirements of the counterparties cannot be met because the bids submitted in the tender operation were not sufficient. Depending on the amount of the ensuing liquidity shortfall, this results in more or less significant fluctuations in money market interest rates.

Two episodes in March and in June 2003 serve as examples of clear underbidding. In both of these cases, the shortage in the amount of liquidity that would have ensured a smooth fulfillment of minimum reserve requirements was substantial: EUR 43 billion and EUR 20 billion, respectively. Since, by contrast, the annual average minimum reserve requirement was EUR 130 billion in 2003, these two cases deserve a closer look.

To analyze these temporary situations, it is first necessary to briefly describe how the operational framework for monetary policy has been functioning up to now. Particular emphasis must be given to the following two key factors:

- 1) The minimum reserve system with its maintenance period starting on the 24<sup>th</sup> calendar day of one month and ending on the 23<sup>rd</sup> calendar day of the following month.
- 2) The fact that the maturity of the main refinancing operations was two weeks.

The first factor is particularly relevant in the present context. As previously mentioned, compliance with reserve requirements is determined on the basis of the average of the daily balances on the counterparties' reserve accounts over the entire reserve maintenance period. This means that the credit institutions subject to minimum reserves have great flexibility for managing their reserves. Depending on their liquidity situation, but also contingent upon their assessment of how money market interest rates will develop, they will opt either for frontloading or backloading reserves.

A frontloading strategy is characterized by a liquidity surplus (more minimum reserves are held than the necessary average amount) in the first half of the maintenance period, which is attributable either to liquidity inflows from the financial institution's activities at that time or to the anticipation of an interest rate hike in the second half of the maintenance period.

In the opposite scenario, a credit institution that opts for backloading either expects liquidity inflows during the second half of the reserve maintenance period or an interest rate cut. Therefore, at the beginning of the reserve maintenance period, the credit institution will hold less central bank money than the required minimum reserve average. Instead, it will compensate for the reserve deficit later on, using either liquidity inflows or – if the interest rates have in fact been cut – by borrowing the shortfall at more favorable conditions in the money market or from the ECB.

Under the facts and circumstances described above, the dates scheduled for the ECB's interest rate decisions play a crucial role in market participants' decisions as to which strategy

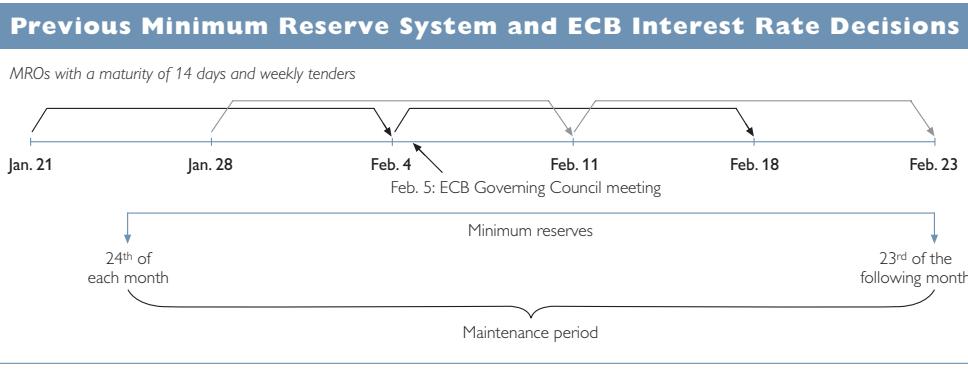
to follow. Generally, the ECB Governing Council assesses the monetary policy stance at its first meeting of the month. Accordingly, interest rate decisions are normally taken during that meeting.<sup>4</sup>

If this provision is embedded in a minimum reserve regime with a maintenance period that begins on the

24<sup>th</sup> calendar day of each month and ends on the 23<sup>rd</sup> calendar day of the following month (that is, the “old” system), this implies that there is always the possibility of a key interest rate change within a particular reserve maintenance period.

Chart 1 illustrates this point.

