

International Securities Market Association

European repo market survey
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This report has been commissioned by the International Securities Market Association (ISMA) in particular support of members of ISMA's European Repo Council (ERC) and in the interests of the international securities market as a whole.

Its purpose is to help participants in, and observers of, Europe's cross-border repo market to gauge the size of the market.

All statements, opinions and conclusions contained within this report are made in a personal capacity by the author, are his sole responsibility and do not represent the opinion of ISMA, which has neither taken an official position on the issues discussed, statements made and conclusions drawn herein nor sought to verify the information, statistics, opinions or conclusions provided.

ABOUT THE AUTHOR

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The author also acts as an independent consultant providing research and training on the international money, securities and derivatives markets to professional market associations, government agencies, regulatory authorities, banks, brokers and financial information services.

Mr. Comotto has written a number of books and articles on a range of financial topics, including the foreign exchange and money markets, swaps and electronic trading systems. He takes particular interest in the impact of 'electronic brokers' on the foreign exchange market and in the more recent introduction of electronic trading systems into the bond and repo markets. He is a regular speaker at conferences on the repo market and on electronic trading in the fixed-income market.

The author served for ten years at the Bank of England, within its Foreign Exchange Division and on secondment to the International Monetary Fund in Washington DC.

EXECUTIVE SUMMARY

In June 2003, the European Repo Council (ERC) of the International Securities Market Association (ISMA) conducted the fifth in its series of semi-annual surveys of the repo market in Europe.

The latest survey asked a sample of financial institutions in Europe for the value of their repo contracts that were still outstanding at close of business on June 11, 2003. Replies were received from 84 offices of 72 financial groups, mainly banks.

Total repo business

The total value of repo contracts outstanding on the books of the 84 institutions who participated in the latest survey was EUR 4,050 billion, compared to EUR 3,377 billion in December 2002 and EUR 3,305 billion in June 2002. In addition, some institutions in the survey also had repo contracts outstanding with the European Central Bank (ECB) at the close of business on June 11, 2003, to the total value of EUR 170 billion.

The headline numbers produced by the survey fix a lower boundary to the size of the European repo market. However, it is not possible to use the headline numbers to measure the growth in the market. Some of the changes between surveys represent the entry and exit of institutions into and out of the survey. Instead, year-on-year growth in the European repo market was measured by comparing the returns from the 36 institutions that have participated in all five surveys. The aggregate outstanding value of repo contracts at these institutions grew by 17.1% over the year to June 2003. Virtually all of this growth occurred over the six months since the last survey in December 2002. This pattern is consistent with the increased levels of activity seen in European government bonds during this period.

Counterparty analysis

The latest survey showed that the share of electronic trading continued to grow over the first half of 2003, reaching 18.0% of the total value of outstanding contracts in June 2003, compared with 16.8% in December 2002 and 12.7% in June 2002. The number of survey participants trading repo electronically increased to 51 in June, from 48 in December 2002 and 39 in June 2002.

Geographical analysis

The survey shows that 38.1% of reported outstanding repo contracts were with domestic counterparties, 52.8% were cross-border and 9.0% were negotiated anonymously on an Automated Trading System (ATS) and settled with a central clearing counterparty (CCP). The share of domestic business has therefore continued to decline, falling from 44.1% in December 2002 and 53.2% in June 2002. In contrast, the share of anonymous electronic trading has continued to grow, increasing from 6.6% in December 2002 and 5.6% in June 2002.

In June, 31 institutions reported anonymous electronic trading, compared to 35 in December 2002 and 21 in June 2002.

Settlement analysis

In the latest survey, 6.2% of total outstanding business was settled through tri-party repo arrangements, compared to 7.3% in December 2002 and 6.3% in June 2002. However, the number of institutions in the survey using tri-party repos increased to 33 from 30 in December 2002 and 29 in June 2002.

Cash currency analysis

In the latest survey, 75.6% of reported outstanding repos were denominated in euros (EUR), 8.8% in pounds sterling (GBP), 9.4% in US dollars (USD) and 3.3% in Japanese yen (JPY). The shares of the euro and the pound fell, while the shares of the dollar and yen increased.

Collateral analysis

The share of repo collateral held by survey participants which was issued in countries in the Eurozone was virtually unchanged at 75.4%. However, within this total, there were large increases in the shares of collateral issued in Germany (to 31.3% from 28.9% in December 2002) and minor Eurozone countries (to 7.0% from 1.6%), largely at the expense of collateral issued in Italy (down to 16.0% from 18.5%).

Outside the Eurozone, the share of collateral issued in the UK fell to 9.6% from 10.7%.

The share of equity increased significantly, although from a low base, to account for 1.0% of the total value of collateral outstanding.

Maturity analysis

Whereas the December 2002 survey showed that the importance of very short-terms to maturity (from overnight to 1-week) and longer terms (over six months) fell back towards year-end, the latest survey reveals a recovery. The share of intermediate terms (between 1-week and 6 months) and forward-forward repos demonstrated the inverse pattern. This tends to confirm previous observations that the average remaining term to maturity lengthens at year-end as dealers seek to lock in longer-term funding over the turn of the year. The last two year-ends have also coincided with periods of heavier trading in response to active interest rate

management by central banks. Such activity tends to employ longer-term and forward-forward repos.

Product analysis

The number of institutions that undertook securities lending and borrowing from their repo desks increased to 45, up from 43 in December 2002 and close to the 46 reported in June 2002. Moreover, the share of total business that was accounted for by securities lending and borrowing was steady at 13.5%. Equity accounted for 4.3% of this business.

Concentration analysis

In the latest survey, the concentration of the survey sample increased for the first time. The top ten institutions in the survey accounted for some 53.1% of total reported business (from 50.9% in December 2002), largely at the expense of the institutions ranked 21-30. Thus, the top twenty accounted for 75.6% (from 73%), but the share of the top thirty was virtually unchanged at 87.8%.

CHAPTER 1: THE SURVEY

On June 11, 2003, the European Repo Council (ERC) of the International Securities Market Association (ISMA) conducted its fifth semi-annual survey of the repo market in Europe.

The ISMA survey has been supported by the ACI – The Financial Markets Association, and welcomed by the European Central Bank (ECB). The survey was managed and the results analysed on behalf of ISMA by the ISMA Centre at Reading University in England under the guidance of the ERC Steering Committee (“ERC Committee”).

1.1 What the survey asked

The survey asked financial entities in a number of European centres for the value of the cash side of repo and reverse repo contracts still outstanding at close of business on Wednesday, June 11, 2003.

The questionnaire also asked institutions to analyse their business in terms of type of counterparty, currency, type of contract, type of repo rate, remaining term to maturity, method of settlement and source of collateral. In addition, it asked about securities lending and borrowing conducted on repo desks.

