MONEY MARKET INTEGRATION: A MARKET PERSPECTIVE

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1. INTRODUCTION

"*Responding to the introduction of the euro and the new monetary policy framework, the money market has undergone a process of deep integration and standardisation throughout the euro area. Nevertheless, the degree of integration achieved to date differs among the various market segments. Those which are more integrated are the* unsecured deposit market, *in which banks exchange short-term liquidity without the guarantee of collateral, and the* derivatives market. *Relatively less integrated segments of the market include the* repo market, *in which participants exchange short-term liquidity against collateral, ...*".[1]

This short, but very precise, description of the euro money market provided by the European Central Bank certainly reflects the opinion of most, if not all, market players.

Probably as a consequence of the different levels of integration shown by the various segments of the euro money market, the public debate and publications relating to the various market segments have evolved in different directions.

When focusing on interbank deposits and short-term interest-rate derivatives, the debate typically aims to achieve a better understanding of how the market works as well as of the trends that are under way. The purpose is to obtain as accurate a "picture" of the market as possible. Accordingly, the questions asked are usually of the following type: what terms are deposit transactions mostly concentrated on? Through which channels does liquidity get redistributed across euro area countries? Is the cash market gaining or losing importance with respect to the derivatives market? What are the most successful derivative instruments? Etc.

By contrast, when turning to the market for repurchase agreement transactions (repos), the emphasis is typically on the factors, which hinder a full integration of the market. Accordingly, the debate often focuses on the practical difficulties encountered by market players in the cross-border settlement of collateral, on the legal uncertainties stemming from the shortcomings of bankruptcy law in some countries (or from the lack of harmonisation of the documentation used in repo agreements) and on other impediments to a smooth functioning of the market. The usefulness of a similar "picture" of the market as the one mentioned for deposits and derivatives tends to be neglected. This carries a risk that important market features or developments go unnoticed.

This paper partly attempts to fill this gap. It is divided into two sections. Section 2, which is devoted to deposits and derivatives, follows a "traditional" approach, addressing the questions highlighted above and other similar ones. Section 3 concentrates on repurchase agreements. It differs from previous analyses of this segment of the market by trying to present an overall picture of the repo market. This picture is based on a survey that has been conducted specifically for that purpose. A summary of the results of the survey can be found in the conclusive remarks at the end of the section. Additional remarks regarding the repo market are presented in an Appendix[2].

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[1] "The euro area one year after the introduction of the euro: key characteristics and changes in the financial structure", *European Central Bank, January 2000 Bulletin, p. 40 (in the English version).*

[2] *Prepared by Godfried de Vidts (Fortis Bank and Chairman of the European Repo Council).*

2. INTERBANK DEPOSITS AND SHORT-TERM DERIVATIVES

The unsecured deposit segment of the euro money market has shown, almost from the outset of the single currency, a marked degree of integration. Liquidity circulates efficiently within the euro area and the dispersion of interbank deposit rates across countries is normally low, while market players generally express satisfaction as regards the way the market functions (see section 2.1).

The largest banks play a key role in the cross-border circulation of liquidity. These banks provide the whole banking system with an essential service, while simultaneously benefiting from a privileged position in the liquidity market (see section 2.2).

Deposit transactions tend to concentrate on the shortest maturities, a development that has to be put in perspective with the increasing use of interest rate derivatives (and, in particular, EONIA swaps) to manage the banks' market risks (see section 2.4).

2.1. An integrated market for deposits

The degree of integration of the euro market for interbank deposits is substantially good. This seems to be confirmed by several pieces of evidence:

- *Market sentiment*. The opinion of the major market players, often expressed in public, is that (unsecured) liquidity circulates across euro countries in an efficient way. Liquidity imbalances and (limited) differences in interest rates across countries do show up from time to time, but they are usually absorbed in a few hours. In a recent survey carried out among the banks of the ECB Money Market Contact Group[3] (henceforth, the "ECB Contact Group"), only one bank out of 20 has expressed dissatisfaction with the degree of integration of the market. Confronted with the question "Is the euro market for deposits efficient?", the banks of the group have answered as follows:

Extremely efficient	2	banks
Significantly efficient	9	"
Sufficiently efficient	8	"
Relatively efficient	1	"
Improvably efficient	0	"

[3] *The survey has been conducted on behalf of the group, and with the banks of the group, by Rudolf Duttweiler of Commerzbank and Armin Steppan of Bank Austria Creditanstalt. The results of the survey have been presented to the group on January 27, 2000.*

The ECB Money Market Contact Group is chaired by the Director General Operations of the ECB and is made up by (i) 3 other representatives from the ECB; (ii) 22 commercial banks, each of which represented by one person; (iii) 11 observers, one per national central bank. The 22 commercial banks (of which 19 are part of the Euribor panel) cover all the countries of the euro area plus the United Kingdom. The group, which meets on a quarterly basis, aims to favour an informal exchange of opinions on euro money market issues between the monetary authorities and market players.

Note that only 20 banks have accepted to take part in the survey.

Moreover, 16 banks out of 20 have expressed the view that market liquidity is now better[4] than it used to be in the legacy currency markets prior to Stage Three while, for the remaining 4 banks, only a slight deterioration has taken place.

- *Overnight rates*. On several occasions the ECB has pointed out that the dispersion across countries of the overnight rates, reported by the Euribor banks to the ECB itself for the EONIA calculation, is quite low. This piece of evidence is particularly meaningful, because it is based on actual transaction rates, and transaction amounts are used to weigh the rates.[5]

- *Euribor*. The dispersion across countries of the offered rates contributed by the Euribor banks for the calculation of the reference Euribor rates is also quite low. For example, table 1 shows that the spread between the average 1-month rate reported by German banks and the average 1-month rate reported by the bank(s) of each other EMU country is only exceptionally higher than 3 basis points in absolute value. Although meaningful, this piece of evidence has to be treated with some caution, since it is based on "declared" rates (as opposed to actual transaction rates).

Table 1 - FREQUENCY OF 1-MONTH SPREADS WITH GERMAN RATES LOWER THAN 0.03% IN ABSOLUTE VALUE

(in percentage terms)

Based on 147 daily observations (Jul. 7, 1999 to Jan. 28, 2000)

AUS	BEL	EIRE	FIN	FRA	ITA	LUX	NETH	POR	SPA
99.2	99.2	97.5	93.3	96.6	99.2	94.1	99.2	97.5	95.0

- *Standing facilities*. The scarce recourse of banks to the ECB standing facilities during the first three weeks of the reserve maintenance period (see an illustration on figure 1 for two recent periods) is an indication of an integrated market. An even stronger indication in the same direction derives from data for the last days of the maintenance period. On such days, banks are tightly constrained in managing their end-of-day reserve account balances, and significant inefficiencies of the market in redistributing liquidity across banks would necessarily lead to massive *simultaneous* utilisation of *both* the marginal lending facility and the deposit facility. Actually, we usually observe that only *one* of the two facilities ends up being significantly utilised (reflecting not a problem of distribution of liquidity, but simply a liquidity excess or shortage at the level of the entire system).

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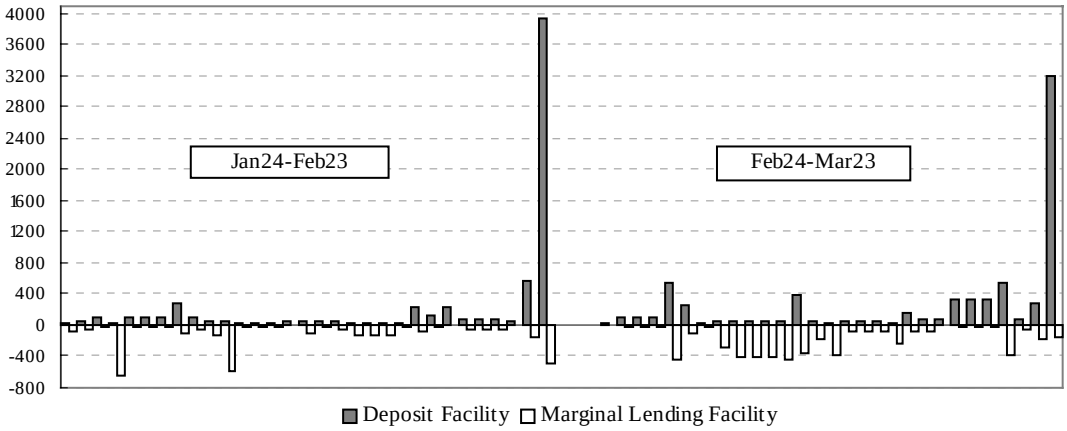
[4] *Significantly better for 7 banks, slightly better for 9 banks.*

[5] *In its May 1999 Monthly Bulletin (p. 35 in the English version), the ECB specifies that the above mentioned dispersion is measured as "the weighted standard deviation of the average country rates" (which are weighted average rates themselves).*

Figure 1 – RECOURSE TO ECB STANDING FACILITIES

Reserve maintenance periods: Jan24-Feb23 and Feb 24-Mar23, 2000



2.2 A two-tier market for deposits

Having ascertained that the interbank deposit market does redistribute liquidity across countries efficiently enough, it remains to clarify how the market performs this task.