Chart 1



If market participants’ expectations of an imminent change in the key interest rates gather momentum, direct consequences on credit institutions’ bidding behavior in ECB tender operations are very likely to occur in this scenario. Since, as described previously, there is a close connection between credit institutions’ minimum reserve maintenance patterns and their bidding behavior, the bidding amounts (and the interest rates offered) in tender operations primarily depend on the following two factors: the liquidity requirement and/or the anticipated liquidity conditions at the end of the reserve maintenance period and the spread between short-term money market rates and the minimum bid rate for MRO tenders. These money market rates are of course also

influenced by interest rate expectations for the immediate future.

Heterogeneous interest rate bids for MROs reflect, *inter alia*, credit institutions’ differing expectations about the level of the marginal allotment rate as well as their willingness to resort to riskier alternative refinancing options in the money market. These decisions are obviously also influenced by the availability of eligible underlying assets, the anticipated credit risk premium and their individual balance sheet structure.

The money market reference rates for the interest rates offered in tender operations are the short-term rates for unsecured deposits and increasingly, the EONIA swap rates,<sup>5</sup> owing to the high liquidity of this market segment, as well as corresponding repo rates.

<sup>4</sup> On November 8, 2001, it was announced that the Governing Council of the ECB would assess its monetary policy stance, as a rule, only at its first meeting of each month. The exact schedule of these monthly meetings is published around mid-year for the following year. The ECB may, however, deviate from this schedule if necessary.

<sup>5</sup> In an EONIA swap, a fixed-term interest rate is exchanged for the average of the EONIA rates over the course of a certain period, for example, one week. After the end of this period, the difference is usually paid out.

Basically, short-term money market rates (for example, the overnight rate) reflect the equilibria in the money market and also, to a certain degree, the expected level of the MRO minimum bid rate at the end of the reserve maintenance period, as well as the assessment as to whether liquidity conditions at this point are tight or loose. If these conditions are assessed as neutral, which means that the market does not anticipate a change in the key ECB interest rates and there is a high probability of neither a liquidity shortfall nor a surplus at the end of the reserve maintenance period, the difference between the overnight rate and the minimum bid rate for MROs is usually no more than a few basis points.

The earlier the market becomes aware of (or anticipates) probable imbalances, the earlier the short-term money market rate will deviate from the minimum bid rate. This amplitude normally culminates on the last day of the reserve maintenance period because then the most precise assessment regarding the amounts necessary to adjust discrepancies between the level of reserves held and the minimum reserves required (borrowing deficits/depositing surpluses through the Eurosystem's standing facilities) is available.

The factors described above show that expectations of imminent key interest rate changes can certainly lead to significant fluctuations in the bidding volume. Strong market expectations of a key interest rate hike can thus result in a substantially higher bids submitted in MROs (as previously mentioned, this phenomenon occurred in the period from 1999 through 2000). By contrast, expectations of a key interest rate cut usually lead to a marked decline in bids. In

this case, it is not possible to sufficiently adjust the bid rates (downward) in variable rate tenders because of the minimum bid rate. Instead, bidding interest will be regulated through the volume of bids. High expectations of interest rate cuts tend to exert a downward pressure on short-term money market rates, which may cause a temporarily fall below the minimum bid rate. This phenomenon has also been observed during underbidding episodes.

Interestingly, however, the money market rate can also rise considerably above the minimum bid rate as a direct result of significant underbidding, even though the market was anticipating an interest rate cut (see chart 2).

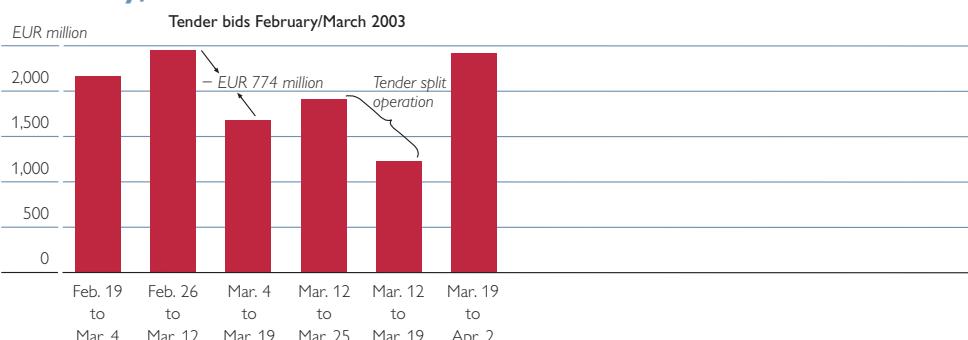
This is caused by a temporary liquidity shortage against the required minimum reserve maintenance, which in turn triggers an interest rate response that pushes the rate up and temporarily increases volatility. This is a typical example of a situation which the market does not classify as "liquidity neutral" as previously defined and therefore reacts accordingly. Generally it can be assumed that the higher the anticipated accumulated liquidity shortage, the higher will be the likelihood of a movement in short-term interest rates. Such market responses can move short-term interest rates temporarily to just under the level of the marginal lending facility.

