

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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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.

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 2004, the European Repo Council (ERC) of the International Securities Market Association (ISMA) conducted the seventh 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 9, 2004. Replies were received from 81 offices of 75 financial groups, mainly banks. Returns were also made by the main automated trading systems (ATSs) and tri-party repo agents in Europe and a group of voice-brokers under the auspices of the London-based Wholesale Market Brokers Association (WMBA).

Total repo business

The total value of repo contracts outstanding on the books of the 81 institutions who participated in the latest survey was EUR 4,561 billion, compared to EUR 3,788 billion in December 2003 and EUR 4,050 billion in June 2003.

It is important to note that some of the changes between surveys represent the entry and exit of institutions into and out of the survey. In order to try to measure the year-on-year growth in the European repo market for a constant sample, a comparison was made of the returns from institutions that participated in several surveys. Growth was between about 16% and 19% over the year to June 2004, most of which occurred over the six months between the December 2003 and June 2004 surveys.

Counterparty analysis

The latest survey showed that the growth in the share of electronic trading accelerated over

the first half of 2004 to reach 23.8% of the total value of outstanding contracts in June 2004, compared with 20.0% in December 2003 and 18.0% in June 2003. This increase was despite the fact that fewer survey participants reported electronic trading (47 compared to 50 in December 2003 and 51 in June 2003).

The share of voice-brokers continued to decline (to 24.8% from 27.2% in December 2003 and 30.7% in June 2003). The share of direct trading fell back slightly to 51.4% (compared with 52.8% in December 2003 and 51.3% in June 2003).

Geographical analysis

The survey showed a significant jump in the share of reported outstanding repo contracts that had been negotiated anonymously on an ATS and settled with a central clearing counterparty (CCP) to 11.6% from 8.3% in December 2003. This was largely at the expense of domestic transactions (37.3% from 39.6% in December 2003) and, to a lesser extent, cross-border transactions (51.0% from 52.1%), particularly with eurozone counterparties (25.6% from 27.3%). Domestic transactions were more important for the WMBA voice-brokers (43.1%), reflecting their location in the large London repo market.

Settlement analysis

In the latest survey, 10.9% of total outstanding business was settled through tri-party repo arrangements, largely sustaining the dramatic increase in share seen between December 2003 (11.2%) and June 2003 (6.2%). The number of institutions in the survey using tri-party repos increased to 37 from 32 in December 2003 and 34 in June 2003.

Cash currency analysis

In the latest survey, 70.5% of reported outstanding repos were denominated in euros (EUR), 11.8% in pounds sterling (GBP), 10.7% in US dollars (USD) and 3.5% in Japanese yen (JPY). The share of sterling grew largely at the expense of the euro. US dollars played a much larger role in tri-party repo (28.1%) and sterling was, unsurprisingly, much more important for the WMBA voice-brokers (26.3%).

Collateral analysis

The share of repo collateral held by survey participants which was issued in countries in the eurozone continued to fall, touching 69.0%, compared to 70.5% in December 2003, largely reflecting continued growth in UK collateral. The largest share of collateral continued to be issued in Germany (28.6%).

The bulk of outstanding contracts transacted across ATs was in German and Italian collateral (38.8% and 29.4%, respectively).

The share of government bonds was 87.4% compared with 86.6% in December 2003. Government bonds accounted for only 36.3% of outstanding tri-party repo contracts.

The share of equity fell back slightly to 1.8% from 2.2% in December 2003.

Maturity analysis

The bulk of repo activity continues to be in terms of one month or less (68.1% compared to 63.8% in December).

The pattern established in previous June surveys was also broadly repeated in June 2004. Thus, the importance of very short-terms to

maturity (from overnight to 1 week) and longer terms increased.

Data provided by the ATs confirmed the much shorter average term to maturity of electronic trading. Thus, 97.1% of the outstanding contracts reported by the ATs had one month or less remaining to maturity compared to 68.1% in the main survey and 22.5% reported by the WMBA voice-brokers. The largest share of the voice-brokers business was accounted for by forward-forward repos (47.7%).

