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Rabobank

Introduction

The operational framework of the Eurosystem is a relatively complex set of instruments and procedures, established by the Governing Council of the ECB and published under the “General Documentation on ESCB Monetary Policy Instruments and Procedures”. This set of instruments, as well as its interaction with the activity of banks in the money markets can be analysed from a very theoretical perspective. On the other hand, the implementation of monetary policy is also a very practical issue. It relies on actual operations between the central bank and its counterparties, and between these counterparties and other institutions.

To illustrate this essential introductory remark, I have reproduced below the “print” of the electronic conversation conducted by Eddy Okhuijsen, young cash manager of Rabobank, slightly before 6.45 a.m. on 4 January 1999:

Our terminal: RABD          Our user: Eddy Okhuijsen
O/N EUR DEP
EDDY> HIHI 3.18 + 22
HIHI THAT’S FINE CAN TAKE 1 BIL THERE
DONE THANKS FOR THE DEAL DIRECT VIA TARGET FOR ME PLSE
OK SAME FOR ME TVM CU BIBI FRNDS
BIBI FRNDS

With this transaction, from a very practical perspective, the euro was born. In a similar way, from a practical point of view, the operational framework saw the light of day on the afternoon of the same day, with the first recourse to the standing facilities of the Eurosystem. As far as Rabobank is concerned, as we didn’t access the standing facilities until 7 January, the operational framework became a tangible reality with our first bid for EUR 9.5 bn in the first main refinancing operation (MRO), on 5 January 1999, where we used, from the start, collateral on a cross-border basis (in practice Italian paper) in addition to “local” Dutch assets.

These anecdotes are noteworthy. The success (or lack thereof) of the implementation of monetary policy depends – inter alia – on the interpretation of the monetary stance of the ECB by its counterparties, which is reflected in their bidding behaviour in the Eurosystem’s tenders, or in the pattern of fulfilment of their reserves, etc.
The purpose of this paper is to provide an illustration of the practical response of bank treasurers, who are the direct counterparties of the Eurosystem in its operations, to the operational framework established by the ECB. It includes an assessment of the performance of the operational framework, from the micro-economic point of view of a “user” rather than from a macro-economic perspective. The paper does not intend to reflect the views or experience of all counterparties of the Eurosystem, of which there are almost 8,000\(^1\). It reflects the experience of one counterparty, albeit one of the largest and most active. It is also noteworthy that the paper positions itself in the “real world”, i.e. in the context of the configuration of the operational framework as it now stands. Indeed, the operational framework of the Eurosystem has been so built that the ECB can easily switch from one format of instrument to another (e.g. fixed to variable rate tender, single to multiple rate auctions, etc.), which would result in an immediate adjustment of the response of counterparties to a new environment.

The approach of the paper is essentially descriptive, and is presented as a list of answers to a number of simple and straightforward questions, organised in three sections. Section 1 addresses the question of the perceived “performance” of the framework as it currently exists: it includes a description of the perception by counterparties of the operational objectives of the ECB. Section 2 provides an example of actual bidding process in the ECB’s tenders. Section 3 discusses the ease of use of the current framework for bank treasurers, based on the experience of one particular treasurer\(^2\).

1. **What is the performance of the Eurosystem’s operational framework from the point of view of a counterparty?**

To assess the performance of the operational framework, one has to measure its results against its objectives\(^3\). The ECB has to this day not published any information as regards any operational target it may have in the conduct of its operations. Accordingly, bank treasurers have to make up their own mind as to what the operational aims of the ECB may be. For that purpose, the main source of

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\(^1\) According to the Annual Report 1999 of the ECB, at the end of 1999, around 7,900 euro area credit institutions were subject to reserve requirements. Out of these, around 4,100 had direct or indirect access to a RTGS account, and could therefore potentially participate in monetary policy operations. Around 3,800 had access to the deposit facilities and 3,200 to the marginal lending facility. Finally, some 2,500 could participate in the open market operations of the Eurosystem, and a subset of some 200 had been selected as eligible for potential fine-tuning operations.

\(^2\) Although the author has been fortunate enough to operate in the years prior to the introduction of the euro in several countries now in the euro-area, and therefore benefits from a comparatively broad experience.

\(^3\) By objective, it is not referred here to the primary objective of the Eurosystem (which can be seen as a “strategic” objective), which is naturally to achieve price stability, as enshrined in the Maastricht Treaty. Rather, what is meant here is the “intermediate” operational aims of the ECB in its operations (which can be referred to as a “tactical” objective).
information at their disposal is the “General Documentation”, sometimes referred to as the “Treasurer’s Bible”, which contains in principle all the information necessary for banks in their dealing with the Eurosystem. Other sources of information are the public statements made by the members of the decision-making bodies of the Eurosystem and, naturally, the experience drawn from sixteen months of ECB operations.

In practical terms, two practical sets of questions can be asked. Firstly, it can be assumed that the ECB has naturally as an objective to implement a single monetary policy, i.e. that it is implemented in a homogenous manner across the euro-area. The arising question is whether this has been the case. Secondly, one can try and identify possible operational targets of the ECB in its liquidity management, and assess whether these targets have been met.

1.1. Has there been a single monetary policy in the euro area?

In simple terms, there exists a single monetary policy in the euro area if liquidity is available at a single price across the euro area. This does not refer only to the price of liquidity provided by the central bank, but also to the price of redistribution of that liquidity among counterparties in the secondary market.

Has the price of central bank liquidity been homogenous across the euro area?

The price of liquidity provided by the central bank in the main refinancing operations, which have until now always been conducted in the form of fixed-rate tenders, is, by definition, identical across the euro area.\(^4\)

In the long-term refinancing operations, which represent 30% of the provision of liquidity by the Eurosystem, the ECB has adopted since March 1999 a format of so-called “American” (i.e. multiple rate) auctions. This implies that counterparties can obtain liquidity from the central bank at different prices, and therefore, by comparing the actual prices at which they obtain liquidity across the euro area, one could in theory identify any heterogeneity in the implementation of monetary policy. Unfortunately, such a breakdown is not publicly available.

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\(^4\) This is entirely true only if the cost of opportunity of using collateral in the open market operations of the central bank is the same across the euro-area. In practice, insofar as collateral can be used on a cross-border basis without limitations, the only potential difficulty from that point of view to a homogenous implementation of monetary policy is cost and easiness of access to collateral located abroad.
Has the price of redistribution of liquidity been homogenous across the euro area?

However, this information would be of little relevance, insofar as the price of liquidity in the secondary market is effectively identical across the euro area\(^5\). Therefore, the “transmission process” of monetary policy finds a homogenous base across the euro-area, in the form of a single money market yield curve. This is a sufficient indication of the “unity” of monetary policy across the euro area.