The ECB normally responded to such situations with increased allotments in subsequent tender operations. In addition, so-called tender split operations were carried out on some occasions. This means that an additional operation with a maturity of one week was conducted in parallel to the regular MRO in order to realign the volumes of the outstanding tender operations.

Chart 2

### Underbidding Episodes and Interest Rate Movement

#### February/March 2003



Source: OeNB.

Nevertheless, credit institutions frequently used the marginal lending facility, as the higher allotment amounts did not necessarily cover the entire shortfall.

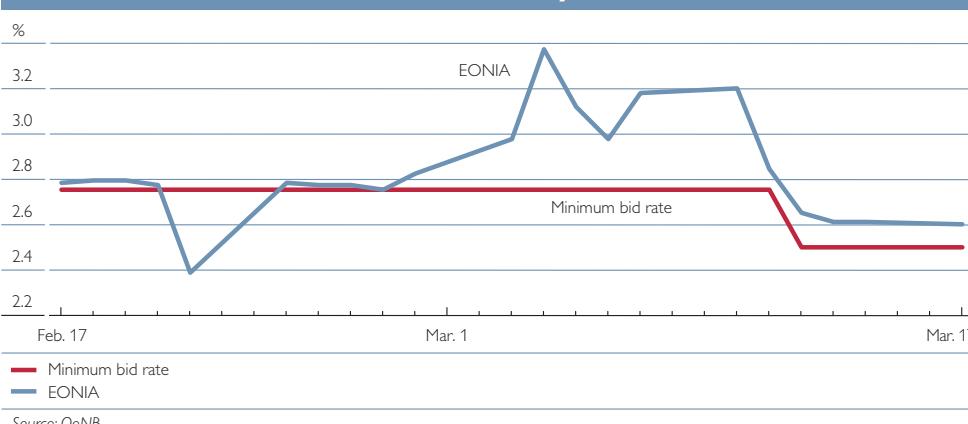
In addition to interest rate expectations during a given minimum reserve maintenance period, yet another aspect was relevant in the phased-out system: As a result of the two-week maturity of the MRO (with tenders on a weekly basis), at least the last MRO within a minimum reserve maintenance period overlapped with the subsequent one. This in turn could result in interest rate expectations for the next reserve maintenance period already having an effect on the bidding behavior during the current period.

From a central bank's perspective, distortions of bidding behavior prompted by speculation and the resulting tensions in the money market with phases of higher volatility are undesirable because the MROs do not just play a vital role in the regular supply of the market with central bank money but are also important factors in signaling the ECB's monetary policy stance.

In the current system of variable rate tenders, the minimum bid rate provides this signaling function (during the period in which the MROs were conducted as fixed rate tenders, the fixed rate of the tenders had this function).

Chart 3

### EONIA and Minimum Bid Rate February/March 2003



The greater volatility of short-term money market rates due to market participants' expectations, the more this signaling effect is endangered.

### 3 Measures to Reduce Distortions

In order to mitigate the previously described impacts of counterparties' expectations on the money market, the ECB Governing Council decided in early 2003 to implement the following changes to the operational framework for monetary policy, which came into effect in the first quarter of 2004:<sup>6</sup>

#### 3.1 Minimum Reserve

Since – as previously described – the timing of the minimum reserve maintenance period was one of the major factors causing the imbalances experienced in the past, an obvious step was to implement a change in the reserve maintenance schedule.