Product analysis

The share of total business conducted on repo desks that was accounted for by securities lending and borrowing fell back between December 2003 and June 2004 to 13.0% compared to 24.7% in December 2003 and 13.5% in June 2003. The share of equity contracted sharply to 1% from 5.5% in June 2003.

Concentration analysis

In the latest survey, the top ten institutions in the survey accounted for some 53.0% of total reported business, down from 56.7% in December 2003 but close to the 53.1% reported in June 2003. However, the top twenty accounted for 78.0% (compared to 78.1% in December 2003 and 75.6% in June 2003), while the share of top thirty increased to 90.0% from 88.8% in December 2003 and 87.8% in June 2003.

CHAPTER 1: THE SURVEY

On June 9, 2004, the European Repo Council (ERC) of the International Securities Market Association (ISMA) conducted its seventh semi-annual survey of the repo market in Europe.

The ISMA survey was actively supported by the ACI – The Financial Markets Association, and has been welcomed by the European Central Bank and European Commission. 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 institutions 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 9, 2004.

The questionnaire also asked the 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 their 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.

An aggregate return for voice-brokers based in London (but including data from some of their continental European offices) was made by 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 WMBA data was broken down

by regional location of clients, currency, remaining term to maturity and type of collateral.

In the latest survey, automatic trading systems (ATS) and tri-party repo agents were asked to provide data on their segments of the repo market. These data allow measurement of the extent to which the survey covers the electronic and tri-party repo markets. They also give new insights into the composition of repo transactions negotiated electronically or settled tri-party.

1.2 The response to the survey

The latest survey was completed by 81 offices of 75 financial groups. This compares with 76 offices of 69 groups in June 2003 and 84 offices of 77 groups in June 2003. While 9 institutions which participated in the December 2003 survey dropped out of the latest survey, 14 institutions joined or rejoined.

The institutions surveyed were headquartered in 15 European countries, as well as in North America (6) and Japan (5). 62 institutions were headquartered in 14 countries of the EU and 55 were headquartered in 10 countries of the eurozone. Although some institutions were headquartered in one country the bulk of their business was conducted in another. 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 is contained in Appendix B.

1.3 The next survey

The next ISMA survey is scheduled to take place at close of business on Wednesday, December 8, 2004.

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. The latest

forms will be published shortly at the following website: www.isma.org/surveys/repo/participate.

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 which can be found on ISMA's website www.isma.org.

CHAPTER 3: ANALYSIS OF SURVEY RESULTS

The aggregate results for the latest survey and four of the previous ones are set out in Table 3.1 (full details for all six previous surveys can be found at www.isma.org).

Q1 What are the total gross values of cash due to be repaid by you and repaid to you on repo transactions maturing after June 9, 2004 (figures in billions)					
	2,157	3,305	4,050	3,788	4,561
Of the amounts given in response to question (1) above:					
	Jun-01	Jun-02	Jun-03	Dec-03	Jun-04
1.1 How much was transacted:					
direct with counterparties					
• in the same country as you	23.2%	21.7%	19.6%	20.5%	19.7%
• cross-border in (other) Eurozone countries	11.8%	13.5%	14.5%	14.9%	13.0%
• cross-border in non-Eurozone countries	11.5%	18.5%	17.7%	17.4%	19.2%
through voice-brokers					
• in the same country as you	28.3%	17.4%	13.6%	12.3%	11.7%
• cross-border in (other) Eurozone countries	11.4%	10.2%	12.0%	9.5%	9.0%
• cross-border in non-Eurozone countries	5.8%	5.7%	4.2%	5.4%	3.5%
on ATs with counterparties					
• in the same country as you	1.7%	5.0%	4.9%	6.8%	5.8%
• cross-border in (other) Eurozone countries	1.5%	1.7%	3.0%	2.9%	3.6%
• cross border-border in non-Eurozone countries	0.3%	0.7%	1.4%	2.0%	2.7%
• anonymously through a central clearing counterparty	4.6%	5.6%	9.0%	8.3%	11.6%
1.2 How much of the cash is denominated in:					
• EUR	73.3%	75.4%	75.6%	72.7%	70.5%
• GBP	11.2%	10.5%	8.8%	10.3%	11.8%
• USD	9.5%	8.2%	9.4%	10.6%	10.8%
• SEK, DKK	1.6%	1.1%	2.0%	2.0%	2.0%
• JPY	3.1%	3.6%	3.3%	3.1%	3.5%
• other currencies	1.3%	1.1%	0.9%	1.4%	1.4%
1.3 How much is cross-currency?	1.9%	3.8%	1.0%	1.2%	1.1%
1.4 How much is:					
• classic repo	83.9%	78.8%	79.0%	80.8%	80.9%
• documented sell/buy-backs	8.2%	12.5%	13.0%	9.7%	11.2%
• undocumented sell/buy-backs	7.9%	8.7%	7.9%	9.6%	7.8%
1.5 How much is:					
• fixed rate	90.4%	81.2%	89.9%	89.6%	87.1%
• floating rate	5.3%	12.1%	5.6%	5.6%	6.6%
open	4.3%	6.7%	4.5%	4.8%	6.2%