The ECB itself has repeatedly presented, as evidence of the homogenous price of liquidity, the very low dispersion of the national contributions to the calculation of the EONIA (euro overnight index average) rate\(^6\). While the breakdown of these national contributions is not public, the empirical experience of bank treasurers of large banks, who have counterparties across the euro area, including naturally a very large number of counterparties not represented in the EONIA panel, confirms these findings.

Noteworthy at this stage is the role of unified benchmarks for interest rate references across the euro area. This is important as, in practice, it has allowed, for instance, an Irish customer to negotiate the standard margins of an overnight credit facility with a Spanish bank, with a simple point of comparison with prices offered by another bank, say a German one. In practical terms, therefore, the use of common references has enhanced competition and arbitrage opportunities and contributed to the integration of the money market, which is in itself a necessary condition for the implementation of a single monetary policy. Incidentally, the role of the ECB in promoting these common benchmarks (the EONIA and the EURIBOR) has not been insignificant\(^7\).

Have the procedures of implementation of monetary policy been homogenous across the euro area?

A second aspect of the assessment of the singleness of monetary policy across the euro area is the comparison of the practical ways in which the various national central banks implement operations, and whether these are similar enough to ensure a “level playing field” for banks. Indeed, not only

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\(^5\) With due consideration to credit or size differences between banks, or any other factor that may affect the cost of liquidity in the interbank market. Only for homogenous groups of banks should the price of liquidity in the secondary market effectively be equal.

\(^6\) The EONIA is calculated using the contributions of 57 banks, originating from all countries in the euro area, as well as other EU (“pre-in”) countries and non-EU countries (the US and Japan).

\(^7\) However, the ECB is not primary responsible for establishing these references, which have been created and are managed by the European Banking Federation (EBF). The ECB only plays an active role in collecting the contributions of individual banks of the EONIA panel, as well as calculating and publishing the daily EONIA rate.
instruments, but also procedures and the practical way in which they are implemented form part of the operational framework.

The most noteworthy element from that point of view is the set of procedures for handling the collateralisation of central bank credit. These procedures vary among countries, with assets being earmarked individually in some countries, while a pool of collateral is used in others. Similarly, formal repurchase operations are conducted in some countries, while in others the assets used as collateral are pledged to the central bank. As a user of the “pooling” system, with previous experience with earmarking systems, I have to recognize the ease of use of the pool. Managing a pool of eligible collateral without any distinction as regards their purpose (Main Refinancing Operations, Long-term Refinancing Operations, intra day credit facility in TARGET or use of the Marginal Lending Facility) nor of their location (“local” NCB or cross border use via the CCBM) is a very comfortable facility, as opposed to having to identify each single line of collateral and to allocate them to every specific need. In practice, using one system or the other may represent a significant difference in terms of the human resources needed to manage it and the risk of errors. Insofar as banks cannot obtain liquidity from a NCB other than their “home” national central bank – and therefore have to use the procedures established by their particular NCB, this may represent an element of heterogeneity in the implementation of monetary policy.

Another potential source of heterogeneity of the system, equally related to the collateral issue, is the eligibility of a wide range of assets, some of them non-marketable, which may be in practice difficult to use on a cross-border basis. This may represent an advantage in favour of the banks, which hold these assets on their balance sheet, or more generally in favour of the banking sector of countries, where a large amount of such assets is available.

A practical comparison of these differences among euro area countries is not easy to conduct by one single counterparty, insofar as it deals effectively with only one national central bank. As a matter of example, it is interesting to recall that in the Netherlands, the banks and the National Central Bank (De Nederlandsche Bank) initially “failed” to obtain eligibility for the huge outstanding private mortgage loans as collateral for the Eurosystem’s operations because of their very specific legal structure. In Germany, on the contrary, and thanks to the very well developed “Pfandbriefe” model, a large share of the outstanding mortgage loans has been able to be added to the list of eligible collateral. Other examples of heterogeneity are even more striking as regards non-marketable collateral, such as bank loans, or even the existence of equity on the “tier two” lists of eligible collateral in only a few NCBs (in the Netherlands, Spain and Portugal).
Has the dialogue between the central bank and counterparties been homogenous across the euro area?

On the other hand, the decentralised framework of the Eurosystem has proved remarkably efficient in ensuring an equal “access” to central bank information for banks, independent of the country in which they operate. Indeed, it may be recalled that one of the specific features of the euro area is that it includes 11 countries, representing as many banking communities, with their histories, culture, indiosyncratic aspects, legal and regulatory environments, etc. Not least is the fact that 8 different languages across the euro area are spoken in the dealing rooms of banks, and this number will only increase with the process of enlargement of the euro area in coming years. From that point of view, a decentralised implementation of monetary policy operations also implies that each national central bank keeps domestic contacts with the home banking community, collects information in its own language, according to national customs, and then feeds back this information to a central body in a common format together with the other ten national central banks. Similarly, the national central banks can provide a common information to all banks each in their own language.

In addition, it may be noted that, from time to time, direct exchanges of information take place between the ECB and some major market participants, either by the means of ad hoc telephone conversations or in the context of the meetings of the informal ECB Money Market and Foreign Exchange Contact Groups.

In this context, the experience of 16 months of single monetary policy suggests that, contrary to what had at times been suggested before the introduction of the euro, the geographical location of the European Central bank is immaterial for its counterparties. The decentralised framework of the Eurosystem allows a homogenous exchange of information flows between the central bank and counterparties, independent of the location of each.

In conclusion, from the point of view of a bank treasurer, it can be said that there has effectively been a single monetary policy in the euro area from January 1999 onwards. However, it is also true that some minor areas of heterogeneity remain, in particular as regards the collateral aspects of the operational framework.

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8 In fact, according to the terms of the Maastricht Treaty (the ESCB shall “define and implement the monetary policy of the Community” and “the ESCB shall be composed of the ECB the (…) National Central Banks”) one may say that the “central bank” of the euro area is the Eurosystem itself, not only the ECB. Therefore, the central bank of the euro area is not situated in one location, but in eleven different locations.
1.2. What is the operational aim of the ECB? How is it implemented in practice?

As mentioned above, the ECB has never published, nor signalled informally what “intermediate” or “tactical” target, if any, it has in the conduct of its operations. However, understanding the reasoning of the central bank in its allotment decisions and the choice of the instrument it uses is a crucial concern for bank treasurers. Accordingly, treasurers have had to try and identify what could be the intermediate aims of the ECB, based on whatever information is available to them.