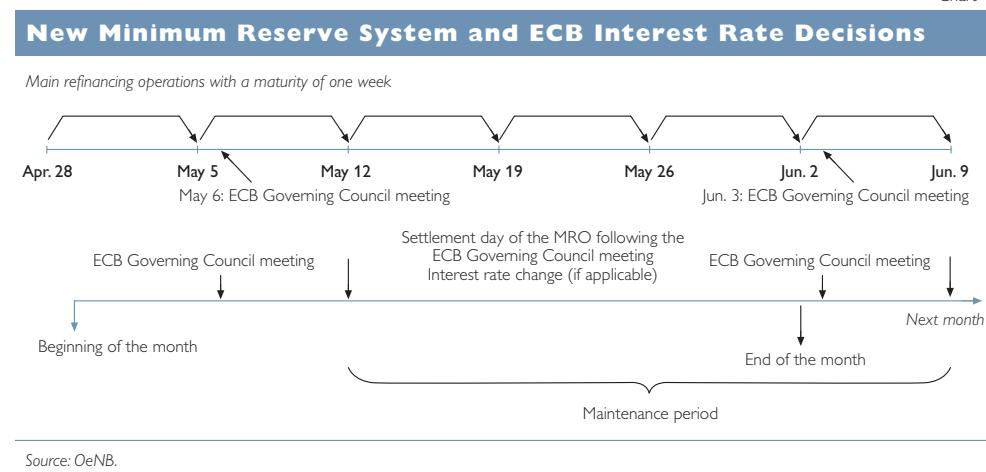
Under the new system, the reserve maintenance period always starts on the settlement day of the

MRO following the meeting of the ECB Governing Council at which the monthly assessment of the monetary policy stance is scheduled. As a complement to this redefinition of the minimum reserve maintenance period, changes in standing facility rates will generally coincide with the start of a new reserve maintenance period.

This means that instead of starting and ending on fixed calendar days, the reserve maintenance periods depend on the schedule of ECB Governing Council meetings. Consequently, the maintenance periods will vary in length.

As to the calculation of the minimum reserve, it is crucial that under the new system, the gap between the date on which the reserve basis is calculated, i.e. the last day of the month, and the start of the reserve maintenance period is at least as long as under the previous system. For instance, a credit institution's reserve requirement for a maintenance period starting in April would be calculated using its reserve base data from the end of February.

Chart 4



<sup>6</sup> The measures implemented were influenced by the public consultation launched by the Eurosystem on October 7, 2002, to gather the views of market participants on a set of planned technical measures designed to improve the efficiency of the operational framework for monetary policy.

### 3.2 Tender Operations

As previously mentioned, the allotment rhythm of MRO allotments was also a factor that fostered potential distortions of bidding behavior in certain situations. Because tender operations with a maturity of two weeks were conducted on a weekly basis, MROs regularly overlapped with the subsequent reserve maintenance periods.

Although the maturity of 14 days can be considered adequate for supplying central bank money to the financial sector, the ECB decided to synchronize the maturity of MROs and new tender operations. Consequently, the maturity of the MROs was shortened from two weeks to one week.

A technical change was also implemented with regard to the longer-term refinancing operations (with a maturity of three months). Instead of on the first Wednesday of each minimum reserve maintenance period like under the old system, they are normally allotted on the last Wednesday of each calendar month under the new system.

### 3.3 Desired Effect of the Changes

#### to the Framework

The combination of the changes outlined above is to help remove expectations of interest changes during any particular maintenance period, given that changes in the ECB's key interest rates will generally only apply to the forthcoming reserve maintenance period and that liquidity conditions will no longer spill over from one reserve maintenance period to the next. Furthermore, shortening the maturity of the MRO has solved the problem of

overlapping MROs (one refinancing operation extending over two minimum reserve maintenance periods).

In technical terms, this means that interest rate speculation of the kind previously described will no longer be relevant within the prevailing maintenance period, which in turn stabilizes the conditions in which bidding in the main refinancing operations takes place and thus reduces the volatility of short-term money market interest rates.

In addition, these measures will ensure that the reserve maintenance period always starts on a TARGET operating day, while ending on a non-TARGET day will be very rare.

## 4 Risk Control Measures

The eligibility criteria applied to underlying assets provide another important contribution to the smooth functioning of the Eurosystem's monetary policy operations.