The detailed results of the survey are set out in Table 3.1 at the beginning of Chapter 3. An extract of the accompanying Guidance Notes is reproduced in Appendix A.

In the latest survey, an aggregate return for voice-brokers based in London (but including data from some of their continental European offices) was received from the Wholesale Market Brokers’ Association (WMBA). Data was contributed by six voice-brokers active in the European repo market (GFI, Icap, Martin Brokers, Prebon Marshall Yamane, Tradition and Tullett Liberty). The total value of outstanding contracts reported by the WMBA was about 94% of the total value of outstanding voice-

brokered contracts reported by the 84 principal counterparties who participated in the latest survey. The WMBA data were broken down by regional location of clients, currency, remaining term to maturity and type of collateral.

1.2 The response to the survey

The latest survey was completed by 84 offices of 72 financial groups. This compares with 82 offices of 76 groups in December 2002 and 86 offices of 77 groups in June 2002. While 12 institutions which participated in the December 2002 survey dropped out of the latest survey, 13 new institutions joined and one institution from the June 2002 survey which had dropped out in December 2002 rejoined.

The institutions surveyed were headquartered in 19 European countries (73), as well as in North America (7) and Japan (4). Of the European countries represented, 15 were in the EU and 12 in the Eurozone. Many institutions provided data for their entire European repo business. Others provided separate returns for each office with its own repo book. A list of the institutions included in the survey appears in Appendix B. (Participants in previous surveys are listed in Appendix C.)

1.3 The next survey

The next ISMA survey is scheduled to take place at close of business on Wednesday, December 10, 2003.

Any financial institution wishing to participate in the next survey can download copies of the questionnaire and accompanying Guidance Notes from ISMA’s web site. New forms will be published in October at the following website: www.isma.org/surveys/repo.

Questions about the survey should be sent by e-mail to reposurvey@isma.org.

Institutions who participate in the survey receive, in confidence, a list of their rankings in the various categories of the survey.

CHAPTER 2: METHODOLOGICAL ISSUES

Issues of methodology raised in the survey have been discussed in the reports of previous surveys. These can be found on ISMA's website www.isma.org.

CHAPTER 3: ANALYSIS OF SURVEY RESULTS

The aggregate results for all five surveys are set out in Table 3.1.

Q1 What are the total gross values of cash due to be repaid by you and repaid to you on repo transactions maturing after the survey date (figures in billions)					
	2,157	2,400	3,305	3,377	4,050
Of the amounts given in response to question (1) above:					
	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03
1.1 How much was transacted:					
direct with counterparties					
• in the same country as you	23.2%	19.1%	21.7%	20.9%	19.6%
• cross-border in (other) Eurozone countries	11.8%	10.8%	13.5%	10.5%	14.5%
• cross-border in non-Eurozone countries	11.5%	15.1%	18.5%	15.4%	17.7%
through voice-brokers					
• in the same country as you	28.3%	24.0%	17.4%	15.2%	13.6%
• cross-border in (other) Eurozone countries	11.4%	10.8%	10.2%	11.7%	12.0%
• cross-border in non-Eurozone countries	5.8%	7.3%	5.7%	9.6%	4.2%
on ATs with counterparties					
• in the same country as you	1.7%	4.8%	5.0%	6.8%	4.9%
• cross-border in (other) Eurozone countries	1.5%	1.4%	1.7%	2.0%	3.0%
• cross border-border in non-Eurozone countries	0.3%	0.6%	0.7%	1.4%	1.4%
• anonymously through a central clearing counterparty	4.6%	6.2%	5.6%	6.6%	9.0%
1.2 How much of the cash is denominated in:					
• EUR	73.3%	75.7%	75.4%	77.2%	75.6%
• GBP	11.2%	11.4%	10.5%	10.0%	8.8%
• USD	9.5%	7.8%	8.2%	7.7%	9.4%
• SEK, DKK	1.6%	1.2%	1.1%	2.0%	2.0%
• JPY	3.1%	2.6%	3.6%	2.2%	3.3%
• other currencies	1.3%	1.4%	1.1%	0.8%	0.9%
1.3 How much is cross-currency?	1.9%	3.1%	3.8%	2.3%	1.0%
1.4 How much is:					
• classic repo	83.9%	79.8%	78.8%	79.5%	79.0%
• documented sell/buy-backs	8.2%	8.5%	12.5%	10.8%	13.0%
• undocumented sell/buy-backs	7.9%	11.7%	8.7%	9.7%	7.9%
1.5 How much is:					
• fixed rate	90.4%	86.6%	81.2%	89.7%	89.9%
• floating rate	5.3%	8.1%	12.1%	7.0%	5.6%
open	4.3%	5.3%	6.7%	3.3%	4.5%

	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03
1.6 How much fixed and floating rate repo is (1.6.1) for value before the weekend after the survey date and has a remaining term to maturity of:					
• 1 day	14.3%	15.5%	18.6%	15.6%	18.7%
• 2-7days	30.3%	17.8%	22.8%	20.1%	22.0%
• more than 7 days but no more than 1 month	17.6%	24.9%	25.8%	27.6%	26.1%
• more than 1 month but no more than 3 months	11.4%	13.0%	9.9%	14.8%	12.0%
• more than 3 months but no more than 6 months	6.9%	6.7%	6.9%	9.2%	7.1%
• more than 6 months	10.7%	13.9%	11.4%	5.9%	7.6%
• forward-forward repos	8.8%	8.1%	4.6%	6.8%	6.5%
1.7 How much is tri-party repo:	5.5%	4.2%	6.3%	7.3%	6.2%
• for fixed terms to maturity	67.0%	88.1%	91.8%	79.3%	90.8%
• on an open basis	33.0%	11.9%	8.2%	20.7%	9.2%
1.8 How much is against collateral issued in:					
Austria					
• by the central government	1.0%	0.4%	0.7%	0.5%	0.7%
• by other issuers	0.0%	0.1%	0.1%	0.1%	0.0%
Belgium					
• by the central government	7.5%	6.2%	4.5%	5.1%	5.0%
• by other issuers	0.0%	0.0%	0.1%	0.2%	0.2%
Denmark					
• by the central government	0.4%	0.3%	0.3%	0.6%	0.6%
• by other issuers	0.3%	0.3%	0.1%	0.3%	0.4%
Finland					
• by the central government	0.1%	0.1%	0.2%	0.3%	0.3%
• by other issuers	0.0%	0.0%	0.0%	0.1%	0.0%
France					
• by the central government	5.8%	6.3%	13.8%	9.8%	8.9%
• by other issuers	0.4%	0.7%	1.0%	0.9%	0.9%
Germany					
• by the central government	29.0%	33.2%	23.2%	24.2%	26.6%
• pfandbrief	3.0%	2.3%	1.8%	2.2%	2.6%
• by other issuers	2.1%	1.6%	1.9%	2.5%	2.1%
Greece					
• by the central government	1.5%	1.5%	1.0%	1.7%	2.0%
• by other issuers	0.0%	0.0%	0.1%	0.0%	0.3%
Ireland					
• by the central government	0.0%	0.0%	0.1%	0.1%	0.1%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.1%
Italy					
• by the central government	17.8%	17.3%	17.5%	17.2%	15.1%
• by other issuers	0.4%	0.5%	0.5%	1.3%	0.9%