Each treasurer can form his own assumptions, and there is no reason to believe that all have come to a similar understanding of the ECB’s policy. The following section therefore provides one illustration of the practical reasoning of one treasurer at one particular moment in time. It may however be seen as an illustration of the simple, pragmatic manner in which the counterparties of the Eurosystem approach such an issue.

*What intermediate objective does the ECB pursue?*

The first source of such information is naturally once again the “General Documentation”, which justifies here its nickname of “Treasurer’s Bible”. It is stated inter alia in this document that the Eurosystem aims at “steering interest rates”, “stabilising money market rates” and “signalling the stance of monetary policy”. From this wording, it can be inferred that the ECB aims in the conduct of its operations to let short-term interest rates fluctuate around its main official rate, i.e. for all practical purposes the MRO rate. Furthermore, it can be inferred that the ECB aims to ensure that these fluctuations are within a relatively close range around the MRO rate, for instance in a range of ± 5 bpts around the MRO rate.

*Which interest rate (if any) does the ECB target?*

A second question is to which interest rate, or set of interest rates, would this implicit operational target apply. Once again, the answer to this question is any treasurer’s guess, but the strong public support that the ECB has provided to the creation of the EONIA as the overnight interest rate benchmark would lead treasurers to believe that this is the most closely followed interest rate by the ECB liquidity managers. Such an assumption seems reasonably consistent with the conduct of liquidity-providing operations by the ECB since the introduction of the euro. Recently, however, as expectations of a tightening of monetary policy have developed, the EONIA has diverged quite

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9 *Cf “General Documentation on ESCB Monetary Policy Instruments and Procedures”, ECB, September 1998 (chapter I: Overview of the monetary policy framework).*
significantly from the level of the MRO rate, without apparently triggering any reaction by the ECB.
This casts a shadow on the perception by the market of the operational aims of the ECB, and, by
creating an element of uncertainty, presents an additional difficulty for bank treasurers and cash
managers.

What is the time horizon of any ECB “tactical” target?

Another question as regards a possible operational aim of the ECB, expressed in terms of stability of
the overnight rate or another interest rate, would be over which period the ECB would aim to stabilise
this interest rate. For instance, it could be assumed that the ECB aims to stabilise the overnight rate
over a very short period (e.g. week by week), or alternatively that it only aims to stabilise this rate
around the level of the MRO rate on average over a maintenance period, taking into account possible
future changes in monetary policy. In practical terms, the 16 months that have elapsed since the
introduction of the euro do not yet provide a sufficient track record for treasurers to be able to assess,
with a strong degree of confidence, the operational target, if any, of the ECB. In addition, it cannot be
ruled out that the ECB has modified, or will modify in the future, its operational target (if any) so that
treasurers may have to continue to explore the wide range of possible assumptions and “test” them in
real time.

It may be recalled, however, that such “tests”, or “learning process” are not cost-free. They involve
actual operations, impacting the profit and loss accounts of the counterparty. For that reason, a
treasurer cannot be content with ex-post analyses of previous ECB decisions. He has to take also a
forward-looking approach, making the best possible use of the information available to him, and must
accept a significant degree of risk. From that perspective, it would undoubtedly make a treasurer’s life
easier if the ECB made explicit any potential operational target.
Incidentally, it can be underlined that a change from the current fixed-rate tenders (for the MRO rate) to a variable rate tender would not necessarily clarify the operational objective of the ECB. In fact, by introducing another variable element in the liquidity equation, it would make the treasurers’ life much more difficult.

2. How does a bank behave in practice in the Eurosystem’s operations?

In order to illustrate the response of bank treasurers and cash managers to the operational framework established by the ECB, a description of the “bidding process” of one counterparty in the ECB operations is provided below. It may be underlined once more that this example draws upon the experience of one counterparty, and may not adequately reflect the bidding process of all counterparties. For one thing, not all counterparties of the Eurosystem by far actually take part in open-market operations. This section is divided into: firstly, a brief description of the organisation of cash management and treasury activities at Rabobank; secondly, a description of the management of minimum reserves; then, a description of the decision-making process when bidding in, thirdly, the Long-Term Refinancing Operations (LTRTO) and, fourthly, the Main Refinancing Operations (MRO); and finally, a description of the way one deals in practice with the “overbidding”, i.e. the selection of the amount of bids, on the basis of the desired amount of central bank liquidity.

2.1. Background of Rabobank

Rabobank is a 100-year-old universal bank in the Netherlands with a strong market share in International Food and Agricultural business. It occupies a unusual situation among the credit institutions of the euro area, owing to its very high creditworthiness status (Rabobank benefits from a AAA/Aaa rating for its long-term debt and a A1+/P1 rating for short-term liabilities). Its balance sheet amounted to EUR 281 bn at the end of 1999 and its reserve requirements represent more than 2% of the total reserves requirements of all euro area credit institutions.

The treasury activities of Rabobank, like that of most of the large euro area banks previously active in several of the countries now taking part in EMU, have been reshuffled in the summer of 1998, in order to adapt to the bank’s expectations as to the structure of the euro market-to-be. The principle retained at Rabobank is that of a full integration of all short-term\(^{10}\) interest rate and financing instruments, within a global business division called STIR (Short-Term Interest Rate group). The three pillars of

\(^{10}\) Short-term is here defined as all maturities up to three years.
the STIR organisation are Liquidity Management (Money Market Trading), Collateral Management (Repo, Securities Lending and Money Market Securities) and Interest Rate Management (Money Market Derivatives, including FX Forwards). These desks are gathered in one “Centre of Competence” per currency bloc. In other words, the STIR Centre of Competence for the euro, based in Utrecht, combines expertise for euro liquidity, euro-denominated collateral and euro interest rates, and is the only interface between the bank and the market. In practice, this means that every time a trader takes a view on the market or hedges a customer transaction, he will firstly assess with his colleagues from other desks which instrument is felt to be the most appropriate, the cheapest and the most beneficial from the point of view of regulatory capital usage.

The re-organisation of Rabobank’s treasury activities is a practical example (not the sole of its kind) of the impact of increased competition and market integration brought about by the introduction of a single European currency\(^{11}\).

Another element of the re-organisation of Rabobank Treasury activities that is relevant from the point of view of its “use” of the operational framework of the Eurosystem is the choice of an internal funding and performance benchmark, in the form of the EONIA. This choice has been made possible by the depth and the liquidity of the EONIA swap and overnight money markets. This unique, widely accepted reference has made it possible to compare the relative value of any asset class and any liability class with each other. It has immediately generated tremendous arbitrage opportunities and most of all has given us the capacity to warehouse liquidity with a high quality level of collateral, without market risks, and with the added luxury of freedom in choosing the timing of our actions.

