

ECB MONEY MARKET CONTACT GROUP

BANKS' ORGANISATION OF MONEY MARKET ACTIVITIES RESULTS OF A SURVEY AMONG THE MEMBERS OF THE MMCG

Introduction

This paper summarises the results of a survey conducted between 2005 and 2006 among the member banks of the ECB Money Market Contact Group (MMCG).

The main purpose of the analysis was to investigate the organisational structure of the money market area in participating banks, with a focus in particular:

- on the area in charge of the participation in the periodical refinancing tenders of the Eurosystem and
- on repo and collateral activities.

A second line of investigation aimed at understanding which specific market instruments and parameters banks use when they decide whether and at what level to bid for liquidity in the weekly tender.

The last step was to try to combine the results of these two lines of investigation, to see whether the internal organisation might eventually influence the bidding behaviour in the tender operations.

Structure of the survey

The panel included all banks in the MMCG. The total number of respondents was 23, though due to the usual rotation in the group, a part of the survey was answered only by 22 banks.

All the participants replied to a questionnaire and most of them also delivered a brief presentation of their internal organisation in the course of the periodical meetings of the MMCG. As it was agreed not to publicly disclose any individual data only some general references to the presentations are made in this document.

The questionnaire (see the full version in the Appendix) asked the respondents:

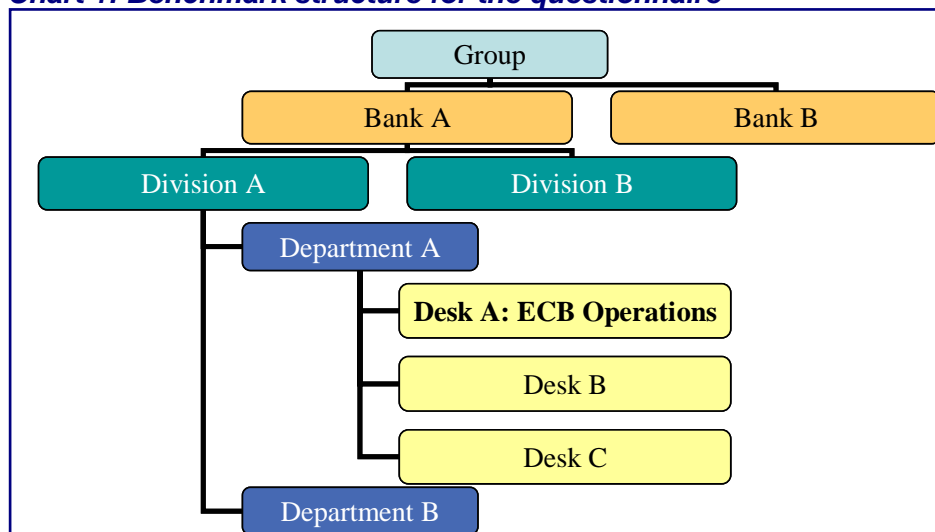
- to identify the relative position of relevant desks and activities in the organisation chart;
- to clarify through additional replies some important points about the structure and the reporting lines;
- to rank six money market instruments according to their perceived relevance as a reference for the decision to participate in the weekly tender;
- to clarify some issues on the collateral management activity. This latter point was further investigated in a second round of consultations, as some doubts had emerged in the MMCG discussion of the preliminary results.

The questionnaire

For the analysis it was important to find a way to standardise information about the organisational structures in order to make the aggregation of the replies possible. This task was complicated by the fact that it soon became obvious that the individual structures were very different.

To solve this problem the standard structure of Chart 1 was proposed.

Chart 1: Benchmark structure for the questionnaire



Since a pivot point had to be fixed, the questionnaire was centred on the desk which in each bank is in charge of Eurosystem operations, regardless of its position in the organisation (Desk A in the model of Chart 1 and, from now on, the “tender desk”).