	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03
Luxembourg					
• by the central government	0.0%	0.0%	0.0%	0.0%	0.1%
• by other issuers	0.1%	0.2%	0.2%	0.2%	0.3%
Netherlands					
• by the central government	1.4%	1.2%	1.3%	1.5%	1.8%
• by other issuers	0.3%	0.3%	0.5%	0.5%	0.5%
Portugal					
• by the central government	0.3%	0.2%	0.3%	0.2%	0.3%
• by other issuers	0.0%	0.0%	0.0%	0.1%	0.4%
Spain					
• by the central government	5.4%	4.6%	5.0%	6.7%	6.0%
• by other issuers	0.1%	0.4%	0.5%	0.3%	0.2%
Sweden					
• by the central government	1.1%	0.7%	0.7%	1.0%	1.1%
• by other issuers	0.2%	0.2%	0.2%	0.5%	0.3%
UK					
• by the central government	11.2%	9.8%	9.9%	9.3%	8.5%
• by other issuers	0.6%	1.5%	1.1%	1.4%	1.1%
US but settled across EOC/CS	3.0%	2.3%	2.8%	2.6%	2.1%
• other countries	6.9%	6.5%	9.9%		
EU Accession countries				0.3%	0.2%
other OECD				6.9%	7.0%
non-OECD EMEA				0.2%	0.4%
non-OECD Asian & Pacific				0.1%	0.2%
non-OECD Latin America				0.1%	0.2%
equity				0.1%	1.0%
collateral of unknown origin	not canvassed	1.2%	0.5%	0.9%	1.5%
Q2 What is the total value of securities loaned and borrowed by your repo desk: to/from counterparties					
in the same country as you	56.2%	49.5%	47.8%		
• in fixed income				49.7%	44.6%
• in equity				0.5%	2.3%
cross-border in (other) Eurozone countries	24.4%	15.9%	24.9%		
• in fixed income				22.3%	20.5%
• in equity				0.1%	0.8%
cross-border in non-Eurozone countries	19.4%	34.7%	27.3%		
• in fixed income				27.2%	30.5%
• in equity				0.2%	1.2%
for which the term to maturity is					
• fixed	72.3%	70.8%	78.5%	75.5%	72.9%
• open	27.7%	29.2%	21.5%	24.5%	27.1%

Total repo business (Q1)

The total value of repos and reverse repos outstanding on the books of the 84 institutions which participated in the survey at close of business on June 11, 2003, was EUR 4,050 billion. This amount was almost exactly split between repos and reverse repos. The values measured by the survey are gross figures, which means that they have not been adjusted for the double counting of transactions between pairs of survey participants. Nor does the survey measure the value of repos transacted with central banks as part of the latter's monetary policy operations. However, the ECB provided a value for "official" repos outstanding at close of business on June 11 with those participants in the ISMA survey who are eligible to participate in the ECB's repo operations and who agreed to be included. This was EUR 170 billion, which represents some 48.2% of the value of outstanding repos between all eligible banks and the ECB at close of business on June 11. This compares with EUR 129 billion and 58%, respectively, at the time of the December 2002 survey.

In order to gauge the year-on-year growth of the European repo market (or at least that segment represented by the institutions which participated in the ISMA survey), it is not valid to simply compare the total value of repos and reverse repos with the same figures in previous surveys. Some of the changes will represent the entry and exit of institutions into and out of the survey. To avoid this problem, comparisons were made only of the aggregate business reported by institutions which had participated in several surveys:

- The repo business of the 36 institutions which have participated in all five surveys grew by 17.1% year-on-year to June 2003. Business grew by only 0.1% in the first half of the year (June to December 2002), but by 17.0% in the second half (December 2002 to June 2003).

- The repo business of the 62 institutions which participated in the latest survey and in at least the June 2002 survey grew by 21.6%.

The conclusion is that growth in the European repo market recovered strongly between December 2002 and June 2003 after having stagnated in the previous six months. This is consistent with the intense activity seen over this period in European government bonds, which provide the bulk of collateral in the European repo market.

Individual repo books continued to show an extremely wide range of year-on-year percentage changes. Some very large books doubled and tripled in size. Percentage changes in smaller books were even more dramatic. Of the 62 institutions that participated in the June 2003 and June 2002 surveys, the books of 18 contracted but the remainder expanded. The average size of repo books in June 2003 was larger than in December 2002 at EUR 48 billion (standard deviation EUR 76 billion).

Counterparty analysis (Q1.1)

The share of reported outstanding repos negotiated directly with the other counterparties (ie not through a voice-broker or over an ATS) was 51.3% compared to 59.3% in June 2002.

A sub-set of direct repos, equivalent to 6.2% of the total outstanding business, was settled through tri-party repo arrangements, virtually the same as in June 2002, but down from 7.3% in December 2002. In total, 33 out of the 84 survey participants used tri-party repos. This compares with 29 in June 2002.

The fall in the share of tri-party repo is puzzling. There is anecdotal evidence to suggest that there is growing interest in the product. The survey data was analysed for the 17 users of tri-

Numbers of participants reporting particular types of business					
	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03
ATS	19	28	39	48	51
anonymous ATS	13	16	21	35	31
voice-brokers	41	43	67	65	61
tri-party repo	21	22	29	30	33
Total	48	61	86	82	84

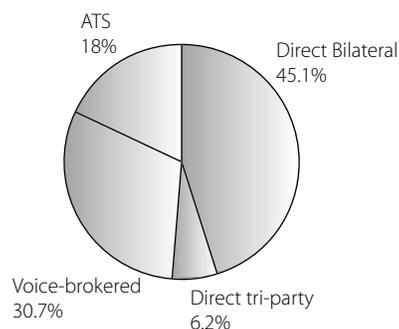
party repo who have participated in all five surveys. In the year to the June 2002 survey, the tri-party business of these 17 institutions grew by 106%, whereas their total repo business grew by 63%. The share of tri-party business therefore increased from 5.8% to 7.2%. In the year to June 2003, their tri-party business grew by only 19%, but their total repo business by just 10%. This took the share of tri-party repo to 8.0%. Why then has tri-party repo not consistently increased as a share of the whole survey? The reason is that most new entrants to the survey who are also users of tri-party repo have diluted its share (as will the entrance of non-users of tri-party repo). In fact, the absolute amount of the tri-party repo business by new entrants has generally declined after they have entered the survey, whereas their overall repo business has tended to grow. There does not appear to be any systematic difference between the types of institution in the first and subsequent surveys. The divergence in trends in tri-party repo business would therefore seem to be coincidental, which means that the aggregate results of the survey are probably a fair reflection of the general market trend.