In this regard, a consensual view in the ECB Contact Group is that, for the time being, the function of redistribution of liquidity is essentially carried out by the largest banks. More precisely:

- Few large banks per country do regularly enter cross-border transactions, and do so with the large banks of other countries, while transaction amounts are often high;[6]
- Smaller banks do not customarily trade cross-border, limiting themselves to dealing with the (small or large) banks of their own country.

In other words, it appears that the market presents a two-tier structure, whereby "*large banks across the euro area trade among themselves and with the smaller banks in their own local market, while the latter group trades mainly in a local market context*".[7]

The existence of such a two-tier market is easily explained as the result of historical bank-to-bank relationships and credit risk considerations. Small and large banks of the same country have generally been dealing with each other for many years and, when the euro has come, reciprocal credit lines were already in place. Exactly the same holds for the large banks of different countries, which before 1999 were already used to trade legacy currency deposits among themselves.

On the contrary, at the time of the introduction of the euro, banks were generally not sufficiently aware of the credit quality of the smaller banks in other countries. Credit lines to such small banks could not (and cannot) be granted in an instant. From this point of view, the emergence of a two-tier market as described above is something "rational" and "prudent" that, in an initial period of the single currency, might have been expected to occur.

It is also clear that the current configuration of the market puts the largest banks in a position of advantage. On days when liquidity imbalances and interest rate differentials across countries happen to be particularly sharp, the largest banks may "arbitrage" liquidity *in and*

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[6] *For more comments on transaction amounts, see the next section.*

[7] *From the minutes of the January 27, 2000 meeting of the ECB Contact Group.*

out from their own country, borrowing domestically and lending abroad at higher rates (or the other way round). Under more "normal" conditions, large banks still have the possibility to choose whether they want to finance their short positions for the day (or to place their excess liquidity for the day) within their own country or cross-border.

In other words, while performing an important liquidity redistribution function, the largest banks do make a profit out of it.

A natural question is whether this market structure is or not likely to change over a reasonably short period of time.

In the opinion of the authors, the likelihood of such a change is not very high. On the one hand, it is a fact that the market for deposits is not an area where the largest banks are willing to increase their credit risks and their usage of capital. As a consequence, the establishment of many new relationships between the smaller banks of a country and the large banks of other countries does not seem a very likely event.

On the other hand, the smaller banks of different countries *would* have an interest in developing a network of relationships among themselves. However, the process of getting acquainted with each other, evaluating each other's credit quality and establishing credit lines is not easy. Even assuming that such process will occur, it will most probably take years to do so.

The establishment of an electronic trading system for interbank deposits across the euro area might greatly accelerate the process towards a more complete integration of the market[8]. In fact, banks participating in the system would be "forced" to consider each other and to decide whether they want to be trading with each other or not. (Moreover, an electronic system would favour a more efficient matching of the demand and supply of funds, enhancing market liquidity and price transparency. When properly interfaced with a bank's legacy systems, it would also allow remarkable savings in the bank's operational costs).

Not all the largest European banks, however, look upon the emergence of such an electronic system favourably.

2.3 An increased role for short-term derivatives

When comparing the euro money market with the situation of the legacy currency markets before 1999, two major trends are often emphasised by market participants:

- Deposit transactions tend to concentrate more than before on the shortest term maturities, particularly the overnight one (and very large single transaction amounts -for hundreds of millions or even over one billion- are being observed with a certain frequency). By contrast, a reduction in the activity on longer term deposits has been witnessed. Finally, there are signs that at least some of the largest banks have reduced their market making activities on deposits.

  The need for banks to keep credit risks under control and to economise on capital is commonly reported to be the driving force behind these developments.

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[8] *A screen-based market for interbank deposits, named "e-MID" (formerly "MID"), is already active. Introduced in Italy in 1990, this market has currently 190 participants: 155 Italian banks (or banking associations), 27 Italian branches of non-Italian banks and 8 non-Italian banks operating from outside Italy. The e-MID market is interfaced with the Italian real time gross settlement system, so allowing for the automatic settlement of all the deposit transactions between participants that hold an account at Bance d'Italia.*

- Banks have been increasingly using interest rate derivatives to manage their market risk. The market for EONIA swaps is reported to have taken the greatest advantage of this trend, having experienced a remarkably strong growth since the introduction of the euro (with large single ticket transactions frequently observed as well in the EONIA market, mirroring the situation of the overnight deposit market). Other interest rate derivatives seem to have witnessed a decrease in activity (like FRAs) or broadly stable volumes (like Euribor futures).

  The increased use of derivatives (in replacement of cash instruments) to manage market risks is the result of the same factors highlighted earlier, i.e. credit risk and capital considerations on the part of banks. The different performances of the market for EONIA swaps, on the one hand, and the market for Euribor-related derivatives, on the other, could be a consequence of the concentration of deposit trades on the shortest term maturities. Due to this concentration, the EONIA rate is supported by higher market liquidity than the Euribor rates (especially the longer term ones).

Given the over-the-counter nature of most of the markets involved[9], providing clear empirical evidence of these facts is a hard task. Again, some help may come from the ECB Contact Group survey, already mentioned.

One of the questions of the survey was: "*do you notice a concentration of cash activities on the short end with higher amounts per trade (i.e., O/N) in comparison to previous activities in the legacy currencies ?*". Convincingly enough, 20 banks out of 20 have answered "*yes*" and the motivations given for this answer (most banks have indicated "*increased usage of derivatives to manage the exposure*" and "*balance sheet restrictions*") are entirely consistent with previous remarks.

Other interesting results of the survey are reported in the box below. Table B in the box provides the number of deposit and FX swap transactions that a "representative bank" (i.e. weighted average of all answers) of the group closes over one day[10] (as regards foreign exchange swaps, only the swaps with one leg denominated in euro are taken into account). Transactions are broken down per maturity and amount.

The relatively small number of transactions (8) carried out daily with maturities between 3 (exclusive) and 12 months (inclusive) confirms that the market liquidity behind the longer-term Euribor rates is not very high. The shorter the maturity, the higher the number of daily transactions and, presumably, the significance of the Euribor rates. Although these results are (at least qualitatively) in line with the experience and expectations of active market players, it must be underlined that they might have been somewhat affected by perturbations linked to the anticipations of the Century Change (Y2K).[11]

Table B also shows that, while around 80% of the deposit and FX swap transactions of our "representative bank" apply to amounts smaller than EUR 100 million, larger transaction amounts are not infrequent and, in particular, around 3 transactions per day involve amounts above EUR 500 million.[12]

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[9] *The Euribor futures markets and the e-MID deposit market are notable exceptions.*

[10] *As indicated in the box, the reference period for the survey was Sep. 20 to Oct. 20, 1999.*

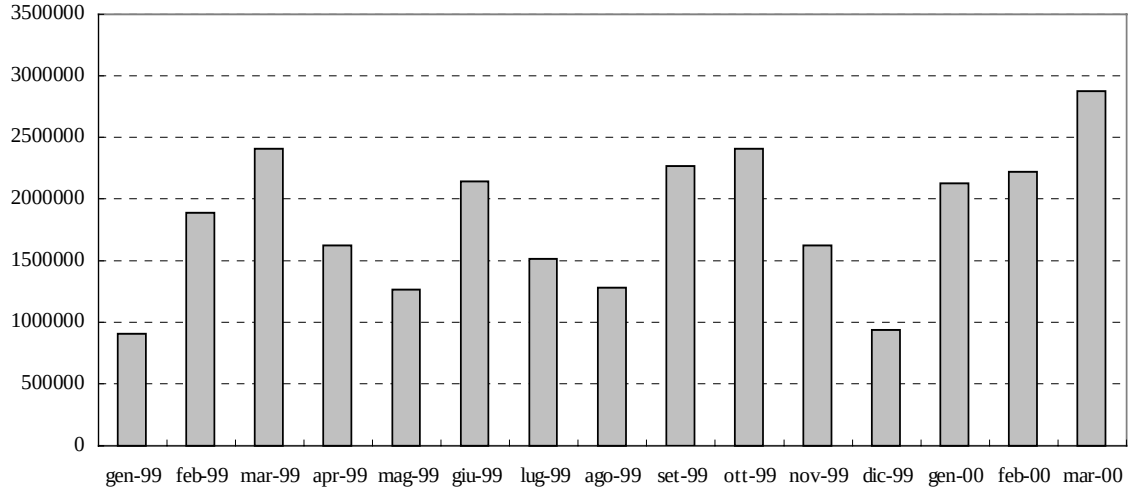
[11] *During the reference period of the survey (see previous note), terms over 3 months were precisely those overcoming the end of 1999.*

[12] *Note that a sort of "indivisibility" problem might have somewhat boosted the number of large amount transactions reported by the respondent to the survey. For example, it may well have been the case that a*

According to the results presented in table C, the overall judgement of banks, as regards the efficiency of the various money market segments, is favourable. Banks also deem that, with the advent of the euro, liquidity conditions in all market segments have improved (table D). It turns out, however, that the EONIA swap market is perceived to be by far the most efficient, as well as the one that has gained most in terms of liquidity.