Having in mind the benchmark structure of Chart 1, banks were asked to rank with a number from 0 to 4 a list of desks and/or activities on the basis of their distance in the organisation chart from the tender desk. The ranking had to be attributed and interpreted as follows:

- 0= same group
- 1= same bank
- 2= same bank, same division
- 3= same bank, same division, same department
- 4= same bank, same division, same department, same desk

The activities and the desks considered relevant for the analysis are detailed in Table 1.

Table 1: Activities and desks mapped by the analysis

Intraday cash management
Collateral management
Money market deposits
CPs/CDs as a funding source
CPs/CDs as an investment product
Money market derivatives as market makers
Money market derivatives as internal/external price takers only
Repo as market makers
Repo as internal/external price takers only
Eligible bonds portfolio (if a dedicated portfolio exists)
Proprietary bond portfolio
FX spot as market makers
FX spot as internal/external price takers only
FX forward as market makers
FX forward as internal/external price takers only

Furthermore, six money market instruments and parameters (see Table 2 below) were proposed to the respondents, who were asked to rank them on a scale from 1 to 6 on the basis of their importance on the decision of tender participation (1=very relevant, 6=hardly relevant).

All the instruments in Table 2 are cash based, with the exception of Euro Overnight Indexed Average (EONIA) swaps. They were included because a common way of funding consists in rolling daily overnight deposits, which are hedged by paying the fixed rate on a one week EONIA swap.

Table 2: Ranking of market instruments and parameters

1 week repo	1-6
1 week EONIA swap	1-6
1 week expected daily overnight deposit average	1-6
1 week FX swap	1-6
1 week cash deposit	1-6
1 week Euro CP	1-6

Main results of the analysis

The first aggregated result that could be derived from the data was, for each desk/activity, an index of “organisational proximity” to the tender desk¹.

The index allowed to rank the nine desks/activities (price making and price taking were jointly considered to simplify the reading of the results) by their closeness to the tender desk, as shown in Table 3.

Table 3: Ranking of desks/activities by proximity to the tender desk

1	Money market deposits desk
2	CPs/CDs desk
2	MM derivatives desk
4	Intraday cash management desk
4	Repo desk
4	FX forward desk
7	Collateral management
8	FX spot desk
9	Proprietary bond portfolio

The desks/activities appear in the table above in order of decreasing reported “organisational proximity” to the tender desk. At first sight it is not surprising to see the money market deposit desk in the first position. But some other relative positions in the rank seem fairly interesting and are worth mentioning.

Firstly, the repo desk appears in the fourth position. If this looks strange, considering that the tender itself is a repo transaction, it has to be remembered that in most banks the repo desk was historically part of the fixed income desk. Only recently a migration of the repo desks towards the treasury area has been observed, driven, among the other reasons, by the growing role of the secured liquidity market². As a recognition of its current role, it is worth noting that the repo desk shares the fourth position with one of the most traditional treasury activities, namely the FX forwards. It is also worth mentioning that during the survey, which was modularly conducted during more than a year, the repo desk increased its “proximity” to the tender desk, as the number of reporting banks grew. Even if this movement might be mainly explained by the random time distribution of the surveys, it has to be

¹ Methodologically desks/activities were grouped in two main groups: those ranked from 0 to 2 (same group and/or same bank and/or same division) were considered “far”, those ranked from 3 to 4 (same department and/or same desk) were considered “close”. Then the sum of desks/activities considered “close” was considered for the final index. To further graduate the results, in those cases where market making and price taking activities resulted to be in two different groups, a “close” rank was considered prevailing when market making was in the “close” group, or when price taking was not only in the “close” group, but also in the same desk (rank 4).

² Useful data on the increasing volumes of secured market can be found in the ECB Money Market Survey, available on <http://www.ecb.int/pub/pdf/other/euromoneymarketsurvey200601en.pdf>.

noted that some banks indicated that they had recently decided to consolidate the repo desk in the treasury function.

Secondly, the surprisingly low ranking of the broadly defined “collateral management” activity, only seventh in the scale. Indeed, notwithstanding its important role for the access by the banks to the refinancing facilities of the Eurosystem, collateral management in most structures was reported as being “organisationally far”, or at least less close than other activities, to the tender desk.