The share of voice-brokers in June 2003 was 30.7% compared to 34.4% in June 2002. Of the 84 participants in the latest survey, 61 reported using voice-brokers, down from 67 in June 2002.

The share of inter-dealer ATSs was 18.0% compared to 12.7% in June. The number of

institutions in the latest survey using ATSs increased from 39 to 51 over the year.

Figure 3.1 – Counterparty analysis



Geographical analysis (Q1.1)

In June 2003, 38.1% of reported outstanding repo contracts were with domestic counterparties, 52.8% were cross-border and 9.0% were negotiated anonymously on an ATS and settled with a central clearing counterparty (CCP). Of the cross-border business, 29.5% was with counterparties in the Eurozone and 23.3% was with counterparties outside the Eurozone (but note that the survey cannot identify the location of the reporting counterparty).

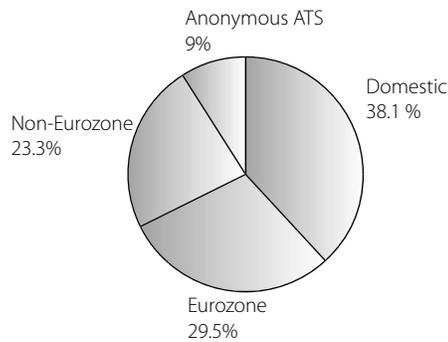
The share of domestic business has declined continuously since the first survey (from 53.1% in June 2001).

The share of business across ATSs offering anonymous electronic trading continued its recovery from a low of 5.6% in June 2002 to reach 9.0% in June 2003.

In the latest survey, 31 institutions reported anonymous electronic trading, compared to 21 in June 2002.

In the case of the voice-brokers represented by the WMBA data, of the contracts negotiated through those firms and still outstanding on the survey date, a somewhat larger proportion was between domestic counterparties than was reported in the main survey (47.9% compared to 38.1%). This may reflect a bias in the activities of these firms towards business between institutions in the London market. The remaining business was cross-border, mainly between counterparties both within the Eurozone (31.5%) or between counterparties of which only one was in the Eurozone (18.6%). The residual 2.1% was cross-border between counterparties both outside the Eurozone. These figures provide some insight into intra-Eurozone repo business (but unfortunately, we do not know how much domestic business was within Eurozone countries).

Figure 3.2 – Geographical analysis



Settlement analysis (Q1.7)

Of the tri-party repo business, the share of fixed-term repos was 90.8%, similar to the level in June 2002 (91.8%).

Cash currency analysis (Q1.2)

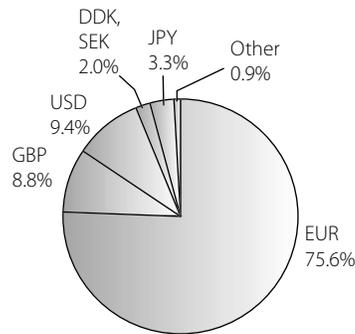
In this survey, 75.6% of reported outstanding repos were denominated in euros

(EUR), 8.8% in pounds sterling (GBP), 9.4% in US dollars (USD) and 3.3% in Japanese yen (JPY), compared to, respectively, 75.4%, 10.5%, 8.2% and 3.6% in June 2002.

The reported share of cross-currency repos continued to fall back in June 2003, touching 1.0%, compared to 3.8% in June 2002. However, the response rate to this question remains low: only 21 survey participants answered this question.

In the case of the voice-brokers represented by the WMBA data, the importance of the euro was lower (70.7%) but still very significant. The shares of the US dollar and yen were also lower (2.8% and 0.2%, respectively), while the shares of the pound sterling and of the Danish krone and Swedish krona were much higher (18.5% and 6.0%, respectively).

Figure 3.3 – Currency analysis



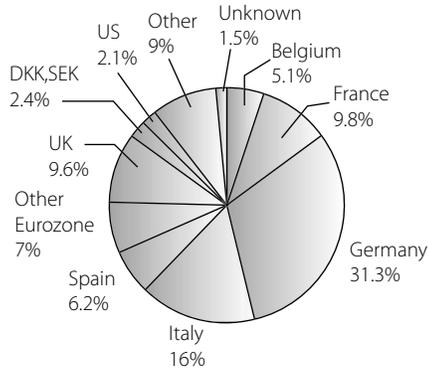
Collateral analysis (Q1.3 and Q1.8)

75.4% of repo collateral held by survey participants was issued in countries in the Eurozone, compared with 74.4% in June 2002. There were large increases in the share of collateral issued in Germany (31.3% from 26.9%) and other Eurozone countries (7.0% from 4.6%) at the expense of collateral issued in France (9.8% from 14.7%) and, to a lesser extent, Italy (16.0% from 18.0%),

The bulk of collateral issued in “other countries” continues to be fixed income securities

issued in "other OECD countries" (ie not the EU, the US or the EU Accession countries) at 7.0%. The share of equity collateral increased significantly, but from a low base to just 1.0%.

Figure 3.4 – Collateral analysis

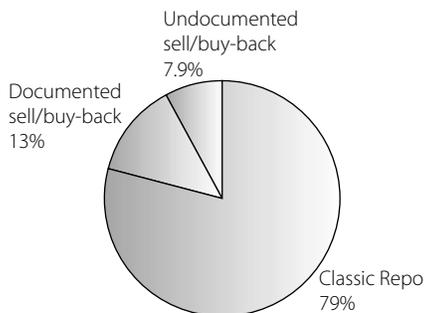


The share of collateral issued by central governments was down to 88.1% from 90.6% in June 2002. However, government bond collateral remained much more important in the voice-brokered business reported by the WMBA (about 93.4%).

Contract analysis (Q1.4)

79.0% of reported outstanding repo contracts were classic repo, 13.0% were sell/buy-backs documented under agreements such as the TBMA/ISMA or PSA/ISMA Global Master Repurchase Agreements (GMRA) and 7.9% were undocumented sell/buy-backs. These figures are very similar to those in June 2002 (78.8%, 12.5% and 8.7%, respectively).