	Jun-01	Jun-02	Jun-03	Dec-03	Jun-04
1.6 How much fixed and floating rate repo is (1.6.1) for value before June 12, 2004 and has a remaining term to maturity of:					
• 1 day	14.3%	18.6%	18.7%	18.0%	17.3%
• 2-7 days	30.3%	22.8%	22.0%	18.9%	22.5%
• more than 7 days but no more than 1 month	17.6%	25.8%	26.1%	26.9%	28.3%
• more than 1 month but no more than 3 months	11.4%	9.9%	12.0%	15.9%	12.4%
• more than 3 months but no more than 6 months	6.9%	6.9%	7.1%	6.4%	7.3%
• more than 6 months	10.7%	11.4%	7.6%	8.0%	7.0%
• forward-forward repos	8.8%	4.6%	6.5%	5.8%	5.2%
1.7 How much is tri-party repo:		6.3%	6.2%	11.2%	10.9%
• for fixed terms to maturity	67.0%	91.8%	90.8%	25.1%	83.1%
• on an open basis	33.0%	8.2%	9.2%	11.2%	16.9%
1.8 How much is against collateral issued in:					
Austria					
• by the central government	1.0%	0.7%	0.7%	0.7%	0.7%
• by other issuers	0.0%	0.1%	0.0%	0.1%	0.1%
Belgium					
• by the central government	7.5%	4.5%	5.0%	3.8%	4.1%
• by other issuers	0.0%	0.1%	0.2%	0.2%	0.2%
Denmark					
• by the central government	0.4%	0.3%	0.6%	0.4%	0.4%
• by other issuers	0.3%	0.1%	0.4%	0.4%	0.3%
Finland					
• by the central government	0.1%	0.2%	0.3%	0.2%	0.3%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%
France					
• by the central government	5.8%	13.8%	8.9%	7.7%	8.3%
• by other issuers	0.4%	1.0%	0.9%	0.9%	1.0%
Germany					
• by the central government	29.0%	23.2%	26.6%	25.6%	23.5%
• pfandbrief	3.0%	1.8%	2.6%	3.1%	2.6%
• by other issuers	2.1%	1.9%	2.1%	2.4%	2.5%
Greece					
• by the central government	1.5%	1.0%	2.0%	1.5%	1.7%
• by other issuers	0.0%	0.1%	0.3%	0.0%	0.0%
Ireland					
• by the central government	0.0%	0.1%	0.1%	0.1%	0.2%
• by other issuers	0.0%	0.0%	0.1%	0.1%	0.1%
Italy					
• by the central government	17.8%	17.5%	15.1%	14.2%	14.0%
• by other issuers	0.4%	0.5%	0.9%	0.4%	0.3%