Eligible assets are divided into two categories: tier one and tier two assets.<sup>7</sup> Tier one consists of marketable debt instruments fulfilling euro area-wide eligibility criteria specified by the ECB. Tier two consists of marketable and non-marketable assets which are of particular importance to national financial markets and banking systems.

The most recent changes concern the risk control measures that are applied to the assets underlying Eurosystem monetary policy operations<sup>8</sup> and can be summarized as follows:

Tier one assets were allocated to one of four liquidity categories, with a specific valuation haircut to be assigned to each category.

<sup>7</sup> The ECB Governing Council has already committed to a decision to merge the two categories of assets into one single list.

<sup>8</sup> The detailed provisions are set out in the "General Documentation on Eurosystem Monetary Policy Instruments and Procedures" (ECB, February 2004).

Table 1

Liquidity Categories for Tier One Assets			
Category I	Category II	Category III	Category IV
Central government debt securities	Local and regional government debt securities	Traditional Pfandbrief-style debt instruments	Asset-backed securities
Debt securities issued by central banks	Jumbo Pfandbrief-style debt instruments	Credit institution debt securities	
	Supranational debt securities	Debt instruments issued by corporate and other issuers	
	Agency debt instruments		

Source: ECB.

Table 2

Levels of Valuation Haircuts Applied to Eligible Tier One Assets								
in Relation to Fixed Coupon and Zero Coupon Instruments								
Residual maturity	Liquidity categories							
	Category I		Category II		Category III		Category IV	
	Fixed coupon	Zero coupon	Fixed coupon	Zero coupon	Fixed coupon	Zero coupon	Fixed coupon	Zero coupon
0 to 1 year	0.5	0.5	1.0	1.0	1.5	1.5	2.0	2.0
1 to 3 years	1.5	1.5	2.5	2.5	3.0	3.0	3.5	3.5
3 to 5 years	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
5 to 7 years	3.0	3.5	4.5	5.0	5.5	6.0	6.5	7.0
7 to 10 years	4.0	4.5	5.5	6.5	6.5	8.0	8.0	10.0
More than 10 years	5.5	8.5	7.5	12.0	9.0	15.0	12.0	18.0

Source: ECB.

The following haircuts apply to inverse floating rate instruments<sup>9</sup>:

Table 3

Levels of Valuation Haircuts Applied to	
Eligible Tier One Inverse Floating Rate Instruments	
Residual maturity	Inverse floaters coupon
	Haircuts in %
0 to 1 year	2
1 to 3 years	7
3 to 5 years	10
5 to 7 years	12
7 to 10 years	17
More than 10 years	25

Source: ECB.

With regard to the haircut schedule for inverse floating rate instruments, a distinction between instruments with pre-fixed coupons and instruments with post-fixed coupons is no longer necessary. The minimum haircut applied to inverse floaters is

the haircut corresponding to the zero-to-one-year maturity bucket of the liquidity category or group to which the instrument is assigned.

Differentiation of instruments according to liquidity categories was instituted because, as a rule, if it should

<sup>9</sup> An inverse floating rate instrument is a financial instrument where the rate of interest paid to the holder of the instrument varies inversely with changes in a certain reference interest rate.

become necessary to realize (sell) instruments with limited liquidity, markdowns and/or delays must be expected. Consequently, an appropriate valuation haircut, which is scaled up with increasing residual maturity (the maturity buckets were slightly refined compared to the old framework), is deducted ex-ante from the current market value of the instruments. This means that under the amended framework less liquid instruments are subject to significantly greater haircuts.

The classification of eligible tier two assets remains unchanged and distinguishes between the following four liquidity groups of eligible assets:

1. marketable debt instruments with limited liquidity;
2. debt instruments with restricted liquidity and special features;
3. equities; and
4. nonmarketable debt instruments, including trade bills, bank loans and mortgage-backed promissory notes.

The valuation haircuts shown in table 4 apply to tier two assets.

Table 4

<b>Levels of Valuation Haircuts Applied to Eligible Tier Two Assets</b>					
Residual maturity	Marketable debt instruments with limited liquidity		Debt instruments with restricted liquidity and special features		
	Fixed coupon	Zero coupon	Fixed coupon	Zero coupon	Zero coupon
0 to 1 year	2.0	2.0	4.0	4.0	4.0
1 to 3 years	3.5	3.5	8.0	8.0	8.0
3 bis 5 years	5.5	6.0	15.0	16.0	16.0
5 to 7 years	6.5	7.0	17.0	18.0	18.0
7 to 10 years	8.0	10.0	22.0	23.0	23.0
More than 10 years	12.0	18.0	24.0	25.0	

Source: ECB.