It was therefore decided to conduct a supplementary analysis on “collateral management”, aimed at dividing this function into several related activities and trying to understand the reason for its low ranking. It has to be recalled that, as also evident from the presentations delivered by the MMCG members, banks can substantially differ on the organisation of collateral management activities. The additional questionnaire (see page 3 of the questionnaire in the Appendix) identified the following activities:

- administrative work (margins and mark-to-market calculations, collateral transfer instructions,...);
- collateral pool;
- trading portfolio held also as collateral;
- investment portfolio held also as collateral

The new findings showed that the relatively low ranking of “collateral management” is explained by the “organisational distance” from the tender desk of some of its components. In detail, as shown in Table 4, on the one hand collateral management understood as “administrative work” was reported as being “close” to the tender desk only in 31% of the banks. On the other hand, however, collateral management understood as management of the portfolio dedicated to collateral purposes or of the trading portfolio used also for collateral purposes was reported as being “close” to the tender desk in 70% of the cases. The management of the investment portfolio used also for collateral purposes ranked mid way (“close” in 52% of the cases)³.

Table 4: For each “collateral management” activity, percentage of banks that reported it as organisationally close to the tender desk

Administrative work	31%
Portfolio dedicated to collateral requirements	70%
Main trading portfolio, used also for collateral requirements	71%
Main investment portfolio, used also for collateral requirements	52%

The low ranking of collateral management activities is also explained by the different degree of centralisation of collateral activities. As shown in Table 5, 33% of the panel banks of the additional survey (21 in total) reported the centralisation of all the collateral related activities mentioned before, while

³ Methodologically, as before, rankings from 0 to 2 (same group and/or same bank and/or same division) were considered “far”, whereas rankings from 3 to 4 (same department and/or same desk) were considered “close”.

24% reported the centralisation of all activities excluding the administrative work and 19% reported a complete separation of all these activities. It is again worth mentioning that during the period of the survey one bank declared that it had recently centralised most collateral management activities (pool of collateral and administrative work) in the treasury and another bank reported that it was explicitly considering doing this in the near future.

Table 5: Percentage of banks with centralised collateral management activities

All activities centralised	33%
All activities centralised, excluded administrative work	24%
All activities centralised, excluded investment portfolio	19%
All activities centralised, excluded trading portfolio	5%
All activities decentralised	19%

As mentioned before, the second focus of the questionnaire was the relative ranking of six money market instruments according to their perceived relevance as a reference for the decision to participate in the weekly ECB tender⁴.

In Table 6 the average reported ranking and the standard deviation are shown for each instrument.

Table 6: Ranking of instruments/parameters. Average and standard deviation

Instrument	Average	Standard deviation
1 week EONIA swap	2.74	1.5
1 week repo	2.87	1.5
1 week expected daily overnight deposit average	3.04	1.8
1 week cash deposit	3.22	1.5
1 week FX swap	3.96	1.6
1 week Euro CP	4.83	1.6

⁴ It has to be considered that each bank, when deciding the participation in the tender versus the recourse to the interbank market (alternative from its point of view), maximises its individual utility function, which can differ from the utility function of the banking system as a whole, as underbidding episodes in the past clearly showed. The fact that the tender participation is a "repeated game" might influence the convergence of the micro utility functions to the aggregated one, and help reach consistent dynamic equilibria.

The findings were not unambiguous as individual respondents ranked quite differently the parameters/instruments considered in the analysis and no clear consensus emerged.

This conclusion can be inferred both from the absolute level of the average ranking for each instrument and from the standard deviation of the ranking, which is fairly high compared to the scale of the average. To add graphic evidence to this result, rankings are plotted in Charts 2 and 3 below, which refer each to one set of three instruments considered in the survey. The lines represent the average ranking for each instrument.