	Jun-01	Jun-02	Jun-03	Dec-03	Jun-04
Luxembourg					
• by the central government	0.0%	0.0%	0.1%	0.0%	0.1%
• by other issuers	0.1%	0.2%	0.3%	0.3%	0.6%
Netherlands					
• by the central government	1.4%	1.3%	1.8%	1.7%	2.0%
• by other issuers	0.3%	0.5%	0.5%	0.7%	0.8%
Portugal					
• by the central government	0.3%	0.3%	0.3%	0.4%	0.4%
• by other issuers	0.0%	0.0%	0.4%	0.0%	0.0%
Spain					
• by the central government	5.4%	5.0%	6.0%	6.1%	5.4%
• by other issuers	0.1%	0.5%	0.2%	0.2%	0.2%
Sweden					
• by the central government	1.1%	0.7%	1.1%	0.9%	1.1%
• by other issuers	0.2%	0.2%	0.3%	0.4%	0.5%
UK					
• by the central government	11.2%	9.9%	8.5%	8.9%	10.3%
• by other issuers	0.6%	1.1%	1.1%	1.9%	1.3%
US but settled across EOC/CS	3.0%	2.8%	2.1%	2.9%	2.2%
• other countries	6.9%	9.9%			
EU Accession countries			0.2%	0.4%	0.2%
other OECD			7.0%	9.4%	9.8%
non-OECD EMEA			0.4%	0.4%	1.3%
non-OECD Asian & Pacific			0.2%	0.2%	0.1%
non-OECD Latin America			0.2%	0.3%	0.5%
equity			1.0%	2.2%	1.8%
collateral of unknown origin		0.5%	1.5%	0.7%	1.2%
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%	47.8%			
• in fixed income			44.6%	45.3%	53.8%
• in equity			2.3%	0.3%	1.0%
cross-border in (other) Eurozone countries	24.4%	24.9%			
• in fixed income			20.5%	13.4%	19.4%
• in equity			0.8%	0.6%	0.2%
cross-border in non-Eurozone countries	19.4%	27.3%			
• in fixed income			30.5%	40.3%	25.4%
• in equity			1.2%	0.1%	0.3%
for which the term to maturity is					
• fixed	72.3%	78.5%	72.9%	80.8%	65.9%
• open	27.7%	21.5%	27.1%	19.2%	34.1%

Total repo business (Q1)

The total value at close of business on June 9, 2004, of repos and reverse repos outstanding on the books of the 81 institutions which participated in the survey was **EUR 4,561 billion**, of which, 50.6% were repos and 49.4% were 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 official monetary policy operations.

In order to gauge the year-on-year growth of the European repo market (or at least of that segment represented by the institutions which participated in the 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 represent the entry and exit of institutions into and out of the survey. To overcome the problem caused by changes in the sample of survey participants, comparisons were made of the aggregate outstanding contracts reported only by institutions which had participated in several surveys. The repo business of the 35 institutions which participated in all seven surveys grew by 19.0% year-on-year to June 2004. However, most of this growth occurred in the second half of the year, measuring 16.4% from December 2003 to June 2004. Of the 64 institutions that participated in the June 2004 and June 2003 surveys, growth was 16.2% over the year to June 2004. Of the 66 institutions that participated in the June 2004 and December 2003 surveys, growth over the six months was 15.4%, confirming that the bulk of growth in the market took place in the latest six-month period. The concentration of growth in the second half of the year to June 2004 is consistent with anecdotal evidence about the pattern of growth in the underlying fixed-income markets in Europe.

The average size of repo books in June 2004 was about EUR 56 billion (standard deviation EUR 88 billion), somewhat larger than in December 2003. The average year-on-year change to June 2004 was +EUR 9.7 billion. Individual repo books continued to show an extremely wide range of year-on-year percentage changes. Of the 64 institutions that participated in both the June 2003 and June 2004 surveys, there was a clear bias towards growth, with the repo books of 22 contracting and 42 expanding. However, the concentration of growth in the second half of the year is clear. Between the December 2003 and June 2004 surveys, of the 67 institutions that participated, the repo books of 16 contracted and 48 expanded. In sharp contrast, between the June and December 2003 surveys, of the 66 institutions that participated, 35 books contracted and 31 expanded.