Figure 3.5 – Contract analysis

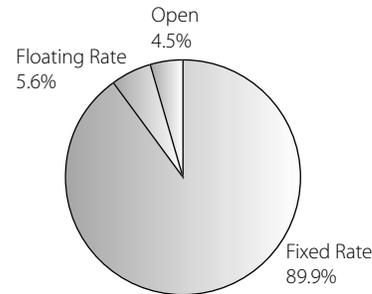


Repo rate analysis (Q1.5)

The share of fixed-rate repos remained high at 89.9%, compared with 89.7% in December 2002 but only 81.2% in June 2002. Floating-rate repos declined further, reaching 5.6% from 12.1% in June 2002.

In total, 24 institutions reported floating-rate business and 30 reported open repos.

Figure 3.6 – Repo rate analysis



Maturity analysis (Q1.6)

Short-term transactions became more important with 40.7% of business having remaining terms to maturity of one week or less, and 66.8% being for one month or less (compared to 35.7% and 63.3%, respectively, in December 2002, and 41.4% and 67.2%, respectively, in June 2002).

Whereas the December 2002 survey suggested that the importance of very short-terms to maturity (from overnight to 1-week) and longer terms (over six months) fell back towards year-end, the latest survey shows a recovery by mid-year. The shares of intermediate terms (between 1-week and 6 months) and forward-forward repos show the inverse pattern. This tends to confirm previous observations that the average term to maturity lengthens at year-end as dealers seek to lock in longer-term funding over the turn of the year. The last two year ends have also coincided with periods of heavier trading in response to active interest rate

management by central banks. Interest rate positioning by dealers tends to use longer-term and forward-forward repos.

In continued contrast to the maturity distribution of the business reported by the 84 institutions reporting as principal counterparties, the voice-brokered business reported by the WMBA had a much longer average remaining term to maturity. Only 21.4% was for one week or less, and 33.4% for one month or less. 21.0% was for longer than six months (compared to 7.6% for principal counterparties) and 26.4% was forward-forward repos (compared to 6.5% for principal counterparties). This is much as expected. Very short-term repos are more exposed to competition from electronic trading and voice-brokers have a much greater financial incentive to arrange longer-term transactions. (See Figure 3.7)

Product analysis (Q2)

45 institutions undertook securities lending and borrowing on their repo desks (separately from their securities lending and borrowing desks). The share of total business accounted for by securities lending and borrowing was 13.5% compared with 12.5% in June. Fixed income securities accounted for 95.6% or more of lending and borrowing from repo desks, down from 99.2% in December 2002 (the remainder is equity).

Figure 3.8 – Product analysis

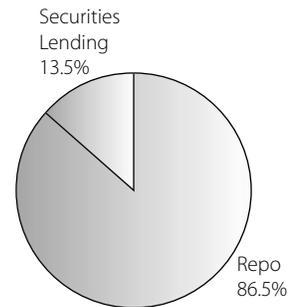
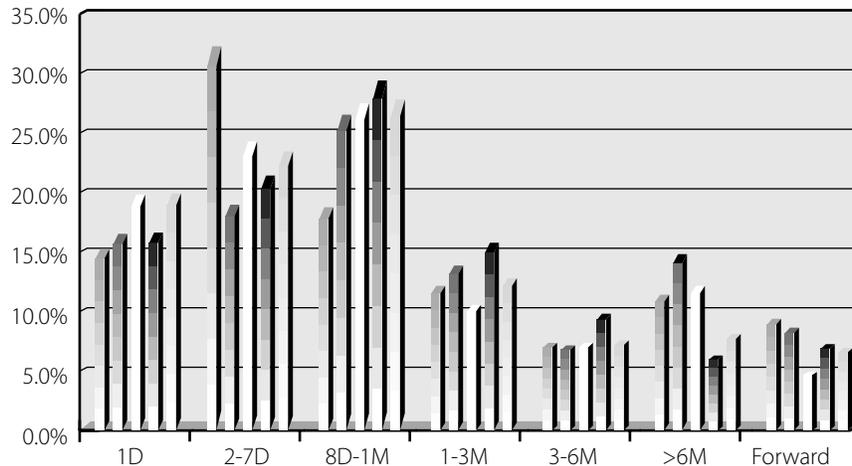


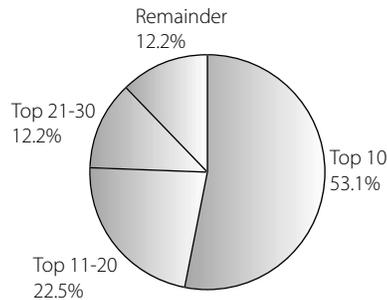
Figure 3.7 – Maturity analysis comparison (left to right columns show June 2001, December 2001, June 2002, December 2002, June 2003)



Concentration analysis

The concentration of the survey sample, which has fallen over previous surveys, increased in June 2003 compared with December 2002. The top ten institutions in the survey accounted for 53.1% against 50.9% in December (but still down from 55% in June 2002). The top twenty accounted for 75.6% (up from 73% in December, but down from 78% in June 2002) and the top thirty for 87.8% (very similar to December 2002, but down from 90% in June 2002).

Figure 3.9 – Concentration analysis



Although the apparent concentration of business is still high, this does not mean that the largest institutions have commensurate market power. A better measure of market concentration – often used in competition analyses – is the Herfindahl¹ Index. The Index for the latest survey fell to 0.041 from the 0.043 in June 2002.

¹ The Herfindahl Index is the sum of the squares of market shares divided by the square of the sum of market shares. The higher the index, the lower the degree of competition. If the index is higher, the more a single institution has a dominant market share and/or the more insignificant the market shares of all the other survey participants. A market in which several institutions have very large market shares can therefore have a relatively low index.

CHAPTER 4: CONCLUSION

The ISMA survey on June 11, 2003 pushed the lower boundary for the size of the European repo market up to EUR 4,050 billion in terms of outstanding contracts. Although most of the largest participants in that market contribute to the survey, it is clear that the actual size of the market must be very much larger than the headline figure for the survey.

The survey also revealed that robust growth in the European repo market resumed in the first half of 2003. The sample of the market which had participated in all five surveys to date grew by 17.1% year-on-year, almost entirely in the second six months. This is consistent with the strong activity seen in the market in European government bonds (which account for the bulk of European repo collateral) over that period.

The market share of electronic repo trading recovered by June 2003 and has doubled year-on-year. The majority of survey participants use electronic trading systems. The share of anonymous electronic trading now accounts for almost half of the total reported share of electronic trading of repos.