Figure 2 – MONTHLY VOLUMES OF EURIBOR FUTURES

Number of first and second quarterly contracts traded at Liffe, Eurex and Matif



Still in the box below, the right-hand side column of table A provides the daily transaction volumes per instrument carried out by a "representative bank".

The important role played by OTC interest rate derivatives is there confirmed. Note, however, that such instruments do not dwarf cash transactions in terms of total amounts. In other terms, there is no evidence of a "derivatives bubble".

The relatively large amount shown for interest rate swaps, which include EONIA swaps, is consistent with other indications of the crucial role played by the latter[13]. By contrast, the somewhat minor role now played by FRAs is also confirmed. With regard to Euribor futures, figure 2 (above) shows that, as already suggested, activity on these instruments do not seem to have followed any particular (upward or downward) trend since the introduction of the euro. Finally, table A in the box shows that, in spite of the reduction in FX activities triggered by the introduction of the euro, FX swaps (with a euro-denominated leg) still seem to represent a non negligible part of the banks' activities.

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bank closing 1 transaction over 500 million every two days has reported 1 such transaction per day (rather than 0.5).

[13] *Although, unfortunately, Table A does not tell what part of the total IRS daily turnover is accounted for by EONIA swaps.*

SOME RESULTS FROM THE SURVEY ON EURO MONEY MARKETS CONDUCTED BY THE ECB MONEY MARKET CONTACT GROUP[14]

Table A - MONEY MARKET ACTIVITIES CARRIED OUT BY A "REPRESENTATIVE BANK"

Median values out of the answers from 20 banks - Reference period: Sep. 20 to Oct. 20, 1999

	No. of transactions per day	Total volumes per day (EUR mio)
Deposits	34	1,571
FX swaps(*)	31	2,549
FRA's	7	680
IRS's(**)	17	2,059

(*) With at least one leg in euros. (**) Including EONIA swaps

Table B - INTERBANK DEPOSITS AND FX SWAPS (with at least one leg in euros)
NUMBER OF TRANSACTIONS PER DAY CLOSED BY A "REPRESENTATIVE BANK"

Median values out of the answers from 19 banks - Reference period: Sep. 20 to Oct. 20, 1999

	Amounts up to EUR:					
	10 mio	**50 mio**	**100 mio**	**500 mio**	**Above**	**TOTAL**
O/N, T/N, S/N	14	13	7	7	1.5	**42.5**
Up to 1 month	7.5	4.5	2.25	2.25	1	**17.75**
Up to 3 months	3	2	2	1	0.75	**8.75**
Up to 1 year	2	3	2	1		**8**
Above	2	1	1	0.5		**4.5**
TOTAL	**28.5**	**23.5**	**14.25**	**11.75**	**3.25**	**81.25**

Table C - EFFICIENCY OF THE VARIOUS MARKET SEGMENTS

Each bank was asked to tick one cell per row. Each cell below reports the number of banks that have ticked it.

	Extremely Efficient	Significantly efficient	Sufficiently efficient	Relatively efficient	Improvably Efficient	TOTAL NO. OF BANKS
Deposits	2	9	8	1	0	**20**
FX Swaps	1	7	8	3	0	**19**
FRA's	1	8	9	2	0	**20**
EONIA's	7	10	2	1	0	**20**
IRS's	3	12	4	0	0	**19**
Eurib. Futures	7	7	4	1	0	**19**

Table D - MARKET LIQUIDITY WITH RESPECT TO THE PRE-EURO LEGACY CURRENCY MARKETS

Each bank was asked to tick one cell per row. Each cell below reports the number of banks that have ticked it.

	Improved significantly	Improved slightly	Worsened slightly	Worsened significantly	Unchanged	TOTAL NO. OF BANKS
Deposits	7	9	4	0	0	**20**
FX Swaps	4	8	6	0	1	**19**
FRA's	7	7	6	0	0	**20**
EONIA's	14	6	0	0	0	**20**
IRS's	9	7	1	0	2	**19**
Eurib. Futures	5	9	2	0	3	**19**

(*) Given the distribution of the answers provided by the banks of the group (characterised by some suspect "outliers"), R. Duttweiler and A. Steppan have reckoned that medians give a more appropriate idea of the "representative bank" than averages would. Note that the use of the medians may lead to some inconsistencies in the information provided by the tables. For example, a bank's total number of deposit and FX swap transactions per day turns out to be 65 from Tab. A and about 81 from Tab. B (note also that the two tables are based on a slightly different number of respondent banks).

[14] *For more details on the survey and the ECB Contact Group, see note 3.*

3. THE REPO MARKET

It is well known that the euro repo market is significantly less integrated than the market for euro deposits. Major factors, which are commonly perceived to prevent full integration of the repo market, are[15]: difficulties in the cross-border settlement of collateral; various forms of legal uncertainty; different tax treatments of bonds.

In this section, we present the results of a survey conducted on the euro-denominated repo market. The main purpose of the survey is to provide some information about the level of integration of the market. The survey provides a "snapshot" of the repo market as of February 2000, which is the period to which the participants' answers applied.

3.1. The survey: methodological aspects

The survey has been conducted by sending a questionnaire to a number of banks operating in Europe. In particular, the questionnaire has been distributed to:

- the banks of the ECB Money Market Contact Group;
- the banks of the ACI Euribor Money Market and Liquidity Working Group;
- the banks of the ISMA European Repo Council;
- a selected sample of the customer banks of a London-based broker;[16]
- banks directly contacted by the two authors of this paper.

Answers to the questionnaire (on a voluntary basis) have been returned either to one of the authors of this paper or to the London-based broker. In the latter case, the broker has aggregated the information per country and has passed it on to an author, disclosing to him the names of the respondent banks. When only one bank from a given country has answered to the broker, the information has been discarded (owing to the confidentiality commitment taken by the broker).

As will become clear below, the authors have also aggregated the information per country. Also in this case, when only one answer from a given country (and no information on that country could be channelled by the broker), the answers have not been used. This reflects both a concern for confidentiality with respect to the respondent bank and a lack of sufficient information to represent the situation of the banking sector of the corresponding country).[17]

We are in a position to present the results of the survey for six "countries": Benelux (3 respondent banks), which we consider for the purpose of the paper as one single "country", France (3 respondents) Germany (7), Italy (6), Spain (4), the United Kingdom (7).

Banks have been requested in the questionnaire to provide information on both their "domestic" and "cross-border" activities in euro-denominated repos. The questionnaire

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[15] *See, for example, "*The EU Repo Markets: Opportunities for Change*", Report of the Giovannini Group, European Commission, Euro Paper No. 35, Brussels, October 1999. See also the January 2000 Bulletin of the ECB (pp. 41/2 in the English version).*

[16] *Garban-Intercapital plc.*

[17] *Unfortunately, in this way the authors have lost one answer per each of the following countries: Austria, Finland, Ireland, Portugal, Switzerland.*

clearly defined a "domestic" transaction as "*a transaction with a counterparty located in the same country where you are located*". So, for example, from the viewpoint of the survey a repo transaction involving a French government bond executed between two banking entities located in Germany (one of which may be a foreign branch of a non-German bank) is a German "domestic" transaction.