Chart 2: Ranking of instrument (EONIA swap, repo, 1 week expected overnight)

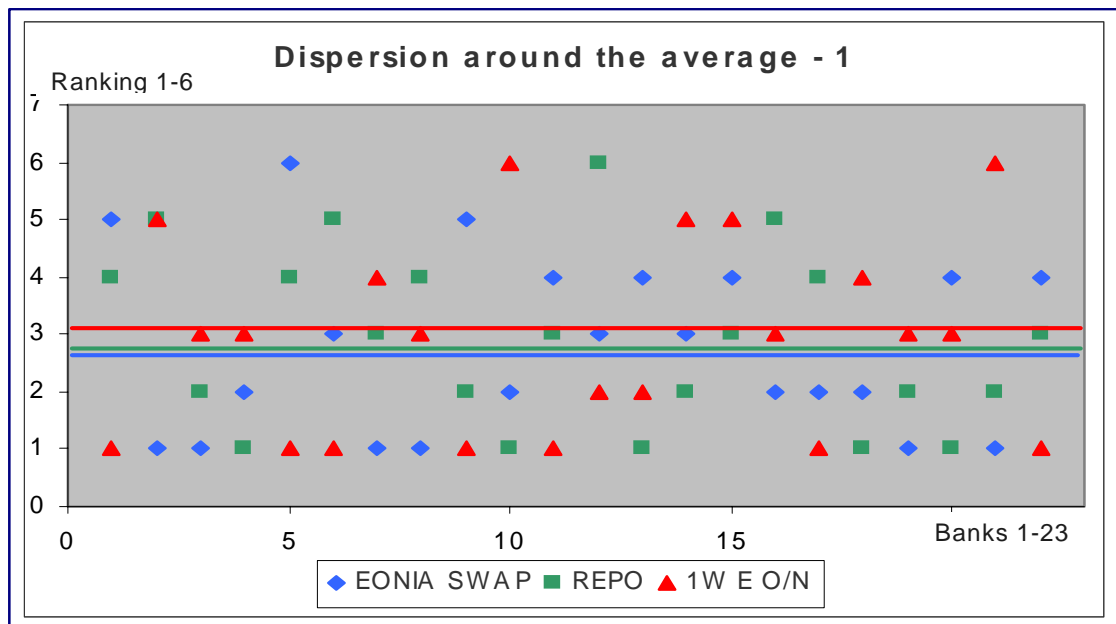
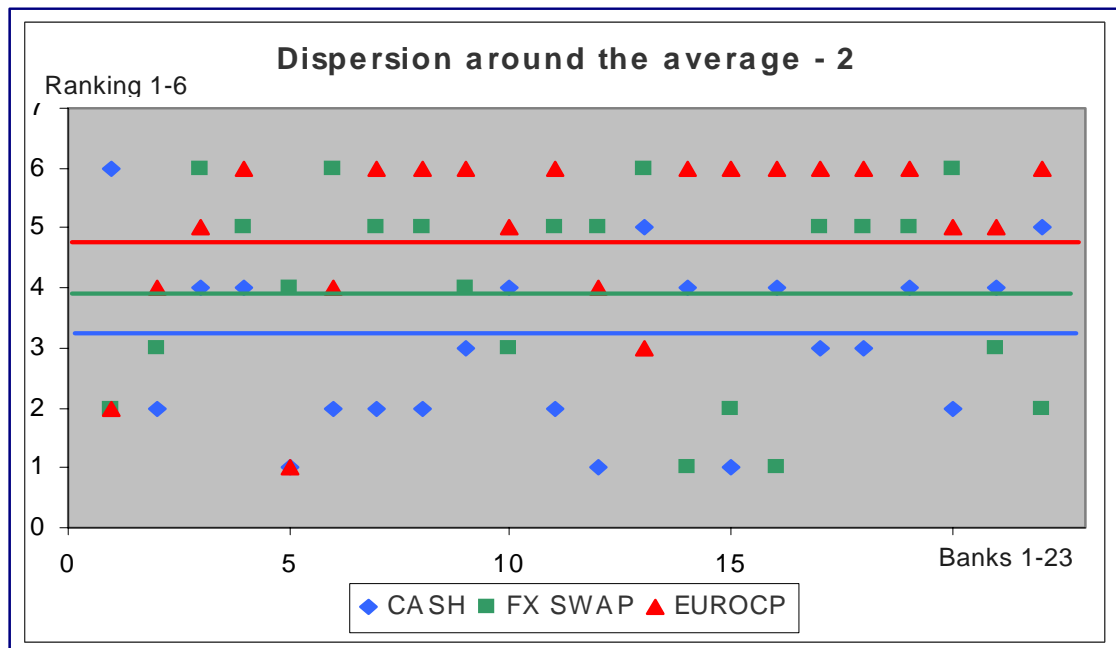