Counterparty analysis (Q1.1)

The share of reported outstanding repos that had been transacted directly with the other counterparties (ie not through a voice-broker or over an ATS) was 51.4%, slightly down from the share of 52.8% reported in December 2003, but very similar to the 51.3% reported in June 2003.

A sub-set of direct repos, equivalent to 10.9% of the total outstanding business, was settled through tri-party repo arrangements, largely sustaining the dramatic jump to 11.2% in December 2003 from 6.2% in June 2003. The number of institutions in the survey using tri-party repos increased to 37 from 32 in December 2003 and 34 in June 2003. These changes are the net result of 6 tri-party repo users leaving the survey or no longer reporting tri-party business, and 11 institutions starting to report tri-party repo.

The 37 institutions which reported tri-party repo business in the latest survey accounted for 83.8% of the all outstanding repo contracts

Numbers of participants reporting particular types of business							
	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04
ATS	19	28	39	48	51	50	49
anonymous ATS	13	16	21	35	31	29	32
voice-brokers	41	43	67	65	61	58	56
tri-party repo	21	22	29	32	34	32	37
Total	48	61	86	82	84	76	81

reported in June 2004 compared to 77.0% in December 2003. Tri-party repo accounted for 12.7% of the repo business of the 37 reporting institutions compared to 14.6% for the 32 institutions reporting tri-party business in December 2003. Tri-party repo business grew by 17.7% over the six months to June 2004 compared to the exceptional 86.1% growth reported over the previous six months. 30% of the growth to June 2004 was accounted for by one institution, but not the same institution that contributed so significantly in December 2003.

In this survey, the main tri-party repo agents in Europe were asked to contribute data. Returns were received from Citigroup, Clearstream, Euroclear, JP Morgan Chase and SegalInterSettle (SIS). The total value of outstanding tri-party repo contracts on June 9, 2004, was EUR 260.6 billion, equivalent to 5.7% of the total value of outstanding repos reported in the main survey. This compares to the share of 10.9% reported in the main survey. The difference is likely to be due mainly to double-counting, as the data reported by the tri-party repo agents include only one side of each transaction.

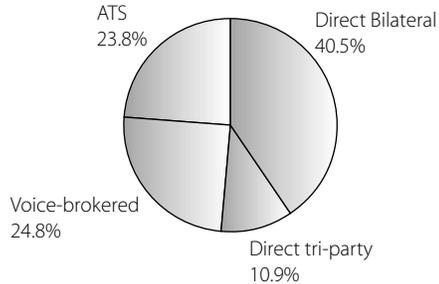
The composition of tri-party business was very different from that reported for the whole survey. 38.4% was domestic and 60.8% was cross-border with counterparties outside the eurozone. 59.8% was against euro, 11.6% against sterling and 28.1% against US dollars. 60.5% of tri-party contracts were cross-currency (the size of cross-currency business done through tri-party

arrangements may help to explain the discrepancy between the currency denomination of cash and collateral, which suggests much more cross-currency repo business than that reported directly). 76.8% were for 1 month or less. 87.4% were fixed-term: the remainder were open contracts. Collateral issued in the EU accounted for 76.5% and collateral issued in the eurozone for 64.9%. The largest shares of collateral were accounted for by collateral issued in Germany (27.2%), US (11.1%), UK (8.6%), France (8.2%), Netherlands (7.7%) and Italy (5.5%). Government bonds accounted for only 36.3% of collateral.

The share of inter-dealer ATSs was 23.8% compared to 20.0% in December 2003 and 18.0% in June 2003. However, the number of institutions in the latest survey reporting use of ATSs decreased slightly to 49 from 50 in December 2003 and 51 in June 2003.