2.2. How does a treasurer manage its minimum reserve requirements?

In order to provide an illustration of the actual decision-making process of a bank treasury in operations with the Eurosystem, a practical description of the process followed by the cash manager of Rabobank, when conducting two major tasks of his activity, i.e. the management of minimum reserves and the participation in the refinancing operations (MRO and LTRO) is given below.

As regards the management of minimum reserves, the cash manager has one constraint and one objective. The constraint is to fulfill the bank’s obligations within the maintenance period. This is a binding constraint, and failure to respect it is simply not an option. The objective is to “beat the market”. The performance of the cash manager relative to this objective is defined as his ability to

\(^{11}\) As has been many times observed, this increased competition is not solely a consequence of the introduction of the euro, but it is obvious that EMU has accelerated dramatically an ongoing process.
achieve over one month a “cost” of the minimum reserves that is lower than the “theoretical” cost of these reserves. This theoretical cost is calculated as the sum of the daily average reserve requirement for the bank multiplied by each daily EONIA fixing.

To achieve his objective within the limits set by his constraint, the cash managers can benefit from two “tools”. On the one hand, the averaging facility provided by ECB, and on the other hand, his ability to read the behaviour of interbank liquidity over the maintenance period. This translates into a revisable weekly plan about what will be the bank’s end of day cash balance with its National Central Bank, i.e. in the case of Rabobank, De Nederlandsche Bank.

At any moment in time, the cash manager must be able to establish a fairly good forecast of the banking liquidity for the following days (until the settlement day of the next Main Refinancing Operation). In very practical terms, he will proceed to the following calculation, using the information provided by the ECB on the REUTERS page “ECB 40”, where the ECB provides daily information about the euro area liquidity:

<table>
<thead>
<tr>
<th>Daily information provided by the ECB on Reuters page 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:19 26APR00   EUROPEAN CENTRAL BANK, FRANKFURT a.M. GE66608 ECB40</td>
</tr>
<tr>
<td>Current account holdings of counterparties with the Eurosystem</td>
</tr>
<tr>
<td>Including holdings to fulfil reserve requirements. In million of euro.</td>
</tr>
<tr>
<td>Current account holdings (*)</td>
</tr>
<tr>
<td>Estimated reserve requirement (***)</td>
</tr>
<tr>
<td>Average current account holdings in current maintenance period (*)</td>
</tr>
<tr>
<td>Use of the standing facilities of the Eurosystem:</td>
</tr>
<tr>
<td>Use of marginal lending facility</td>
</tr>
<tr>
<td>Use of deposit facility</td>
</tr>
<tr>
<td>(*)Including minimum reserve holdings. For historical data see ECB41.</td>
</tr>
<tr>
<td>(***)Preliminary estimate of reserve requirement will be provided in due course.</td>
</tr>
</tbody>
</table>

**First calculation** (daily average current account holdings necessary until the end of the period in order to fulfil the estimated reserve requirement for the whole euro area credit institutions)

\[\text{daily average difference between realised reserves and required reserves} = \frac{\text{average current account holdings in the current maintenance period}}{\text{estimated reserve requirement}}\]
× number of days since the beginning of the period

= total amount of the difference between realised reserves and required reserves

÷ number of remaining days until the end of the period

= daily average liquidity surplus or deficit necessary until the end of the period

+ estimated reserve requirement

= daily average current account holdings necessary until the end of the period in order to
fulfill the estimated reserve requirement (noted A)

Second calculation (net euro area banking liquidity)

+ current account holdings
+ use of deposit facility
- use of marginal lending facility

= net euro area banking liquidity for the previous day (noted B)

Conclusion:
If B<A, then there is a temporary liquidity shortage until the settlement of the next MRO (to be expected to add liquidity) or until the end of the maintenance period. In both cases there will be a variable upward pressure on very short-term money market rates, depending on the size of the shortage.

If B>A, then the opposite situation prevails, with a temporary excess of liquidity, which will most likely trigger a drain at the following MRO, and anyway in the meantime some downward pressure on very short term rates.

At the margin of these basic calculations, the cash manager will have to incorporate in his reasoning process a natural tendency for a banking community constituted of a very large number of credit institutions to “burn” a small amount of reserves representing something between EUR 500 to 1,000 millions on a daily average. This represents the “excess reserves”, i.e. the sum of the reserves built by “mistake” (or by excessive precaution, or for any other purposes) by all credit institutions, and which have a negative effect on the liquidity.
On the basis of the information provided and its own estimate of required reserves, the cash manager will be able to adjust his plans accordingly, on a daily basis, and therefore try to “beat the market”, slowing down or accelerating the fulfilment of the bank’s minimum reserve obligations.

It is noteworthy that a key element of the analysis, on top and beyond of the information provided by the ECB, is the ability by the Treasurer and cash manager to estimate adequately the reserve requirements of all credit institutions subject to minimum reserves in the euro area. These “forecasts” have admittedly been rendered more difficult by the advent of the euro, insofar as it has become more difficult for each individual bank to assess adequately the fluctuations of autonomous factors of banking liquidity in the whole area, compared to the prevailing situation in each individual country before 1999. The most noteworthy of these autonomous factors are described on the ECB web page as “Treasury activities affecting liquidity in the euro area”. Among the countries where the autonomous factors are the most volatile and the most difficult to forecast accurately are France, Spain and Italy. Little information is available to help forecast these fluctuations in autonomous factors, though reasonable and useful information is published by Prometeia on its Reuters page “Promeur12”. From that point of view, the Eurosystem itself, which combines the expertise of all eleven NCBs and that of the ECB, benefits from a privileged position, and the publication of its own forecasts of autonomous factors could be welcome. On the other hand, the publication of the ECB’s forecasts would leave all banks in the same competitive position, and would therefore ultimately be neutral from the point of view of the aforementioned objective of the cash manager, i.e. to “beat” the competition.

2.3. How does a treasurer bid in practice in the Long-Term Refinancing Operations (LTRO)?

Another interesting task of Rabobank’s liquidity managers is the process related to the subscription to the ECB refinancing operations. As regards the Long Term Refinancing Operations (LTRO), according to the “General Documentation”, the ECB does not, as a rule, intend to send a signal to the market through these operations, and therefore normally acts as a rate taker. Since March 1999, the LTROs have been conducted in the form of multiple rate auctions. The main element of the decision-making process for a bank is therefore to establish at which rate the Treasury of the bank finds it worthwhile to get 3-month Central Bank money against collateral.