3.2. Domestic versus cross-border repo activities

The aggregate domestic and cross-border transaction values per day reported by the banks located in the various countries are shown in table 2. It is important to note that the amounts of domestic transaction amounts are on a "gross basis", i. e. they may well contain duplications (it is possible that a transaction between two respondent banks – and reported by both, is counted twice). Noteworthy also is the fact that, if one sum up all the amounts reported in the table, one obtains an overall "gross" turnover of EUR 162.7 billion per day, which contains potential duplications of the cross-border transactions as well. In any case, given the size of the transaction amounts reported, the results of survey seem to be satisfactorily representative of the overall situation of the repo market.[18]

Table 2 - REPO TRANSACTIONS PER DAY

Aggregate transaction value reported by the banks located in each country - EUR billion

	Benelux (3 Banks)	**France** (3 Banks)	**Germany** (7 Banks)	**Italy** (6 Banks)	**Spain** (4 Banks)	**U.K.** (7 Banks)
Domestic Transactions	5.0	8.7	17.0	7.6	17.0	10.3
Cross-Border Transactions	17.4	12.9	43.9	8.0	3.1	11.8

Figure 3 shows, for each country, the relative share of the domestic and cross-border transaction values, as also reported in table 2. Since the domestic amounts in the table contain potential duplications (while the cross-border ones do not), the information provided here must be interpreted very carefully. The only correct interpretation is that the figure shows the degree of openness (or closeness) of an "average bank" located in the country under question. This interpretation bypasses the problem of domestic transaction duplications, but provides a useful and reasonable basis for analysis[19].

It appears clearly from the figure that the degree of openness of the average bank in Benelux and Germany is particularly high, and that it remains relatively high as well in France, Italy and the UK. On the contrary, the typical bank in Spain seems to be significantly more "closed". This is consistent with reports from market players, according to which legal uncertainties as well as tax issues make cross-border transactions with Spain more difficult.

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[18] *For the sake of comparison, recall that the overall daily turnover estimated by the Giovannini Group for all the EU repo markets in 1998 is EUR 245 billion. Consider that this is a "net" figure and that it refers to two years ago.*

[19] *Alternatively, the reader might want to apply some "reduction factor" to the domestic transaction amounts shown in Tab. 2, and then compare this reduced amount to the cross-border values. The magnitude of the reduction factor applied, however, would be inevitably arbitrary.*

Figure 3 – DOMESTIC VERSUS CROSS-BORDER REPO TRANSACTIONS OF AN "AVERAGE BANK" FOR EACH COUNTRY

% of the total transaction value of the "average bank"

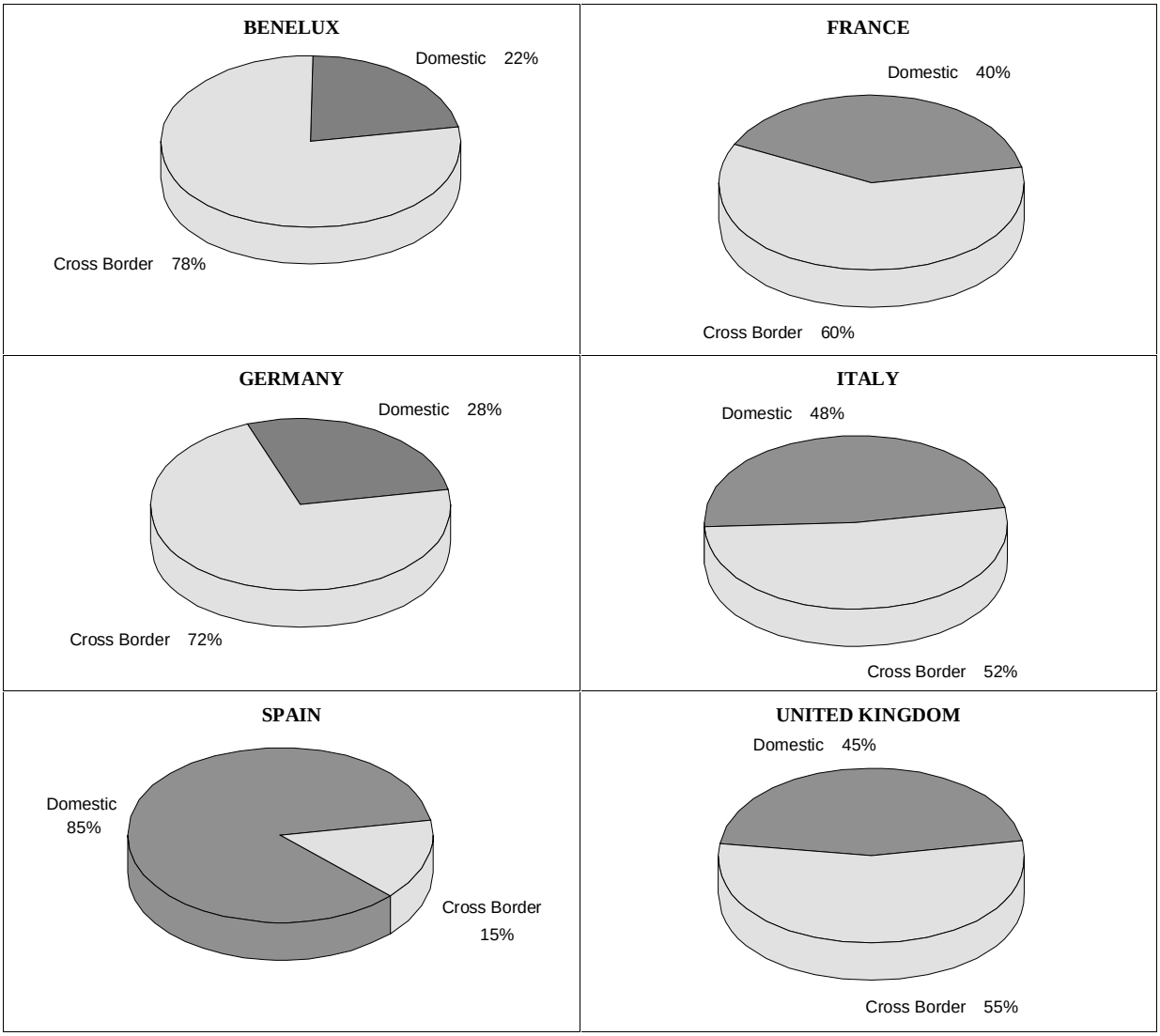

Table 3 describes how the cross-border activity carried out by the average bank (or, in this case equivalently, by the banks) of a given country is broken down, based on the country where the counterparties are located. For example, 2% of the total value of cross-border transactions of banks located in Germany is carried out with counterparties located in the Benelux, 9% with counterparties located in France, etc.

Table 3 - CROSS-BORDER REPO ACTIVITY PER COUNTERPART COUNTRY

% of the total cross-border transaction value of banks in the country indicated in the row

	Country where counterparts are located							
	BEN	***FRA***	***GER***	***ITA***	***SPA***	***U.K.***	***Others***	***TOT***
BENELUX	-	4%	17%	11%	-	67%	1%	100%
FRANCE	3%	-	9%	23%	2%	61%	3%	100%
GERMANY	2%	10%	-	12%	5%	60%	11%	100%
ITALY	3%	9%	17%	-	1%	67%	3%	100%
SPAIN	-	13%	17%	17%	-	41%	12%	100%
U.K.	9%	11%	31%	36%	1%	-	12%	100%

The table provides two relevant pieces of information. Firstly, the UK is the most important location for counterparties situated in all the other countries. At least 60% of the cross-border activity of banks located in Germany, Italy, Benelux and France is carried out with counterparties located in the United Kingdom. This simply confirms the key role played in the market since the late 1980's / early 1990's by the London-based repo desks of several large banks and investment banks from all over the world (US, Japan, the UK itself and naturally continental Europe). Note also that the cross-border activities of banks located in the UK are largely spread over the other countries.

Secondly, 30% to 40% of the cross-border activities of banks located in Germany, Italy, Benelux and France is carried out with counterparties located in countries other than the UK. Although this statement mirrors the previous one, it is not trivial. Should one have taken a similar snapshot of the market in the pre-euro 1998 situation, one would probably have found that the "non-UK" share of each country's banks cross-border activities would have been significantly lower. In other words, the results presented in table 3 provide an indication (but, unfortunately, not an indisputable evidence) that the advent of the euro has significantly improved cross-border relationships between banks located in continental Europe's countries, also as regards repo transactions.

Table 4 confirms that banks in most countries report significant increases in the value of their cross-border transactions, compared to their pre-euro repo activity in all the legacy currencies.[20] The expansion seems to have been particularly strong for banks located in Germany and France (while those in Spain appear relatively unaffected by the advent of the euro). The lively evolution of cross-border transactions appears even more meaningful when compared to the more static behaviour reported for domestic transactions.

Table 4 - RECENT EVOLUTION IN REPO TRANSACTIONS

% change in transaction values with respect to the repo activity
in all the legacy currencies during the fourth quarter of 1998

	Benelux	**France**	**Germany**	**Italy**	**Spain**	**U.K.**
Domestic Transactions	-12%	-9%	8%	18%	10%	35%
Cross-Border Transactions	33%	87%	72%	28%	-13%	39%

The growth in cross-border activities is also confirmed by the evidence collected as regards the number of counterparties in cross-border transactions (Table 5).[21] With respect to the pre-

[20] *The questionnaire asked: "Has your EURO repo activity increased or decreased compared to your repo activity in ALL the legacy currencies (DEM,FFR, ITL, etc.) during the fourth quarter of 1998?". Respondents were invited to check (separately for domestic and cross-border transactions) one of the following values:*

+100%, +75%, +50%, +25%, 0%, -25%, -50%, -75%, -100%.