In this survey, the principal automated trading systems (ATSs) operating in Europe were asked to provide data on their segment of the repo market. Returns were received from BrokerTec, Eurex Repo and MTS. The reported share of repos outstanding on June 9, 2004, that had been transacted across an ATS was 12.5%. This is almost half the main survey estimate of 23.8%. The difference is likely to be due mainly to double-counting as the ATS data count only one side of each transaction. Another difference is that the main survey covers at least one additional ATS.

Figure 3.1 – Counterparty analysis



Geographical analysis (Q1.1)

The shares of domestic and cross-border business fell over the year to June 2004. 37.3% of reported outstanding repo contracts in June 2004 were with domestic counterparties, compared with 39.6% in December 2003 and 38.1% in June 2003. 51.0% of contracts were cross-border, compared with 52.1% in December 2003 and 52.8% in June 2003. The share of contracts that had been transacted anonymously on an ATS and settled with a central clearing counterparty (CCP) rose sharply over the year to reach 11.6% in June 2004 from 8.3% in December 2003 and 9% in June 2004. The number of institutions reporting anonymous electronic trading increased to 32, compared to 29 in December 2003 and 31 in June 2003.

Of the business reported directly by the ATSs, 59.4% was transacted anonymously. This corresponds to a share of 7.4% of the total value of outstanding contracts, compared to the 11.6% share reported in the main survey. Double-counting of business for the whole survey is the likely reason for the discrepancy.

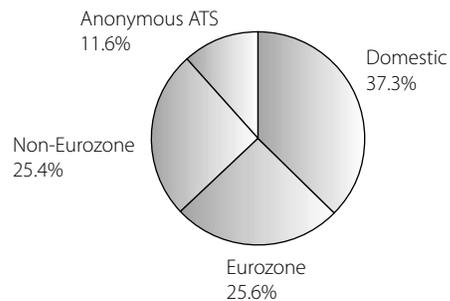
In cross-border business, there has been a reduction over the year in contracts with counterparties in the eurozone and an increase in contracts with counterparties outside the eurozone. In June 2004, 25.6% was with counterparties in the eurozone and 25.4% with counterparties outside the eurozone, compared to

27.3% and 24.8%, respectively, in December 2003, and 29.5% and 23.3%, respectively, in June 2003. However, it is important to note that the survey only identifies the destination of business, not its sources. Thus, business with counterparties outside the eurozone includes transactions in which the other counterparty is located inside the eurozone.

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, the proportion between domestic counterparties fell back to 43.1%, still higher than the share of domestic business reported for the whole survey (37.3%) but much less divergent than in December 2003 (55.6% compared to 39.6%). This would seem to reflect the location of these voice-brokers in the large London repo market. An increased share of cross-border business by voice-brokers was between counterparties both outside the eurozone: 9.6% in June 2004 compared to 2.1% in December 2003. The remaining cross-border business was between counterparties both within the eurozone (up to 23.8% from 21.1% in December 2003 but still much lower than the 31.5% reported in June 2003) or between counterparties of which only one was in the eurozone (up to 23.4% compared to 21.2% in December 2003 and 18.6% in June 2003).

The increasing share of ATSs has almost equalled the decreasing share of voice-brokers, which fell to 24.8% from 27.2% in December 2003 and 29.8% in June 2003

Figure 3.2 – Geographical analysis



Settlement analysis (Q1.7)

Of reported tri-party repo business, the share of fixed-term repos was 83.1%, significantly up from the 74.9% reported in December 2003, but still very much lower than the 90.8% reported in June 2003.

Cash currency analysis (Q1.2 and Q1.3)

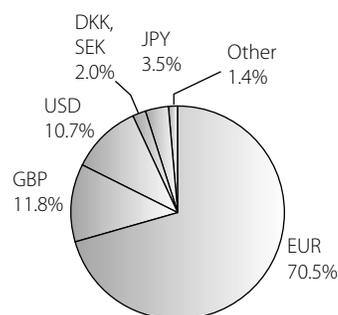
In this survey, 70.5% of reported outstanding repos were denominated in euros (EUR), 11.8% in pounds sterling (GBP), 10.7% in US dollars (USD) and 3.5% in Japanese yen (JPY), compared to 72.7%, 10.3%, 10.6% and 3.3%, respectively, in December 2003 and 75.6%, 8.8%, 9.4% and 3.3%, respectively, in June 2003. Over the year, therefore, the share of the euro declined significantly, while the shares of sterling and the US dollar increased.