In this particular context, the decision-making process will be driven by term deposit traders, who will evaluate, in agreement with the repo desk and the collateral manager, what is the opportunity cost (in basis points), of the use of eligible collateral for 3 months. This process is illustrated below:
Let us assume, for the sake of the presentation, that the “worst” eligible collateral available at this moment within the Treasury of Rabobank (or rather, as detailed above, the STIR group), is worth 3 basis points. Let us equally assume that the pricing policy of the bank for 3 month liquidity is, at that very moment, 3 month EONIA swap minus 1 basis point on the bid side. Then the rate at which the bank will be willing to subscribe to the LTRO will be:

\[
\begin{align*}
3 \text{ month liquidity bid} & \quad \text{(EONIA – 1 bpt)} \\
- \text{ eligible collateral value} & \quad \text{(+ 3 bpts)} \\
\text{= } & \quad \text{LTRO price subscription} \\
& \quad \text{(EONIA – 4 bpts)}
\end{align*}
\]

Once the desirable rate at which to subscribe has been set, the amount for which to subscribe must be decided. This will be decided by the term liquidity trader, based on his needs at that particular point in time and naturally on the amount of available collateral within the bank for that purpose.

As is clear from the illustration provided here, the price and quantity of the bank’s subscription to Long-term Refinancing Operations is dependent on the bank’s liquidity pricing policy at the time when the bids are collected.

2.4. How does a treasurer bid in practice in the Main Refinancing Operations (MRO)?

As regards the Main Refinancing Operation (MRO) the main objective of the treasurer is slightly different, at least under the current environment, whereby the MRO is conducted under a fixed rate format\textsuperscript{12}. In that case, the cash manager does not have to decide on the rate at which he finds desirable to obtain Central Bank money in return for collateral, but rather on how much 2-week Central bank money he is willing to purchase at the pre-announced fixed rate.

The first step of this assessment, in a way similar to that detailed above in the case of the LTRO, involves the repo desk and the collateral manager. This is the estimation of the total amount of collateral available within the group (i.e. STIR) for the two-week period of the operation, as well as the evaluation of the opportunity cost of using this collateral in a main refinancing operation at the given price. In this particular case, and in the current context of “overbidding”, the Treasury will also establish the amount of a second envelope of collateral that can be reached easily in case of necessity

\textsuperscript{12} It is naturally understood that the ECB may, at any time, change the format of its tenders, as foreseen in the General Documentation.
For the purpose of the presentation, let us assume that the following breakdown:

\[
\begin{align*}
\text{1st envelope of eligible collateral} & \quad \text{EUR 10 bn} \\
+ \quad \text{2nd envelope of eligible collateral} & \quad \text{EUR 5 bn} \\
= \quad \text{Total eligible collateral} & \quad \text{EUR 15 bn}
\end{align*}
\]

The second step of the decision-making process is the “value” of the Central Bank money. Let us, for the sake of the argument, assume the following:

\[
\begin{align*}
\text{- Average value of available collateral}^{14} & \quad 5 \text{ bpts} \\
+ \quad \text{2 weeks EONIA swap price} & \quad 3.70\% \\
- \quad \text{MRO Fixed rate} & \quad 3.50\%
\end{align*}
\]

\[
\begin{align*}
= \quad \text{Value of 2 weeks Central Bank money} & \quad + 15 \text{ bpts}
\end{align*}
\]

Under these assumptions, the bank would be able to hedge the liability it established by subscribing to the MRO with a margin of 15 basis points. The desirability of subscribing to the ECB tender is obvious, and the next step becomes simply to decide the amount of bids that should be submitted.

Before addressing this point, it is worth underlining the obvious, i.e. that the key market rate that determined the desirability of subscribing to the MRO is the 2-week EONIA swap rate. In other terms, the exact level of the EONIA (overnight) rate itself at the time of the submission of bids is not crucial for the bidding behaviour of banks (this to clarify the role of the EONIA in the bidding behaviour, notwithstanding the mention in the first section of this paper of the fact that the ECB may be attempting, through its liquidity management, to stabilise the EONIA rate in a relatively narrow corridor around the MRO rate).

\[13\] The specific aspects of the bidding process linked to the phenomenon known as “overbidding” are addressed in the next sub-section.

\[14\] Given the broad range of assets eligible as collateral for the Eurosystem’s operations, the cost of opportunity of using these assets in open market operations is naturally not homogenous. The calculation provided above is, for the sake of clarity, based on an “average” cost of collateral, but in practice a distinction must be made between various types of eligible assets, which affects the “choice” of the collateral that will be “provided” in priority to the central bank (this point will be addressed further below).
2.5. How does a treasurer deal in practice with the “overbidding”? 

In the current configuration of the operational framework, the ECB does not only control the price of central bank money it provides through the MRO, but equally the amount of liquidity it provides. In practical terms, not all the bids of counterparties are necessarily fulfilled. The ECB does not announce prior to a tender how much liquidity it will provide through the operation, nor which proportion of the bids it intends to fulfill.

In such a context, another “adjustment” variable of the liquidity equation for a treasurer has to exist. Being neither the price nor the quantity of overall supply of central bank money, this adjustment variable de facto becomes the bidding behaviour. In practice, this means that, under the assumption used above for the sake of illustration, a bank should attempt to obtain as much “valuable” central bank money as possible, under the constraint that it can deliver the amount of collateral sufficient to cover this amount. In other circumstances, on the other hand, counterparties may refrain from taking part in the main refinancing operations, if central bank money is perceived to be unnecessarily costly.

Against such a background, the decision-process as regards the amount of bids that should be submitted contains a certain degree of risk-taking that the market, with the silent (and possibly inevitable) agreement of the ECB, has developed. This is what is well known as the overbidding behaviour.

In simple terms, let us assume that a counterparty expects the ECB to provide an amount X of liquidity, and that this particular counterparty is willing to purchase an amount Y of central bank money. Then the ratio of the amount of bids placed by this counterparty to the total amount of bids placed by all counterparties should be as close as possible to Y/X. The amount of bids submitted by one counterparty is therefore extremely dependent on the amount of bids it expects other counterparties to place. This has given ground to a particularly unstable process, whereby expectations of escalating bids\textsuperscript{15} have led to a self-fulfilling inflation of bids, to the extent that the actual amount of bids placed by counterparties now exceeds by 50 to 100 times the actual amount of liquidity allotted (and expected to be allotted) by the ECB.