In processing the results, the answer given by each bank has been weighted with the bank's relative incidence on the overall (domestic or cross-border) transaction value of all the banks in the same country. Of course, Table 4 figures only represent an "indication" and should not be taken "literally".

[21] *The questionnaire asked: "Has the number of your counterparts in CROSS BORDER repo transactions increased or decreased compared to your repo activity in ALL the legacy currencies (DEM,FFR, ITL, etc.) during the forth quarter of 1998?". Respondents were invited to check one of the following 5 answers:*

increased significantly, increased slightly, unchanged, decreased slightly, decreased significantly.

euro situation, banks of all countries (except Spain) report that such number has increased (either slightly or significantly).

Table 5 - NUMBER OF COUNTERPARTIES IN CROSS-BORDER REPO TRANSACTIONS: RECENT EVOLUTION

Compared to the repo activity in all the legacy currencies during the fourth quarter of 1998

BENELUX	**Increased significantly**
FRANCE	**Increased slightly**
GERMANY	**Increased slightly**
ITALY	**Increased slightly**
SPAIN	**Decreased significantly**
U.K.	**Increased slightly**

In conclusion, there is evidence that the introduction of the single currency has brought about significant changes and that cross-border repo activities between countries of the euro area have increased (with the notable exception of Spain). However, an important word of caution may be underlined, referring again to table 3. Although it is likely that the role played in the market by banks located in the UK has recently decreased, in a fully integrated market such role would probably be much smaller and trades would be much more evenly spread across all countries.

3.3. Securities used as collateral.

An important aspect to assess the degree of integration of the market concerns the securities used as collateral in repo transactions. Table 6 shows, for each country, which securities are utilised in domestic transactions (as a percentage of the total value of domestic transactions). Table 7 provides the same information for cross-border transactions.

Table 6 - SECURITIES USED AS COLLATERAL IN DOMESTIC REPO TRANSACTIONS

% of the total domestic transaction value

	BEN	***FRA***	***GER***	***ITA***	***SPA***	***Others***	***TOT***
BENELUX	57%	9%	13%	20%	-	1%	100%
FRANCE	4%	52%	8%	32%	4%	-	100%
GERMANY	1%	1%	92% *	4%	2%	-	100%
ITALY	-	1%	4%	94%	-	1%	100%
SPAIN	-	1%	-	1%	98%	-	100%
U.K.	6%	6%	54%	26%	1%	7%	100%

** Of which 66% are government bonds, 26% are mortgage backed securities ("Pfandbriefe") and corporate bonds*

It seems from the two tables that the six "countries" may be divided into three classes. The first class includes banks located in Germany, Italy and Spain. These still show a strong preference for conducting transactions on their own "domestic" securities. Over 90% of their

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In processing the results, we have assigned a score of 2 to the first answer, 1 to the second, 0 to the third, -1 to the fourth and -2 to the fifth. Then, we have weighted each bank's answer in the same way as described by the previous note. Finally we have converted the resulting figure into a qualitative answer, again.

domestic repo activity is on domestic securities: Italian government bonds in Italy, Spanish government bonds in Spain, German government bonds as well as mortgage backed securities ("Pfandbriefe") and some corporate bonds in Germany. The picture changes only partially when we consider cross-border trades: still 75% of Italy's and Spain's banks transaction values are concentrated on their respective government bonds, and 60% of Germany's activity is still covered by the various German bonds mentioned.

Table 7 - SECURITIES USED AS COLLATERAL IN CROSS-BORDER REPO TRANSACTIONS

% of the total cross-border transaction value

	BEN	***FRA***	***GER***	***ITA***	***SPA***	***Others***	***TOT***
BENELUX	19%	13%	45%	17%	-	6%	100%
FRANCE	3%	17%	6%	64%	9%	1%	100%
GERMANY	9%	4%	60% *	18%	5%	4%	100%
ITALY	2%	10%	10%	75%	-	2%	100%
SPAIN	2%	1%	6%	14%	75%	2%	100%
U.K.	13%	3%	28%	46%	9%	1%	100%

(*) Of which 54% are government bonds, 6% are mortgage backed securities ("Pfandbriefe") and corporate bonds

At the opposite end of the spectrum, we find the banks located in the United Kingdom, which represents by themselves our second class of countries. UK-based banks clearly tend to carry out their domestic and cross-border repo trades using the securities of *all* the countries. Of course, their activity is mostly concentrated on the securities with the largest outstanding volumes, like German and Italian government bonds (from this point of view, the low incidence of French government bonds is somewhat surprising). This simply confirms that London is the only truly international market for repo transactions.

In an intermediate position, the third class of countries includes France and the Benelux. In their domestic trades, these countries do show a preference for their own respective government bonds, but such preference is not as overwhelming as in the case of the first class countries. In their cross-border trades (which represent the most important part of their business, as shown in figure 3), domestic securities do not have any leading role. In general, Benelux-based banks "normally" trade on German, Italian and French government paper (in decreasing order of importance), while banks located in France seems to have a particularly strong bias in favour of Italian government bonds. Concerning the latter piece of evidence, some French traders claim that France is becoming a serious competitor of Italy as far as the repo business on Italian government bonds is concerned.

In Table 8, the values of daily transaction reported by the banks of our panel (independent of their location) are aggregated according to the type of security used as collateral. The transaction values shown are on a "gross" basis (possible transactions between two banks of the panel are counted twice).[22] The table also shows what portion of the repo trades on a certain type of security is carried out between counterparties located in the country where the security was issued. From the table, it turns out that:

- As every market player would expect, the majority of euro-denominated repo trades takes place with German or Italian bonds as collateral. German government bonds are known to

[22] *Note that the underlying data for table 8, like those in table 2, sum up to EUR 162.7 billion.*

dominate the market for "special" repos. This fact is very much related to the success of the Eurex futures contracts linked to these bonds (Bund). Indeed, German government bonds are much more likely to become "specials" when the delivery dates of the aforementioned futures are approaching. Italian government bonds are the most used in the "general collateral" segment of the market, because of their high liquidity and the low probability that they may become "specials". Note that German and Italian bonds already ranked first and second, respectively, in the estimates of the daily turnovers in the EU repo markets provided for 1998 by the Giovannini Group.[23]

Table 8 - SECURITIES USED AS COLLATERAL

Daily transaction value per type of security – EUR billion

BEN. GOVS	***FRA. GOVS***	***GER. GOVS***	***ITA. GOVS***	***SPA. GOVS***	***Others***
13.4	13.4	62.2 *	45.4	24.2	4.2
% traded between counterparts located in the issuing country					
22%	34%	25%	16%	69%	

(*) Of which 55.1 bio on government bonds, 7.1 bio on mortgage backed securities ("Pfandbriefe") and corporate bonds

- The relative size of the repo market on French government bonds appears to be quite small. To some extent, this result might depend on an under-representation of French banks in our panel. However, market players do verbally report a decrease in the repo activity on these bonds since the birth of the euro, in line with the findings of the Giovannini Group.[24]
- While the repo market on Spanish bonds is mainly in Spain, the vast majority of repo trades on German, Italian, Benelux and French securities are carried out by counterparties of which at least one is located outside the issuing country. This piece of evidence is at variance with the Giovannini Group statement that "*one of the major differences between the German market and other European repo markets (apart from its large size) is the fact that a majority of transactions already occur cross-border*".[25]

As a conclusion to this section, a remark can be made as regards interest rates applicable to repo transactions. It is well known to market players that, in the "general collateral" (GC) segment of the market, repo rates are different for different types of collateral. For example, Italian GC rates tend to be higher than German GC rates. Market players report that the spread between the two rates normally stays within the range shown in the first column of table 9 (although, of course, from time to time deviations from that range may occur).

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[23] *Report of the Giovannini Group (see note 15). The daily turnovers estimated by the Giovannini Group for 1998 were as follows (in EUR billion):*

German securities	*60*	*Spanish securities*	*20*
Italian securities	*50*	*UK securities*	*15*
French securities	*40*	*Other securities*	*35*
Belgian securities	*25*		

As already mentioned, these are "net" transaction values (as opposed to our "gross" ones).