A valuation haircut of 22% is to be applied to all eligible equities.

The following levels of valuation haircuts apply to nonmarketable assets: Trade bills with a maturity of up to six months are subject to a 4% haircut. Bank loans with a maturity of up to six months are subject to a 12% haircut. Bank loans with a maturity between six months and two years are subject to a 22% haircut. Mortgage-backed promissory notes are subject to a 22% haircut.

Previously, the risk control framework for Eurosystem monetary policy operations was based on two components: on the one hand, valuation hair-

cuts were applied to the price/value of the assets provided as collateral, and on the other, initial margins were applied to the credit the ECB extended to a counterparty under a monetary policy operation. In other words, if a participating bank was allotted EUR 100 million in a tender transaction, the basis for calculating the required collateral was EUR 100 million plus the corresponding initial margin (1% or 2%, depending on the maturity of the operation). This was the minimum amount which had to be collateralized. The collateral value<sup>10</sup> of these assets was calculated on the basis of the current (market)

<sup>10</sup> Credit institutions can transfer collateral assets to the central banks within the Eurosystem either in the form of repurchase agreements or in the form of collateralized loans.

value of the underlying assets less the appropriate haircuts. This concept of dual protection was established because, at the time the single operational framework for monetary policy was developed, the assets used in monetary policy transactions were not subject to daily valuation in all euro area countries. As a result, it was possible that assets were accepted on the basis of prices that were no longer current. Consequently, the Eurosystem applied initial margins to offset this market risk. Since, by now, all euro area countries value the assets used for collateralizing Eurosystem credit operations on a same-day basis, it is no longer necessary to apply an initial margin to the amount of liquidity provided and this practice has therefore been discontinued.

Furthermore, the trigger point used in margin calls (the tolerance level for a shortfall in underlying assets which, if not attained, requires the participating central bank to demand additional assets or cash from the counterparty) was reduced from 1.0% to 0.5%, bringing it in line with the lowest level of protection provided under the revised framework (initial margin = 0% and valuation haircut = 0.5%).

In order to guarantee coherence between the new valuation haircut schedules for tier one eligible (i.e. marketable) assets and those for tier two eligible assets, the latter also had to be modified to take into account both the discontinuation of initial margins and the new maturity buckets.

These changes represent another step toward a more precise and transparent valuation of underlying assets.

For Austria, initial comparative analyses indicate the following:

The average valuation haircut applied to the assets included in the pools held by Austrian counterparties seems to have increased only slightly as a result of the amended provisions. The reason behind this is that significantly more than 50% of the instruments (valued according to their market value) fall under liquidity category 1 or are either instruments with limited liquidity or floating rate instruments, which are subject to the lowest haircut within the respective liquidity category.

In addition to the valuation criteria for eligible assets, the requirements for eligible guarantees were specified in greater detail. In some cases, for example, a confirmation concerning the legal validity, binding effect and enforceability of a guarantee will have to be provided before the asset supported by the guarantee can be considered eligible.

## 5 Conclusions

This study shows that strong interest rate expectations – in this particular case, expectations of key ECB interest rate changes within a given minimum reserve maintenance period – can have a massive short-term impact on the counterparties' bidding behavior if the operational framework for monetary policy is set up accordingly. This is particularly the case when the maturity of the ECB's regular main refinancing operations and the minimum reserve requirements are organized in such a way that tender operations overlap with the subsequent reserve maintenance period. This increases the probability of an undesirable reaction of short-term money market rates, which may go hand in hand with heightened volatility.

The measures described herein are primarily intended to counteract such

movements. As they have come into effect only recently, it is too soon to empirically analyze their full effect. It can be said, however, that the revised concept is a suitable means to further improve the already high efficiency of the operational framework for monetary policy.

In another important area – the regulatory framework for eligible underlying assets – the Eurosystem implemented measures to increase the precision and transparency of the valuation process and adopted a more extensive definition of the criteria for certain credit standards.

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