In practical terms, the main risk linked to the overbidding pattern for an individual counterparty is that of non-delivery of collateral, in the event that the allotment of that counterparty happens to exceed

\textsuperscript{15} Admittedly partly linked to the desire of counterparties to obtain “cheap” liquidity in the context of expectations of rising rates, but the overbidding process seems to have started already in early 1999, when there were no expectations of rising rates.
significantly its expectations (e.g. if this counterparty has over-estimated the bids placed by its competitors). In this context, it may be underlined that the ECB does not require a counterparty to hold enough collateral to cover all its bids, but only its successful bids, so that there is in theory no limits to the potential amount of overbidding. In fact, with bids totalling EUR 4,277 bn at the MRO of 18 April 2000 and EUR 5,492 bn at the MRO of 26 April, the amount of bids probably already exceeded significantly the amount of eligible assets actually held by – or easily accessible to – counterparties. According to the 1999 Annual Report of the ECB, the total amount of eligible collateral in the euro area amounted to EUR 5,700 bn at end-1999. It may also be underlined that the procedure of the Main Refinancing Operations (announcement of the results of the tender before noon on the trade day and settlement on T+1) provides in principle ample time for counterparties to acquire the necessary amount of collateral, should their successful bids exceed their envelope of collateral.

Ultimately, however, it is the responsibility of each treasurer to establish the level of risk acceptable to his bank. One relevant element in that decision is the “reputation” of the bank. A bank particularly willing to protect its reputation vis-à-vis the central bank and the market place will be less willing to run the risk of excessive bidding. Another element, for banks less concerned about their reputation, may be the bank’s perception as regards its ability to acquire additional collateral in a timely fashion if required. As far as Rabobank is concerned, the latter being no cause for worry, it is the former that exerts a restraint on overbidding. Bearing in mind the responsibility of protecting the reputation and the rating of the bank, the authorised leverage ratio (overbidding ratio) is relatively low. I will call this leverage ratio the Rabo “Cap”.

Against this background, the decision as regards the amount of bids to be submitted will be taken as the result of a simple calculation, illustrated below, where the “Cap” plays a major role:

| Cash manager appetite for 2 weeks CB money | EUR 3 bn |
| Total available collateral | EUR 15 bn |
| Recent MRO allotment ratio | 3% |
| “Absurd yet optimal” subscription | Eur 3 bn / 3% = EUR 100 bn |
| “Absurd yet optimal” leverage of collateral | Eur 100 bn / Eur 15 bn = 6.67 |

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16 Incidentally, this can be put in parallel with the reported reluctance of US banks to access the Discount Window of the Federal Reserve System - even at the cost of more expensive alternatives – owing to the perceived “cost” in terms of reputation to do so.

17 This amount of bids is absurd insofar as it has hardly any relation with the amount of liquidity desired or of collateral held, yet it is optimal if it allows ultimately to obtain the desired amount of central bank money.
It is noteworthy in the illustration above that it is – for lack of better information – assumed that the allotment ratio of the forthcoming MRO will be broadly equal to that of the maturing MRO\(^\text{18}\).

At this stage intervenes the Rabo Cap, i.e. the maximum ratio of available collateral to bids that is tolerated. For the sake of the argument, this cap is assumed to be equal to 3:

<table>
<thead>
<tr>
<th>Description</th>
<th>Calculation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reasonable subscription</td>
<td>EUR 15 bn (\times) 3 = EUR 45 bn</td>
<td></td>
</tr>
<tr>
<td>Expected allotment ratio (unchanged)</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Expected successful bids</td>
<td>EUR 45 bn (\times) 3% = EUR 1.35 bn</td>
<td></td>
</tr>
<tr>
<td>Highly improbable allotment ratio (on the high side)</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Highly improbable successful bids</td>
<td>EUR 45 bn (\times) 20% = EUR 9 bn</td>
<td></td>
</tr>
</tbody>
</table>

In conclusion, in this range of allotment ratio between 3% and 20% (recent level and highly improbable) the bank is still able to deliver the required level of eligible collateral without having to borrow from the second envelope of collateral, least of all from other lenders. It may be underlined that if the process detailed above was applied homogenously by all counterparties, the overbidding phenomenon would probably be more subdued than it is. However, in the context of the assumptions proposed above, banks are in principle encouraged to “arbitrage” the difference in price between the Main Refinancing Operations and that of interbank repo transactions. Overbidding is mainly the result of the ability for the market to arbitrage between the 2 weeks money market rate and the MRO rate in a fixed rate environment (illustrated in the chart below). As long as some banks have a relatively low aversion for risk and are willing to place bids that have no relation to the amount of collateral that they effectively hold, there is no obvious limit to the overbidding. Incidentally, even risk-averse banks keen on protecting their reputation, such as Rabobank, cannot reasonably pursue a 100% safe approach based on a subscription for the amount of collateral effectively available. Such a strategy would have an excessive cost of opportunity, equal to the value of central bank money (in the example above, 15 bpts) times the difference between the desired amount of central bank money (in the example above, EUR 3bn) and the allotted amount of central bank money (in the example above 3% of EUR 15bn of available collateral equals EUR 0.45bn).

\(^{18}\) The maturing MRO is more relevant than the last (overlapping) MRO, as since April 1999, there has appeared a dual pattern, where the size of the two “overlapping” series of MRO have had different size and different allotment ratios, although they have shared a similar trend.
The consequence of this last remark is that, to a certain extent, the existence of the overbidding pattern favours banks which are willing to take a higher degree of risk. Since the lower the allotment ratio, the more volatile it is likely to become, the spiralling overbidding may create a distortion of competition in favour of less prudent banks, which may raise a problem of “credibility” of the ECB operations policy.

Although the instability of the allotment ratio is in itself a consequence of the fact that the ECB controls both the price and quantity of the liquidity it provides, leaving only the bidding behaviour as an adjustment variable, overbidding is not unavoidable. Without resorting to administrative solutions (e.g. the requirement that bids are entirely covered by available collateral, or maximum authorised subscription per participant), more “macro-economic” solutions could be envisaged. A switch to a variable MRO rate environment is a simple solution but, as mentioned earlier, would make banks’ treasurers lives much more difficult and therefore is not an optimal solution. A better interest rate steering policy by the ECB (by the means of clear short term interest rate target and/or sudden and efficient fine tuning operations) would probably give much better results and would stick to the principles of free competition and efficient allocation of resources.

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19 All of these administrative solutions have numerous drawbacks, and in addition it may be questioned whether attempts at eradicating the last degree of freedom in the refinancing operations (i.e. bidding behaviour) is not counterproductive and contrary to the principle of market-orientation of the Eurosystm, insofar as it would hinder arbitrage between the value of central bank money and interbank repo transactions.
2.6. How efficient has been the ECB liquidity management since the introduction of the euro?

Notwithstanding the various remarks made throughout the paper, the practical assessment of the liquidity management of the ECB by a Treasurer is unequivocally good. The management of the liquidity situation of the euro area is one area where the Eurosystem has shown among the best absolute results so far, and this from the very start of Stage Three of EMU. Yet, this has been quite poorly publicised and communicated to the public, possibly owing to the perceived “technical” nature of the task. Looking at the chart below, it is clear that the ECB has had a very small margin of error throughout the first sixteen months since the introduction of the euro.