[24] *Report of the Giovannini Group, Annex 1.*

[25] *Report of the Giovannini Group, p. 9.*

Table 9 – INTEREST RATE SPREADS - Basis points

Terms	**Italian GC** Minus **German GC**	**Unsecured depos** minus **Italian GC**	**Unsecured depos** minus **German GC**
T/N, S/N	2 to 3	0 to 1	2 to 3
1 month	4 to 5	2 to 4	6 to 8
3 months	4 to 5	4 to 6	8 to 10

Table 9 also provides information about the "normal" range for the spread between the Italian GC (or, alternatively, the German GC) repo rate and the unsecured deposit rate.[26] A surprising finding is that, for maturities below 1 month, the Italian GC rate tends to be closer to the unsecured rate than to the German GC rate and that, for the 3-month term, the Italian GC rate is still equidistant between the other two rates. The different credit quality of Italian and German government bonds cannot be a credible explanation for this phenomenon. Indeed, this evidence on interest rates seems to be an important sign of non-integration of the repo market, where market players themselves are still looking for a satisfactory explanation.

3.4 Transaction types. Transaction terms. Type of counterparties.

Tables 10 and 11 present the types of transaction carried out in the market: classic repos, buy/sell backs, securities lending. It is a well known fact that, for legal reasons, banks in Italy and Spain have a strong preference for buy/sell back transactions (which, unfortunately, are usually carried out without legal documentation between the parties and with no arrangement for marking-to-market the securities used as collateral).[27] Therefore, it does not come as a surprise that buy/sell backs dominate both the domestic and cross-border transactions of these two countries. Correspondingly, when trading with banks located in Italy or Spain, banks in the other countries usually have to accept to enter a buy/sell back trade.

Incidentally, it is noteworthy that the percentages shown in the buy/sell back column of table 11 for Germany, Benelux, France and the UK are roughly similar to the percentages of the cross-border activities carried out by banks located in these countries with banks located in Italy and Spain (see table 3).

As expected, the most common form of repo transaction in Germany, Benelux, France and the UK is the "classic" repo. Note, however, that in the domestic context banks located in these countries make recourse to the other types of transaction as well, so that there does not seem to be only one domestic "market convention".

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[26] *Since, for a given term, bid/asked spreads in the three markets involved are similar, there is no particular need to specify whether table 9 spreads refer to bid or asked rates.*

[27] *A buy/sell back annex to the ISMA Global Master Repurchase Agreement is now available. When buy/sell back transactions are supported by an ISMA agreement endowed with such annex, they are documented and do provide for margining (so that they end up differing from classic repos only as long as, in buy/sell backs, the temporary owner of the collateral securities has no obligation to pass on to the original owner the coupon payments that might come due during the term of the transaction). Due to legal issues, however, Italian and Spanish banks do not sign the ISMA agreement with such annex very easily.*

Table 10 – TYPE OF DOMESTIC REPO TRANSACTIONS

% of the total domestic transaction value

	Classic Repo	*Buy/Sell Back*	*Sec. Lending*	*TOT*
BENELUX	82%	7%	11%	100%
FRANCE	85%	15%	-	100%
GERMANY	63%	20%	17%	100%
ITALY	10%	90%	-	100%
SPAIN	24%	74%	2%	100%
U.K.	84%	9%	7%	100%

Table 11 – TYPE OF CROSS-BORDER REPO TRANSACTIONS

% of the total cross-border transaction value

	Classic Repo	*Buy/Sell Back*	*Sec. Lending*	*TOT*
BENELUX	89%	6%	5%	100%
FRANCE	73%	27%	0%	100%
GERMANY	79%	12%	9%	100%
ITALY	3%	97%	0%	100%
SPAIN	5%	91%	4%	100%
U.K.	51%	42%	7%	100%

Figures 4 and 5 provide information on the maturities of domestic and cross-border repo transactions, respectively. Overall, it turns out that banks in Italy and Spain are primarily concentrating their activity on very short-term (T/N and S/N) trades[28]. Germany is by far the country, whose banks' activity is the most evenly spread along the maturity spectrum up to 3 months. The UK, Benelux and France are in a somewhat intermediate position.

To some extent, the concentration of activity involving banks located in Italy and Spain on the very short term is explained by the type of repo transaction, which prevails in both countries. Since buy/sell back transactions do not (normally) provide for margining, the longer the maturity of a transaction, the higher the counterparty/market risk associated to it. It is not infrequent that, for terms beyond one week, banks located in other countries refuse to conclude a deal with banks in Italy or Spain, because they know it would be an undocumented buy/sell back deal for which (unlike classic repos) they would have to allocate capital even if OECD government bonds are used as collateral.

The differences in transaction maturities across countries are also probably a signal of different approaches to the repo business. In all likelihood, concentration on very short-term repos is linked to a use of these instruments primarily in the most classic way, that is, in order to finance a bond portfolio (or to cover bond short positions) on a day-by-day basis.

By contrast, recourse to longer terms may indicate that repos are also used in more sophisticated ways. For example, as part of an arbitrage strategy against bonds, swaps, futures, options[29]. Alternatively, repos may be used to make speculative forward purchases (or

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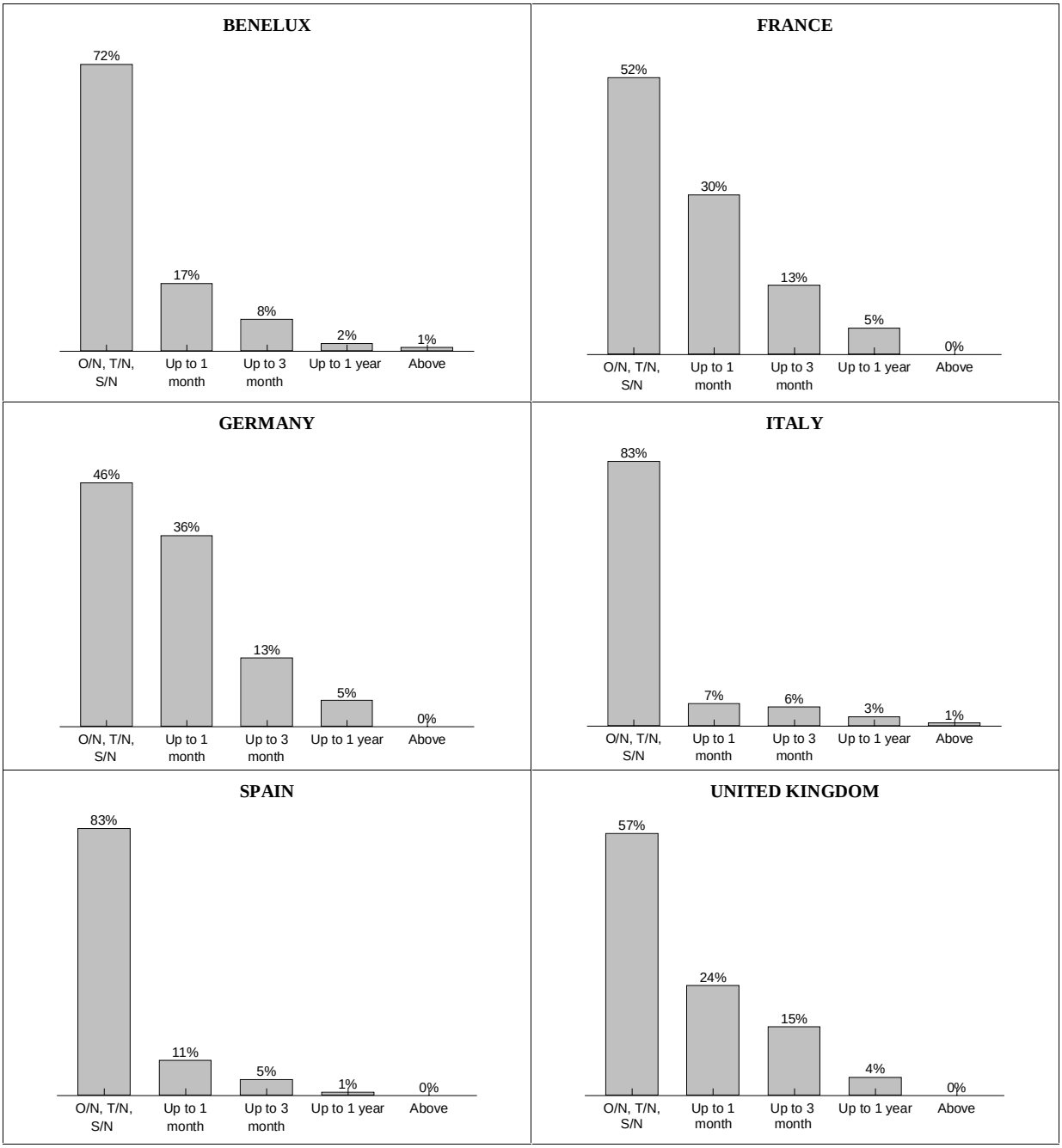
[28] *Given the small incidence of Spain's cross-border trades, we may neglect the information on Spain provided by figure 5.*

[29] *One particularly common strategy consists in (i) entering a reverse repo agreement in the cheapest to deliver Bund at some point before the Bund futures contract expires, (ii) selling the said Bund when its*

sales) of securities. Finally, this may involve actively intermediating repos and reverse repos and accepting mistmatched maturities between the two sides in order to "play" the repo yield curve (paradoxically, this is often called "matched book" trading).