Chart 3: Ranking of instrument by banks (deposits, FX swaps, Euro CP)



Given, as can be noticed in the table and charts above, that individual banks use different parameters to evaluate the economic rationale of participating in a tender versus alternative funding sources, the question arises if this might affect their bidding behaviour.

Indeed, this could be true, given that the above instruments/parameters might not be fully equivalent to each other.

In fact on a micro-level⁵ the closest market substitute for a Eurosystem main refinancing operation (MRO) is a one week interbank repo. Both are secured (require collateral), do not involve liquidity risk before the maturity and carry a fixed rate for the period, while:

- cash deposits are unsecured;
- rolled daily overnight deposits, which are also unsecured, additionally involve liquidity risk and exposure to a daily refunding rate risk;
- rolled daily overnight deposits hedged with an EONIA swap involve also basis risk;
- FX swaps are somewhat 'secured' (in a sense one currency stands as collateral for the other), but due to the involvement of two currencies they are quite different from repos and FX swap rates are normally closer to deposit rates;
- Euro CPs are "unsecured" (even if in form of a security).

Moreover,

- in term of rates, under normal market conditions, on a 1 week period:
 - repos, derivatives and expected EONIA average (ex ante) tend to converge among themselves;
 - term deposit rates and FX swap rates tend to converge (on a slightly higher level);
 - CP rates are more issuer dependent;
- in certain periods of the year (e.g. close to quarter or year end) differences between alternative instruments become larger both in terms of rates and accessibility [not a very good example in this context];
- under certain circumstances (see for example the EONIA swap market in early Autumn 2004) some market segments tend to move partially autonomously from the others.

Considering all these factors, it can be assumed that the instruments/parameters considered in the survey are not fully equivalent. The combined effect of the non equivalence of these instruments and of the different weight given to them by different banks while evaluating their decision to participate in the tender might therefore have an effect on the bidding behaviour of individual banks.

Indeed, if different perceptions of different parameters lead to a different bidding behaviour, and different perceptions can be linked, at least partly, to different internal organisations, it seems difficult to deny that organisational structures might have an impact on banks' bidding behaviour.

⁵ On a macroeconomic monetary level there is of course a substantial difference between the two sources of funding.

Hence the last step of the analysis tried to investigate whether there is a link between the proximity of different desks/activities to the tender desk and the perceived relevance of each instrument as a reference for the decision to participate in the weekly tender.

In fact, with the exception of 4 banks out of 23 (17% of the panel), the first and second highest ranked products for each bank always resulted to be managed in that bank in a structure considered “close” to the tender desk, as defined above. This seems to confirm the idea that “organisational proximity” tends to make some instruments more familiar than others (the “familiarity bias”, as it was called in one of the MMCG meetings).

To summarise the last findings:

- there are different approaches of banks regarding their bidding behaviour when participating to the tender operations of the Eurosystem, with the existence of repo oriented, cash oriented, derivatives oriented, FX swaps oriented and CP oriented banks;
- an influence of banks’ organisation on the approach to the tender participation is likely, through the particular familiarity of the staff in charge with one or more instruments.