If the responsibility for “excess reserves” can only be attributed to the credit institutions themselves (an amount of 0.65% of total minimum reserves only for a community of some eight thousand institutions), the net use of standing facilities, on the other hand, can be understood as having been forced by the margins of error of the ECB.

In other words, if the Euro banking community would not have used these facilities, the system would have shown a temporary excess/deficit of liquidity (which is not possible as a whole) reflected in the chart shown above below as “Daily average margin of error” in each maintenance period. Although the ECB does make “errors”, which generate friction costs between the Eurosystem and the banking system, it is important to bear in mind the proportions: these errors represent on average 0.85% of the total reserves requirements and 0.20% of the total base money. These figures can be considered as remarkably successful for liquidity management in the first sixteen months of operations of a new framework in the equally “new” environment of the euro area.
3. The operational framework: supporting environment or challenge for a bank?

The situation of euro area banks is particular insofar as it includes a large number of banks, which have experimented different monetary policy frameworks over the years (if only between Stage Two and Stage Three). This makes it comparatively easier for euro area banks to assess the operational framework of the Eurosystem with different points of comparison, from the point of view of its “user friendliness”. Once again, the breadth of experience of euro area banks and treasurers vary significantly, so that the assessment made below, based on the experience of one treasurer, may not find a homogenous echo among the other 7,900 counterparties of the Eurosystem. Three points are highlighted, i.e. the set of instruments selected by the Eurosystem, the definition of the maintenance period and some of the aspects related to collateral.

3.1. Is the set of instruments used by the ECB user-friendly for euro area banks?

A first remark is that the set of instruments available to the ECB, as listed in the General Documentation, includes to a very large extent instruments that were used prior to EMU by euro area National Central Banks, so that it has been comparatively easy for counterparties to adapt to the use of these instruments in Stage Three. In practice, the combination of the MROs and standing facilities have proved extremely user friendly (barring the overbidding issue mentioned earlier), while the use of the LTRO, which is perceived as less crucial (not to say superfluous) has provided an additional degree of liquidity, at least for some counterparties.

Main Refinancing Operations

The overlapping model retained by the Eurosystem is of tenders conducted weekly, with a maturity of two weeks. This has proved very useful from a liquidity management perspective, insofar as it allows the ECB to steer interest rates for a period of time that is not too short (by contrast to daily operations, or even operations several times a day). Yet, at the same time, the ECB is able to adjust the banking liquidity around four times per maintenance period. This is considered sufficient from the point of view of a bank treasurer, based on the experience of the past sixteen months as well as “pre-EMU” experience in a number of European countries.

Long Term Refinancing Operations

As described earlier in this document, the use of the LTRO is relatively straightforward from a user’s point of view. The role and desirability of this instrument, however, may be discussed. Theoretically
the LTRO could be a very useful instrument to steer the price of liquidity against collateral for the 3-month term, using for example the 3-month Eonia swap rate by comparison. However, the ECB acts normally as a rate taker in LTROs, as is clear from the format it is currently using (fixed amount and American auction system). So far the outcome of that particular operation has shown an average price of the liquidity against collateral at EONIA flat, which means at the expected future mid unsecured overnight average rate. This shows that participants to that tender do not value collateral as worth anything compared to unsecured money. This would tend to suggest that only lower credit rated institutions or very small ones (the ones which do not have access to the so called wholesale term money markets) are participating in the LTRO and are happy to get term money at what they think is a good rate. Alternatively, banks may be taking advantage of the LTRO to “use” collateral that would otherwise be worthless (e.g. non-marketable Tier two collateral), which is beneficial from the point of view of the use of interbank credit lines and generally cost-free for any other practical purpose. For these institutions the LTRO has certainly been a good improvement of their liquidity ratio, as they were previously accustomed to fund these assets on a shorter basis (at least for banks which did not have a similar instrument at their disposal before Stage Three). For larger and more creditworthy banks, however, the usefulness of the LTRO is more disputable. Insofar as the ECB does not intend to use the LTRO to convey monetary policy signal, the LTRO is in fact of no great relevance for such large players in the euro area money market.

Standing Facilities

Standing facilities are a rather “traditional” component of continental European operational frameworks, and have proven so far very easy to use. Among the few comments that may be made here, one concerns the width of the corridor between the two standing facilities. This is maybe a little bit narrow, if one considers rumours that some participants could manipulate the apparent liquidity situation of the Eurosystem for one day by using standing facilities to change the net situation vis-à-vis the minimum reserves at a low cost. The cost of such “manipulation” is around 1% in current conditions, i.e. the average spread between the EONIA rate and the rate of the Deposit Facility or Marginal Lending Facility. A solution to defuse that “risk” could be to widen the band around the MRO rate, but then this would possibly increase the fluctuations of the overnight rate which, might be contrary to the perceived “tactical” target of the ECB, as presented in section 1.
3.2. Is the configuration of the reserve requirements / maintenance period user-friendly?

Is the current calendar of maintenance periods convenient?

The current configuration of the operational framework of the Eurosystem is one where maintenance periods run from the 24th day of a calendar month to the 23rd of the next month (inclusive). This calendar does not fully “match” that of refinancing operations, as MROs are not based on calendar months but are conducted on a weekly basis. This “mismatch” is no source of concern for users, as long as the calendar is well established and known in advance (as is clearly the case).

Naturally, if the end of maintenance period is a weekend day, the cost of a wrong forecast is more expensive, as access to the standing facilities applies to two days or more, rather than for one day (with the exception of Finland where a slightly more tailor-made process was available before Stage Three and is still applicable). A possible alternative would be to change the calendar of maintenance periods so that they always end on a weekday, which implies that they include a varying number of days each month. This would reduce the impact of wrong forecasts. The advantages of such a shift, however, are not clear-cut from the point of view of users. For one thing, a maintenance period that ends during a weekend creates a level of uncertainty and potential volatility that opens profit and loss opportunities for bank cash managers. Without such opportunities, the incentive to conduct active money market trading would be somewhat reduced. In addition, this uncertainty forces the market to be as accurate as possible and to correct efficiently any past mistakes, whether early or late constitution of the minimum reserves over the period. From the point of view of users, and possibly therefore from the point of view of the ECB as well, removing the current “imperfections” of the system is not necessarily unequivocally positive.