Figure 4 – TERMS OF DOMESTIC REPO TRANSACTIONS

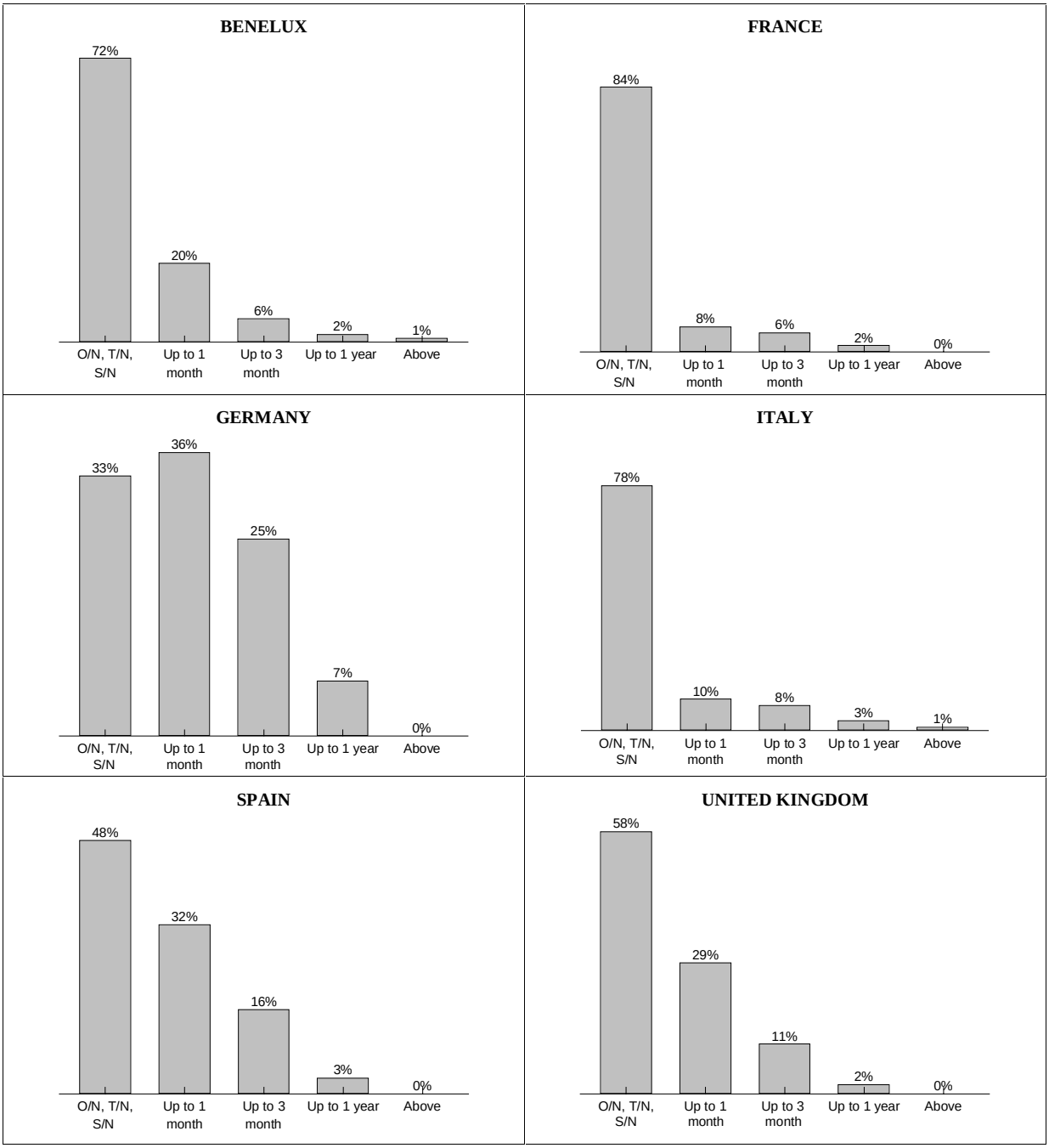
% of the total domestic transaction value



price rises in the proximity of the futures expiry date, (iii) buying the Bund back later, when its price has returned lower, (iv) delivering the Bund when the reverse repo comes due.

Figure 5 – TERMS OF CROSS-BORDER REPO TRANSACTIONS

% of the total cross-border transaction value



Finally, table 12 shows the share of repo transactions which are entered with counterparties that are not (commercial or investment) banks: funds, corporations and (presumably to a lesser extent) retail customers. Note that, in a domestic context, such share is especially significant in Italy, France and Spain while, when coming to cross-border trades, the share in question becomes remarkably high for the UK. The latter seems to be one additional indication of the international nature of the London-based business.

Table 12 – NON BANKING COUNTERPARTIES

% of the transaction value

	Benelux	France	Germany	Italy	Spain	U.K.
Domestic Transactions	1%	20%	14%	25%	21%	7%
Cross-Border Transactions	9%	8%	11%	3%	0%	27%

3.5 Conclusive remarks

An important word of caution to be made is that the survey presented in this section is based on a limited sample of (30) banks. Nevertheless, in view the fairly large size of the overall repo activity carried out by the respondent banks, the survey is deemed to provide useful and reliable information.

The evidence produced on the level of integration of the euro repo market is mixed.

On the one hand there are clear signs that the market is now more integrated that it used to be before the advent of the euro. The degree of openness to cross-border trades is, in general, quite high and cross-border activities are commonly reported to have grown both in terms of the value of transactions and in terms of the number of counterparties involved. The role played in the market by banks located in the UK is still dominant, but over the last two years it has probably weakened in favour of more cross-border trades between banks located in continental Europe. Some of the latter already trade actively on (at least some of) the government bonds issued in other countries.

On the other hand, it is also clear that a full integration of the repo market is still a long way down the road. Banks located in some countries still concentrate two thirds or more of their repo activities on their own domestic securities. Notwithstanding the recent improvements, cross-border trades are far from being evenly distributed across countries and London still channels almost two thirds of such trades (in value terms). The types of transactions are not homogeneous either across countries, although they are admittedly not homogeneous either inside individual countries. In the "General Collateral" segment of the market, repo rates tend to be (excessively) different for different types of collateral. As long as the factors of fragmentation mentioned at the beginning of this section (cross-border settlement difficulties, legal uncertainties, different tax treatments) will stay in place, full integration of the market will not be achieved (see also the Appendix for a discussion of these aspects).

At the two opposite ends of the "integration ladder" stand, on the one hand, the UK and, on the other, Spain. While the London financial centre looks fully internationalised, banks located in Spain tend to trade essentially with domestic counterparties and on domestic securities. Other countries represented in the survey appear to be in an intermediate position: the integration process has certainly begun, but it is also certain that it is not over.

German and Italian government bonds are those which, by far, are the most used as collateral. TheGerman government bonds dominate the market for "special" repos, where they become very actively traded especially when the Eurex futures contract based on these bonds (Bund) is close to expiry. Italian bonds are the most used in the "General Collateral" segment of the market, because of their high liquidity and the low probability that they become "special". The vast majority of repo trades on German, Italian, Benelux and French securities are carried out by counterparties, of which one at least is located *outside* the country of issuance.

APPENDIX

Repo Developments in the New Millennium[30]

by Godfried De Vidts (*Fortis Bank and European Repo Council*)

At the time of the introduction of the Euro, different views on the near term developments of the Euro repo markets circulated in the markets. Some banks clearly had the view that business would decrease very rapidly because a near total convergence would occur in the repo rates for General Collateral (G.C.). The traditional counterparties would leave aside smaller markets as the pool of collateral would be so huge that life was going to be much easier, no fragmentation of the European capital markets, no need to maintain different traders on the different European government bonds. It would be so easy to trade, especially for funding reasons, as one pool of collateral would be easily managed.

From the first days of the Euro this view was proven to be wrong. The main reason was not because traders couldn't agree on the fact that, for the short term of the yield curve in the repo markets, the difference between government bonds issued in Germany and for instance Italy as collateral was a factor for spreads in the G.C. markets to be maintained. Indeed, nothing had changed. Traders still had to keep an eye on all the different government bond markets involved. Some banks had not yet adopted different guidelines allowing them to accept all the in-countries government collateral. Clearly, fragmentation hadn't moved away overnight. The spread between the different underlying securities has now nearly disappeared with 5 b.p. between the highest and lowest quality being the norm.