The results of this analysis, considered in conjunction with the possibility of structural and temporary misalignments among different short term market rates, therefore seem to infer that certain observed situations of tender participation behaviour might be partially explained by banks’ organisational structures.

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APPENDIX: The questionnaire
Mapping of money market related activities

Sample Structure

Imagine a simplified structure composed as follows:

Group – Bank – Division – Department - Desk

Codes

Please indicate, for each of the activities listed below, its relationship with the 'position' in your organisation of the desk in charge of ECB operations (used as a reference point):

0 = same group

1 = same bank

2 = same bank, same division

3 = same bank, same division, same department

4 = same bank, same division, same department, same desk

	Bank (B) or Investment Bank (IB)?	Relationship with the desk in charge of ECB operations	
		euro	other ccys
Intraday Cash Management			
Collateral Management			
Money Market Deposits			
CPs/CDs as a Funding Source			
CPs/CDs as an Investment Product			
Money Market Derivatives as Market Makers			
Money Market Derivatives as Int/Ext Price Takers only			
Repo as Market Makers			
Repo as Int/Ext Price Takers only			
Eligible Bonds Portfolio (if a dedicated portfolio exists)			
Proprietary Bond Portfolio			
FX Spot as Market Makers			
FX Spot as Int/Ext Price Takers only			
FX Forward as Market Makers			
FX Forward as Int/Ext Price Takers only			
ECB operations		-	-

Notes

- "Internal or external price takers" means that the relevant desk only asks for prices from the market or from other group units (included a group's investment bank, if existent) and never quotes prices to the market.

Additional questions

1. Is the main 'treasury function' located in the bank or in the investment bank?
2. Does the main repo desk report to the main 'treasury function'? If the answer is not, which function does it report to?
3. Does the main collateral management desk report to the main 'treasury function'? If the answer is not, which function does it report to?
4. What desk(s) decide about ECB tender participation?
5. Do these desks report to the main 'treasury function'? If the answer is not, which function do they report to?
6. Please rank from 1 to 6 the importance attached from the desk in charge of ECB tender to the market of each of the following instruments in order to decide the participation to the weekly tender: 1 week repo, 1 week Eonia swap, 1 week expected daily overnight deposit average, 1 week fx swap, 1 week cash deposit, 1 week EuroCP
7. Which desk is the 'owner' of the collateral pool?
8. Has the desk in charge of ECB tender the access to the entire eligible bond portfolio?
9. Have external trading units (external=out of the 'treasury') direct access to same day liquidity? If the answer is yes,
 - a. Is the access automatic or subject to Treasury authorisation?
 - b. Is the access subject to a cap?
10. Have external non trading units (external=out of the 'treasury') direct access to same day liquidity? If the answer is yes,
 - a. Is the access automatic or subject to Treasury authorisation?
 - b. Is the access subject to a cap?

Focus on collateral management

Please for each of the collateral management related activities listed below:

1. in the first column indicate with an asterisk those which are run in the same structure
2. in the second column, indicate the relationship with the 'position' in your organisation of the desk in charge of ECB operations, used as a reference point (please use the same ranking from 0 to 4 of the table above)
3. In the third column qualify the type of access to the collateral by the desk in charge of ECB tender (4=automatic without internal deals; 3=automatic with internal deals; 2=to be negotiated with the collateral owner; 1=no access)
4. In the fourth column, indicate at what level each activity shares the same reporting line with the desk in charge of ECB tender(using the scale of the table above, 4=at same desk level, 0=only at group level)

	Run in the same structure	Proximity to ECB tender desk	Type of access by ECB tender desk	Reporting line convergence
Administrative work (margins and MTM calculations, collateral transfer instructions, ...)			-	
Portfolio dedicated to collateral requirements				
Main trading portfolio, used also for collateral requirements				
Main investment portfolio, used also for collateral requirements				

1. Do you have any further comments about your collateral management activity?
2. (Only for previous survey respondents) Were there any changes in your collateral management function since you sent your replies to the original questionnaire? In case the answer is yes, please briefly describe the main changes.