In contrast to electronic trading, the use of tri-party repo arrangements continues to stagnate.

The survey confirmed the predominance of EU government fixed income securities as collateral in the European repo market, although there was some suggestion of growing diversity in collateral and the survey picked up greater use of equity.

The importance of intermediate terms (between 1-week and 6 months) and forward-forward repos decreased over the six months to June 2003, largely repeating the pattern of

seasonal fluctuations seen in previous surveys. Such maturities appear to be boosted in the December surveys by the need of dealers to lock in longer-term funding over the year-end. The last two year ends have also coincided with periods of heavier trading in response to active interest rate management by central banks.

APPENDIX A: SURVEY GUIDANCE NOTES

The following extract is based on the Guidance Notes issued to participants in conjunction with the survey that took place on June 11, 2003

The data required by this survey are: the total value of the repos and reverse repos booked by your repo desk that are still outstanding at close of business on Wednesday, June 11, 2003, and various breakdowns of these amounts.

Branches of your bank in other countries in Europe may be asked to complete separate returns. If your repo transactions are booked at another branch, please forward the survey form to that branch. If branches of your bank in other countries run their own repo books, please copy the survey form to these branches, so that they can also participate in the survey. Please feel free to copy the survey form to other banks, if you discover that they have not received it directly.

General guidance

a) Please fill in as much of the form as possible. For each question that you answer, you will receive back your ranking in that category.

b) You only need to give figures to the nearest million. However, if you give figures with decimal points, please use full stops as the symbols for the decimal points, not commas. For nil returns, please use zeros, not dashes or text.

c) Include all classic repos, sell/buy-backs and similar types of transaction (e.g. pensions livrées). There is a separate question (see question 2) on securities lending and borrowing transactions (including securities lending and borrowing against cash collateral).

d) Exclude repo transactions undertaken with central banks as part of their official money market operations. Other repo transactions with central banks, e.g. as part of their reserve management operations, should be included.

e) Give the value of the cash which is due to be repaid on all repo and reverse repo contracts (not the market value or nominal value of the collateral) that are still outstanding at close of business on Wednesday, June 11, 2003. This means the value of transactions at their repurchase prices.

f) "Outstanding" means repos and reverse repos which will mature or roll over on or after Thursday, June 12, 2003. You should therefore include all open repos and reverse repos that have been rolled over from Wednesday, June 11, 2003 to a later date and all forward-forward repos and reverse repos that are still outstanding at close on Wednesday, June 11, 2003.

g) Give separate totals for (a) repos plus sell/buy-backs and (b) reverse repos plus buy/sell-backs.

h) The survey seeks to measure the value of repos and reverse repos on a transaction date basis, rather than a value date basis. This means that you should include all repo and reverse repo contracts that have been agreed before close of business on Wednesday, June 11, 2003, even if their value dates are later.

i) Give gross figures, i.e. do not net opposite transactions with the same counterparty. If this is not possible, please indicate that your figures are net.

j) In the case of equity repo, for synthetic structures, please give the value of the cash payment.

Guidance on specific questions in the survey form

Q1.1 Transactions (1.1.1) direct with counterparties or (1.1.2) through voice-brokers should exclude all repos transacted over an ATS (see below). These should be recorded under (1.1.3).

Q(1.1.2) Transactions through voice-brokers should be broken down in terms of the location of the counterparties, rather than the location of the voice-brokers.

Q(1.1.3) "ATSs" are automated trading systems (e.g. BrokerTec, Eurex Repo and MTS/EuroMTS, but not voice-assisted electronic systems such as e-speed, Icap's ETC and GFInet). Transactions through these systems should be included in (1.1.2). Anonymous transactions through an ATS with a central counterparty (e.g. RepoClear, Clearnet or Eurex Clearing) should be recorded in (1.1.3.4).

Q1.4 "Classic repos" include transactions documented under the PSA/ISMA Global Master Repurchase Agreement (GMRA) 1995 and TBMA/ISMA Global Master Repurchase Agreement (GMRA) 2000 without reference to the Buy/Sell-Back Annexes, and transactions documented under other master agreements. "Sell/buy-backs" are therefore taken to include all transactions that are not documented. Classic repos include pensions livrées. Classic repos are characterised by the immediate payment by the buyer to the seller of a manufactured or substitute payment upon receipt by the buyer of a coupon on the collateral held by the buyer. If a coupon is paid on collateral during the term of a sell/buy-back, the buyer does not make an immediate manufactured or substitute payment to the seller, but reinvests the coupon until the maturity of the sell/buy-back and deducts the manufactured or substitute payment (plus reinvestment income) from the repurchase proceeds due to be received

from the seller. Sell/buy-backs may be quoted in terms of a forward price rather than a repo rate. Where sell/buy-backs are documented (e.g. under the Buy/Sell-Back Annexes to the PSA/ISMA GMRA 1995 and TBMA/ISMA GMRA 2000), periodic adjustments to the relative amounts of collateral or cash – which, for a classic repo, would be performed by margin maintenance transfers or payments – are likely to be made by early termination and re-pricing. All open repos are likely to be classic repos.

Q1.6 This section asks for the remaining term to maturity (not the original term to maturity) of the fixed-rate repos reported in (1.5.1) and the floating-rate repos reported in (1.5.2) to be broken down as follows:

Q(1.6.1.1) 1 day – this means:

- all contracts transacted prior to Wednesday, June 11, 2003, that will mature on Thursday, June 12, 2003;
- overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, June 11, 2003.

Q(1.6.1.2) 2–7 days – this means:

- all contracts transacted prior to Wednesday, June 11, 2003, that will mature on Friday, June 13, 2003, or any day thereafter up to and including Wednesday, June 18, 2003;
- transacted on Wednesday, June 11, 2003, with an original term of between two days and one week inclusive (irrespective of the value date, which will vary).

Q(1.6.1.3) More than 7 days but no more than 1 month – this means:

- all contracts transacted prior to Wednesday, June 11, 2003, that will mature on Thursday, June 19, 2003, or any day thereafter up to and including Friday, July 11, 2003;
- contracts transacted on Wednesday, June 11, 2003, with an original term of between eight

days and one month inclusive (irrespective of the value date, which will vary).

Q(1.6.1.4) More than 1 month but no more than 3 months – this means:

- all contracts transacted prior to Wednesday, June 11, 2003, that will mature on Monday, July 14, 2003, or any day thereafter up to and including Thursday, September 11, 2003;
- contracts transacted on Wednesday, June 11, 2003, with an original term between one month and one day, and three months inclusive (irrespective of the value date, which will vary).