The real difficulties proved to be the way settlements occur. Even after more than one year, cross border transfers of collateral remains problematic. The expected decline of domestic settlement in favour of the main international clearers on the continent has not occurred. In fact, it was clear that in order to compete in the Europe-wide Euro repo markets, one had to have domestic accounts in nearly all in-countries in order to be of any significance in the underlying repo transactions. It has even been suggested that some institutions have opened branches in other in-Euro countries in order to be able to deal in such domestic markets. Up to today, different cut-off times all over Europe are asking extra attention for management at the backoffices. An institution can have plenty of collateral in an international clearer, but if you want this collateral to be available at your national central bank settlement cut-off times need to be expected. Often it is even the case that the deadline to transfer the bonds from the depository where they are held is past, although at the receiving side there is no problem. Only one solution will be the correct one, real D.V.P. (delivery versus payment) of some sort. In order to achieve this, you really need one cut off time throughout each time zone. The idea sounds great, but it will involve numerous practical changes. There probably will be plenty of legal issues involved as well, especially as we go cross-border. The lack of a common legal law throughout Europe is a real problem.

It is clear that total volumes since last year have increased, probably due to the increase in cross border trades. The increased trading in specials with the German paper market with a diminished focus on specials in other Euro-area countries could be a partial explanation. It is however extremely difficult to measure if the total amount of trades in specials have increased or decreased compared with let's say one year ago. The size of tickets has clearly increased.

[30] *Any views expressed here are those of the author only.*

Often the collateral of the largest debtor countries are used for general collateral trading, be it as cash lender or even as cash taker. As the cash markets in the deposit markets are clearly loosing liquidity, the repo markets are the winners. More banks have seen closer co-operation within their organisation when the assets get allocated. The choice of government bonds one can choose from has clearly become easier within Europe, especially as the exchange risk has disappeared. Previous rules that an institution could only invest a small percentage of its assets in the non-domestic currency are changing, as there is only one currency between the 11 participating countries.

The new trading environment has also given birth to a new variation in the use of the repo product. Forward/forward repo's have popped up and are now traded in huge sizes on a daily basis, going out as far as two years to final maturity. New applications of existing products like the forward/forward repo require a renewed look at the system, legal agreements and credit lines. In this case, it is important to confirm immediately the outstanding obligation, whereas the allocation of the exact collateral seems to be less urgent. However, the underlying security can fluctuate sharply prior to the first settlement. A margin call or reprising of the transaction prior to the settlement of the first leg is necessary in most cases.

More medium and small sized banks are becoming end-users of the repo product. The ECB spreads liquidity around using collateralised operations. The zero cost in CAD when OECD government bonds are used as collateral gives birth to a even level playing field in bilateral repo's. Two years ago the investment banks had no access to interbank funding. Interbank funding was mainly a commercial bank tool. As the product has become popular throughout the Euro-in zone, it has clearly worked to the benefit of all involved, better liquidity, more transparency and increased protection. It also makes the task of the ECB a little easier. Some noises have been made about the difficulty of obtaining the necessary liquidity through the tenders as collateral was not always available at different banks. Clearly, the way cash is invested has to be adopted accordingly. The large pool of non-government bonds that can be given as collateral to the ECB has helped in widening the pool of collateral available. A need to increase the speed of the decision process for inclusion of an asset in the eligibility list, more clarity in the eligibility criteria and a harmonisation of rules of inclusion among central banks are tasks ahead of us.

Further integration is a must, given the positive benefits to be gained when using repo transactions in the financial markets. The revision of the PSA/ISMA GMRA will be another boost for the product. Better legal protection and continuous updates of the legal opinions under such an agreement will give more confidence to new and current participants in the market. The fragmented legal framework in Europe, the different market practices and the self-imposed and sometimes protectionist rules of financial institutions or markets slow down the product.

The initiative from the European Banking Federation, resulting in the creation of the new European Market Agreement, to be used for repo and derivatives shows clearly that difficulties remain in the creation of a single agreement. These different legal environments and to some degree fiscal differences make it extremely difficult to get this document accepted Europe-wide for the time being.

Further steps have been taken by the market participants to have a clear idea of potential differences between different legal contracts.

It is difficult to believe, but Europe has 29 different custodians, domestic and international. Major banks have usually a domestic account in each country in addition to the international clearers. Not very cost efficient, it also makes it difficult to manage the different collateral around. Complications with settlements occur far too much. Different deadlines and not fully

matching reporting requirements on cross-border transactions affect liquidity. The industry, which ultimately has to pay all transaction costs is trying to guide all custodians into further co-operation and mergers. Clearly, this will come in the not so distant future between domestic and international clearers. The recent merger of the stock exchanges in Amsterdam, Paris and Brussels into Euronext is witness of what is to come.

Cedel Bank and Deutsche Borse created recently Clearstream. Euroclear, which is going to change into Euroclear Bank in the near future, has recently signed a merger agreement with Sicovam France.

The ECB regularly consults with the markets, with traders, as well as back-office or settlement people. The authorities realise and the market accepts that the Euro is still a new currency. Certain problems remain but the will is there to make the necessary changes in order to create a bigger more liquid market.

An impression prior to Y2K of relatively few new initiatives in the markets was created. But some very significant developments prior to the millennium have created a momentum that will be felt for months and years to come.

The main trigger was the creation of a central clearing counterparty, allowing for netting of different underlying transactions. London Clearing House started in the summer of 1999 with its Repoclear concept. Clearnet has been doing exactly that in France for the domestic markets. Both target the European wide markets. Although not all underlying collateral is traded through these netting systems, given time, the whole European securities markets could be traded through those systems.

At the end of last year, the E.S.C.C.(European Settlement Clearing Corporation) was launched as the merger of netting initiatives by London Clearing House, Euroclear and G.S.C.C.. In the spirit of what the industry is asking, those institutions worked out an agreement to provide one single platform for netting through Repoclear. It can only be applauded as the right thing to do. The market is divided enough without creating new initiatives increasing the market fragmentation in simular products. To the benefit of the repo participants, further mergers or co-operation agreements with different netting providers is the only way forward.

At the time of writing the German, French and Belgian government bond markets have been acceptable collateral for these central clearing parties. Developments are currently going on in the Italian repo markets, to be followed by the UK, Netherlands and others. On top of repo transactions, cash transactions will be introduced sometime in the spring of 2000 (by cash transactions I mean purchase/sale transactions of securities).

By using a central clearing counterparty the market has clearly gained some momentum. It decreases the use of lines between counterparties, leaving extra room for new bilateral trades. It decreases the burden on the operations side, an element often neglected but terribly important. As a consequence, trading will become easier as the central clearing counterparty has an independent settlement facility (you can use your preferred custodian). This will increase volume in the markets, making it once again more open to new banks and will replace the classical money market operations.

Trading systems for repo transactions are mushrooming. Specially created organisations or the active brokers in the repo market have recently developed repo trading systems using the latest technology. It is all based on screen trading on specific securities or G.C collateral. As these systems are becoming more known, further developments to fine-tune the systems towards the users will be necessary.

The European Repo Council (a merger of the previously known ISMA Repo subcommittee and the workgroup of ACI, The Financial Markets Association) has and will clearly continue to play an important role in all current developments. It is a workgroup involving a wide range of market participants in the European repo markets, irrespective of what organisation they belong to, across all borders.

The E.R.C. creates the basis for discussions concerning legal issues, custodial questions, market practise rules, and infrastructure developments among others. It notably maintains a dialogue with the national central banks and the E.C.B., as well as other financial organisations and clearly paves the way forward for a deeper and more efficient market in Europe.

Simular to an initiative in the US, the E.R.C. tried to develop an inter-dealer triparty product across the international custodians present in Europe. A list of different sets comprising of different baskets of securities was agreed upon. To have a maximum benefit of this new variation of triparty, cross-bridge settlement is clearly a must. Efforts to introduce this product across the international custodians have clearly failed, but in the context of the consolidations and mergers that are currently in full swing, it is only a question of time before this can be achieved.

Clearly, Europe is moving forward at a rapid pace. A whole range of different legal agreements are used for different products, or even for the same product. At the request of the E.R.C. the law firm Freshfield has been commissioned by ISMA to produce a comparison between the E.M.A., the PSA/ISMA GMRA, the 2000 TBMA/ISMA GMRA (new version), the O.S.L.A. agreement and the GMSLA (new Global Master Securities Lending Agreement). A master of the master agreement will probably be a help in order to safeguard an as perfect as possible legal framework across products, in order to minimise risks in an ever growing financial markets.

The market never sleeps, new initiatives will be introduced. Repo will be part of the changing environment as the product is sandwiched between the short and the long end of the trading activities in the financial markets.