As far as the coincidence of the maturity of the MRO and the end of maintenance period is concerned, it seems undesirable to have them both on the same day, because of possible intraday liquidity swings which would not be desirable on a last day of maintenance period. Of course if the last day of the maintenance period was always, for example, the Thursday of the 3rd week of the month, then it would probably give more “readability” to the market. Indeed, it appears that the further the date of the end of the maintenance period is from the last MRO settlement date, the more volatile the overnight rate becomes.

Is the current environment for the minimum reserve system user-friendly?

A first statement is that the averaging facility offered by the Eurosystem is very easy to use and very welcome by users. The depth of the overnight liquidity market is huge (between 50 and 75 % of the
total reserve requirement, just taking into account the EONIA panel banks) and the calculation methodology could not be simpler. This is a particularly positive element of the operational framework.

As far as the ability of the banks to “arbitrage” the constitution of minimum reserves throughout the maintenance period is concerned, it is very difficult to assess the response of the entire banking community. The only information publicly available is the net situation of the overall euro area at the end of a particular day, and therefore one cannot judge what each individual bank has been doing. It is clear however that if some banks are better than others in the management of their reserves, it is at the expense of the others, the entire process being a zero sum game. Only the ECB is able to adjust the overall liquidity of the system (besides the use of marginal facilities). The experience of Rabobank is that we have been able to beat the market on a regular basis (more than 75% of the times) by front or back loading according to our liquidity forecast and as described earlier in the paper. Without attempting to draw hasty conclusions from this performance, this would appear to validate both the assessment of the ECB “objectives” as suggested earlier, and the approach proposed for adjusting the bank’s own treasury position.

This leads to the assessment of the ECB stance, with respect to the constitution of reserves by counterparties. Our strong belief here is that ECB has a neutral approach towards reserve constitution over the period. In other words, the ECB, when adjusting the banking liquidity via the MRO allotment, will make the calculation of the amount, which is necessary to drain or add in order to achieve an average amount of current account holdings equal to reserve requirement by the end of the maintenance period including all visible and invisible (to the market) autonomous factors influencing the banking liquidity before the previous MRO maturity date.

According to that approach, it is perceived that the ECB would act as such:

• On the Tuesday of the MRO announcement, the ECB will assess the following items:
  1. Average backlog or advance of the euro area banking community since the beginning of the period divided by remaining number of days of the period.
  2. Changes in LTRO amount, if any, intervening before the previous (overlapping) MRO maturity date.
  3. Autonomous Factors intervening before the previous MRO maturity date.

• Then the ECB will drain or add the according amount of liquidity, thereby adjusting the liquidity situation “at best” until the next MRO, at which point ECB will fine-tune again the liquidity
situation via the same process, and so on until the last MRO of the maintenance period (having its settlement date within the maintenance period).

Based on this approach, it has proved, as stated above, relatively comfortable to adjust one bank’s own liquidity position throughout the maintenance period, which leads to the assessment that this section of the operational framework has proved in practice to be reasonably user-friendly.

3.3. Has the collateral framework proved user-friendly?

As mentioned above, the ECB accepts in its operations a broad range of collateral, with very different characteristics, as well as different management procedures and, in addition, different risk control measures (which is a natural consequence of the heterogeneity of the list of eligible assets).

From a user’s perspective, beyond the questions of management procedures addressed earlier, the main difference between varying types of collateral is whether they can be used in the interbank repo market or not. For the second type of assets (typically the so-called non-marketable Tier two assets\(^{20}\)), the cost of opportunity of using them in the Eurosystem’s operations is nil if the bank holds them beforehand, and very low (estimated between one and three basis points) if the bank has to purchase it (if feasible) from customers. By contrast, for assets that can be used in the interbank repo market, the cost of opportunity may be high, and such collateral is never used in refinancing operations as a “bargain” price. While overall the collateral framework has proved reasonably user-friendly, its partial heterogeneity may be underlined once again.

An additional noteworthy remark as regards the collateral framework is that an important element that has made it more user friendly is the ability to use collateral cross-border through the Correspondent Central Banking Model (CCBM) managed by the Eurosystem. Unfortunately, the CCBM was intended to be a temporary solution, expected to be replaced by efficient and integrated SSSs, which is still not the case. This raises questions as to whether the CCBM will take de facto a permanent status, or whether other viable solutions can be found in the foreseeable future.

\(^{20}\) For a description of the nomenclature of eligible assets for the Eurosystem’s operations, see the “General Documentation”.

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Conclusion

As a conclusion, the following points may be made:

• Firstly, from the point of view of a user, the performance of the ECB and the whole Eurosystem in operating a new framework with a very large number of counterparties from inception has been remarkably efficient. It has effectively allowed the practical implementation of a single monetary policy, a successful management of the liquidity management of the Eurosystem, and overall a reasonably satisfactory stability of very short-term interest rates. These results should be applauded and possibly better communicated to the public.

• Secondly, the operational framework has proved reasonably user-friendly over the past 16 months since the introduction of the euro, as illustrated in this paper. An important and particularly welcome element is the strong market-orientation of the operational framework.

• Thirdly, naturally, imperfections exist and the ECB may want to correct them in the foreseeable future. For instance, the overbidding issue may need to be addressed, and the ECB may decide to adopt a more transparent stance as regards its “intermediate” target (e.g. which interest rate, if any, it tries to stabilise, and over which period). In addition, the collateral framework definitely may need to be further harmonised in the foreseeable future.

• A fourth and important conclusion, however, is that, while the operational framework is not “perfect”, it cannot, and possibly should not be. A certain degree of volatility and uncertainty is not necessarily detrimental to the implementation of monetary policy. As mentioned above, this creates profit and loss opportunities for banks, which may benefit the largest banks, which have a better access to market information than their smaller competitors. This may be useful in the particular context of the Eurosystem, where all banks have, in principle, an equal access to central bank money. By comparison, in the US or Japan, the central bank deals with a limited set of counterparties, which in return have a responsibility in the functioning of the money market (market-making function). In the euro area, the large banks that assure the liquidity of the market do not benefit from a “privilege” from the central bank. Paradoxically, a certain degree of volatility and risk in the market, by opening arbitrage and profit and loss opportunities, offers these banks an opportunity to extract a benefit for the service they provide in ensuring the equal redistribution of liquidity across the euro area. As far as the ECB pursues its target of giving fair and equal access to all its counterparties, it cannot – and should not - prevent a differentiation between counterparties as regards the treatment of liquidity in the secondary market, which is the result of a confrontation between banks of different size, creditworthiness, expertise, etc., all of which compete with each other.
From that point of view, some of the minor imperfections of the operational framework of the Eurosystem may be even viewed positively. This contributes to the very positive final assessment of the performance of the Eurosystem, from the practical and pragmatic point of view of one of its “users”.