Q(1.6.1.5) More than 3 months but no more than 6 months – this means:

- all contracts transacted prior to Wednesday, June 11, 2003, that will mature on Friday, September 12, 2003, or any day thereafter up to and including Thursday, December 11, 2003;
- contracts transacted on Wednesday, June 11, 2003, with an original term between three months and one day, and six months inclusive (irrespective of the value date, which will vary).

Q(1.6.1.6) More than 6 months – this means;

- all contracts transacted prior to Wednesday, June 11, 2003, that will mature on Friday, December 12, 2003, or any day thereafter;
- contracts transacted on Wednesday, June 11, 2003, with an original term of six months and one day, or longer (irrespective of the value date, which will vary).

Q(1.6.2) Forward-forward repos are defined for the purposes of this survey as contracts with a value date of Monday, June 16, 2003, or later. There is therefore an overlap with corporate/next transactions. If the latter cannot be identified separately, it is accepted that they will be recorded as forward-forward repos.

Q1.7 Please confirm whether you have included your tri-party repo business in (1.6).

Q1.8 Eurobonds should be included as fixed income securities issued “by other issuers” in the countries in which the bonds are issued. This will typically be Luxembourg (1.8.10) and the UK (1.8.15). Equity collateral should be recorded in (1.8.22).

Q(1.8.16) “US in the form of fixed income securities but settled across Euroclear or Clearstream” means only domestic and Yankee bonds. This includes Reg.144a bonds, but excludes Eurodollar and US dollar global bonds, which should be treated as bonds issued “by other issuers” in the countries in which the bonds are issued. This will typically be Luxembourg (1.8.10) and the UK (1.8.15).

Q(1.8.17) The “EU Accession countries” are Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia.

Q(1.8.18) “Other OECD countries” are Australia, Canada, Iceland, Japan, Korea, Mexico, New Zealand, Norway, Switzerland, Turkey and the US. In the case of collateral issued in the US, only collateral settled across the domestic US settlement system should be included in (1.8.18). US collateral settled across Euroclear and Clearstream should be recorded in (1.8.16).

Q(1.8.22) “Equity” includes ordinary shares, preference shares and equity-linked debt such as convertible bonds.

Q2 “Total value of securities loaned and borrowed by your repo desk” includes the lending and borrowing of securities with either cash or securities collateral. Exclude any securities lending and borrowing done by desks other than your repo desk. If your repo desk does not do any securities lending and borrowing, this line will be a nil return.

Q3 “Active” means about once a week or more often.

APPENDIX B: PARTICIPANTS IN THE SURVEY

The names of the participating banks are included in the list that follows. Company names provided here are as supplied by those involved in producing the survey. Names of ISMA member firms may not, therefore, precisely reflect the manner in which they are published in ISMA's online Members' Register.

- ABN Amro Bank
- Allied Irish Banks
- Alpha Bank
- Arab Banking Corporation (Italy)
- AXA Bank Belgium
- Banca Cassa di Risparmio di Asti
- Banca d'Intermediazione Mobiliare (IMI)
- Banca Monte dei Paschi di Siena
- Banco Nazionale del Lavoro
- Bank Austria
- Bank of Cyprus, Greece
- Bank of Ireland
- Bank Przemyslowo-Handlowy PBK
- Bankgesellschaft Berlin
- Banque du Luxembourg
- Banque et Caisse d'Epargne de l'Etat
- Barclays Capital
- Bayerische Landesbank
- BBVA
- BNP Paribas
- Bundesrepublik Deutschland Finanzagentur
- Caixa d'Estalvis de Catalunya
- Caja de Ahorros y Monte de Piedad de Madrid (Caja Madrid)
- CCF
- CDC Ixis Capital Markets
- Citigroup
- Commerzbank
- Confederación Española de Cajas de Ahorros (CECA)
- Credit Agricole Indosuez
- Credit Lyonnais
- Credito Valtellinese
- Croatian National Bank
- CSFB
- Daiwa Securities SMBC Europe Ltd
- Delta Lloyd Securities
- DePfa Bank
- Deutsche Bank
- Deutsche Postbank
- Dexia
- Dresdner Bank
- DZ Bank
- Egnatia Bank
- Erste Bank der Oesterreichischen Sparkassen AG
- Euroclear Bank
- Fortis Bank
- Goldman Sachs
- Halifax Bank of Scotland
- HypoVereinsbank
- IIB Bank Ltd
- ING Bank NV
- ING Belgium
- ING BHF-Bank
- IntesaBCI
- JP Morgan Chase
- KBC
- Kingdom of Belgium Federal Public Service Debt Agency
- Landesbank Baden-Württemberg, Stuttgart
- Landesbank Hessen-Thüringen – Girozentrale
- Landesbank Rheinland Pfalz
- Landesbank Sachsen Girozentrale
- Lehman Brothers
- Merrill Lynch
- Mizuho International
- Morgan Stanley
- National Bank of Greece
- Nomura International

- Norddeutsche Landesbank
Girozentrale
- Nordea Bank Finland Plc
- Nordea Markets Denmark
- Rabobank
- Raiffeisen Zentral Bank AG
- Royal Bank of Scotland
- Santander Central Hispano
- Société Générale
- Tokyo Mitsubishi International
- Toronto Dominion Bank
- UBS
- Unicredit Banca Mobiliare
- UniCredito Italiano Bank
(Ireland) p.l.c.
- Vereins und Westbank

APPENDIX C: PARTICIPANTS IN PREVIOUS SURVEYS

June 2001	December 2001	June 2002	December 2002
ABN Amro Bank	ABN Amro Bank	ABN Amro Bank	ABN Amro Bank
Artesia Banking Corporation	Algemeine Hypothekenbank Rheinboden	Allied Irish Banks	Algemeine Hypothekenbank Rheinboden
Banca d'Intermediazione Mobiliare IMI	Allied Irish Banks	AXA Bank Belgium	Allied Irish Banks
Banco Privado Portugues	Banca d'Intermediazione Mobiliare (IMI)	Banca di Roma	Alpha Bank
Bank of Aland	Banco Nazional del Lavoro	Banca d'Intermediazione Mobiliare (IMI)	AXA Bank Belgium
Barclays Capital	Banco Popular	Bank Austria	Banca d'Intermediazione Mobiliare (IMI)
Bayerische Landesbank	Bankgesellschaft Berlin	Bank Brussels Lambert	Banca Monte dei Paschi di Siena
Bank Brussels Lambert	Barclays Capital	Bank fuer Arbeit und Wirtschaft AG (Bawag)	Banco Nazional del Lavoro
BBVA	Bayerische Landesbank	Bank of Ireland	Banco Popular
Bankgesellschaft Berlin	BBVA	Bankgesellschaft Berlin	Bank Austria
BHF Bank	BHF Bank	Banque du Luxembourg	Bank Brussels Lambert
BNP Paribas	BNP Paribas	Banque et Caisse d'Epargne de l'Etat	Bank of Ireland
CDC Ixis Capital Markets, Frankfurt	CDC Ixis Capital Markets, Frankfurt	Barclays Capital	Bankgesellschaft Berlin
CECA	CECA	Bayerische Landesbank	Banque du Luxembourg
Commerzbank	Commerzbank	BBVA	Banque et Caisse d'Epargne de l'Etat
CSFB	Credit Agricole Indosuez	BHF Bank	Barclays Capital
Daiwa Securities SMBC Europe	Credit Lyonnais	BNP Paribas	Bayerische Landesbank
Deutsche Bank	CSFB	Bundesrepublik Deutschland Finanzagentur	BBVA
Dexia Hypothekenbank Berlin	Daiwa Securities SMBC Europe Ltd	Caixa Geral de Depositos	BHF Bank
DGZ-DekaBank	Deutsche Bank	Caja Madrid	BNP Paribas
Dresdner Bank	Dexia	CCF	Bundesrepublik Deutschland Finanzagentur
Erste Bank der Oesterreichischen Sparkassen	Dexia Hypothekenbank Berlin	CDC Ixis Capital Markets	Caixa Geral de Depositos
Fortis Bank	DGZ-DekaBank	Commerzbank	Caja Madrid
Goldman Sachs International	Dresdner Bank	CECA	CCF
GZ-Bank	DZ Bank	Credit Agricole Indosuez	CDC Ixis Capital Markets

June 2001	December 2001	June 2002	December 2002
Halifax	Erste Bank der Oesterreichischen Sparkassen	Credit Lyonnais	Commerzbank
Hamburgische Landesbank	Fortis Bank	CSFB	CECA
HypoVereinsbank	Goldman Sachs International	Daiwa Securities SMBC Europe Ltd	Credit Agricole Indosuez
IntesaBCI	Halifax	Deutsche Bank	Credit Lyonnais
JP Morgan Chase	Hamburgische Landesbank	Deutsche Postbank	CSFB
KBC	HypoVereinsbank	Dexia	Daiwa Securities SMBC Europe Ltd
Landesbank Baden-Württemberg	IntesaBCI	DGZ-DekaBank	DePfa Bank
Landesbank Schleswig-Holstein	JP Morgan Chase	Dresdner Bank	Deutsche Bank
Landesbank Rheinland /Pfalz Girozentrale	KBC	DZ Bank	Deutsche Postbank
Maple Bank	Landesbank Baden-Württemberg, Stuttgart	EFG Eurobank Ergasias	Dexia
Merrill Lynch International	Landesbank Rheinland /Pfalz Girozentrale	EIB	DGZ-DekaBank
Mizuho International	Landesbank Sachsen Girozentrale	Erste Bank der Oesterreichischen Sparkassen	Dresdner Bank
Morgan Stanley	Lehman Brothers	Fortis Bank	DZ Bank
National Bank of Greece	Maple Bank	General Bank of Greece	EFG Eurobank Ergasias
Nomura International	Merill Lynch	Goldman Sachs	Erste Bank der Oesterreichischen Sparkassen
Norddeutsche Landesbank Girozentrale	Mizuho International	Halifax	Euroclear Bank
Sal Oppenheim	Morgan Stanley	Hamburgische Landesbank	Fortis Bank
Raiffeisen Zentralbank Osterreich	Natexis Banques Populaires	HSBC Athens	General Bank of Greece
Landesbank Sachsen Girozentrale	National Bank of Greece	HypoVereinsbank	Goldman Sachs
Sampo Bank	Nomura International	IntesaBCI	Halifax
Schroder Salomon Smith Barney (Citigroup)	Norddeutsche Landesbank Girozentrale	JP Morgan Chase	Hamburgische Landesbank
UBS Warburg	Rabobank	KBC	Hessische Landesbank
Westdeutsche Landesbank	Raiffeisen Zentral Bank	Landesbank Baden-Württemberg, Stuttgart	HypoVereinsbank
	Sal Oppenheim	Landesbank Sachsen Girozentrale	IntesaBCI

June 2001	December 2001	June 2002	December 2002
	Sampo Bank	Lehman Brothers	JP Morgan Chase
	Schroder Salomon Smith Barney (Citigroup)	LRP Landesbank Rheinland Pfalz	KBC
	SEB	Maple Bank	Landesbank Baden- Württemberg, Stuttgart
	Tokyo Mitsubishi International	Mizuho International	Landesbank Sachsen Girozentrale
	UBS Warburg	Merrill Lynch	Lehman Brothers
	Unicredit Banca Mobiliare	Morgan Stanley	LRP Landesbank Rheinland Pfalz
	Vereins und Westbank	Natexis Banques Populaires	Merrill Lynch
	Westdeutsche Immobilien Bank	National Bank of Greece	Mizuho International
	Westdeutsche Landesbank	Nomura International	Morgan Stanley
		Norddeutsche Landesbank Girozentrale	Natexis Banques Populaires
		Nordea Bank Finland	National Bank of Greece
		Omega Bank	Nomura International
		Piraeus Bank	Norddeutsche Landesbank Girozentrale
		Rabobank	Nordea Bank
		Raiffeisen Zentral Bank	Omega Bank
		Royal Bank of Scotland	Rabobank
		Sal Oppenheim	Royal Bank of Scotland
		Sampo Bank	Sampo Bank
		Santander Central Hispano	Santander Central Hispano
		Schroder Salomon Smith Barney (Citigroup)	Schroder Salomon Smith Barney (Citigroup)
		SEB	SEB
		Société Générale	Société Générale
		Tokyo Mitsubishi International	Tokyo Mitsubishi International
		UBS Warburg	UBS Warburg
		Ulster Bank Ireland	Ulster Bank Ireland
		Unicredit Banca Mobiliare	Unicredit Banca Mobiliare
		Vereins und Westbank	Vereins und Westbank
		Westdeutsche Immobilien Bank	Zagrebacka Banka d.d.
		Westdeutsche Landesbank	

APPENDIX D: ISMA'S REPO COUNCIL STRUCTURE

The International Repo Council (IRC) is a special interest group established by ISMA for members active in the international repo markets.

Beneath the level of the IRC, regional repo councils may be established to represent the repo market of a particular geographic area.

The European Repo Council (ERC) is the first such regional council to have been established. Its members comprise the major banks and securities houses active in Europe's cross-border repo markets.

ISMA members wishing to know more about the repo council and committee structure should refer to section 1000 of ISMA's Rule Book or read the overview provided on ISMA's web site.