The reported share of cross-currency repos continued to be low at 1.1% compared to 1.2% in December 2003 and 1.0% in June 2003. However, the response rate to this question remains low: only 24 participants answered this question in the latest survey. Cross-currency repo accounted for 1.9% of the total value of outstanding repo contracts of these 24 institutions.

In the case of the voice-brokers contributing data through the WMBA, the importance of the euro continued to be much lower than for the whole survey (60.0% compared to 64.5% in December 2003 and 70.7% in June 2003). The share of the US dollar increased to 9.7% from 5.2% in December 2003. The share of the yen remained low at 1.0% compared to 0.7% in December 2003. The share of the pound sterling remained much higher than the whole survey and continued to grow (to 26.3% from 25.6% in December 2003 and 18.5% in June 2003). Again, this would seem to reflect the location of these voice-brokers in London.

The euro was by far the predominant currency of ATS business, accounting for 89.2%. Sterling accounted for 3.5% and "other currencies"

for 7.3%. The latter was predominantly Swiss francs, reflecting the Swiss franc market operated by Eurex Repo.

Figure 3.3 – Currency analysis*Collateral analysis (Q1.8)*

69.0% of repo collateral held by survey participants was issued in countries in the eurozone, compared with 70.5% in December 2003 and 75.4% in June 2003. Collateral issued in Germany continued to be the key component at 28.5%, but its share declined from 31.1% in December 2003 and 31.3% in June 2003. A similar story applied to the second most important source of collateral, Italy. The share of Italian collateral declined to 14.3% from 14.7% in December 2003 and 16.0% in June 2003. The share of collateral issued in France was 9.3% in June 2004, compared to 8.5% in December 2003 and 9.8% in June 2003. Other important sources of collateral were the UK (11.6%), Spain (5.7%) and Belgium (4.3%).

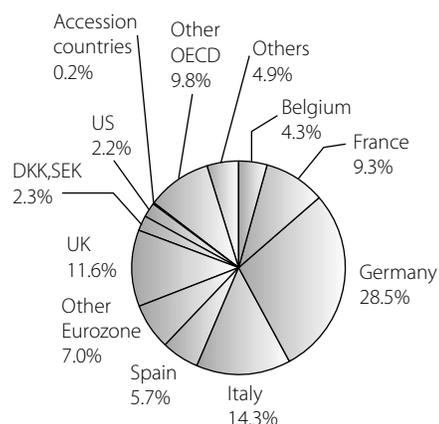
The 10 countries which recently joined the EU accounted for only 0.2% of collateral. The bulk of this was from Hungary and Poland.

The bulk of the remaining collateral was issued in "other OECD countries" (ie not the EU or the US – probably, Switzerland) at 9.8%, compared to 9.4% in December 2003 and 7.0% in June 2003.

The share of equity collateral was reported to be 1.8% compared with a high of 2.2% in December 2003 and 1.1% in June 2003.

Business reported by ATs was overwhelmingly in collateral issued in Germany (38.8%) and Italy (29.4%). Other significant shares were held by collateral issued in France (8.6%), "other OECD countries" (7.3%), UK (3.5%), Belgium (2.9%), Netherlands (2.8%), Spain (1.9%), Greece (1.6%) and Austria (1.0%). In total, collateral issued in EU countries accounted for 92.4% of outstanding repos transacted electronically and collateral issued in eurozone countries for 88.9%.

Figure 3.4 – Collateral analysis



The share of collateral issued by central governments recovered to 87.4% from a low of 86.6% in December 2003, but down slightly from 88.1% in June 2003. Government bond collateral remained much more important in the voice-brokered business reported by the WMBA but less important than previously (92.0% compared to 96.6% in December 2003 and 93.4% in June 2003).

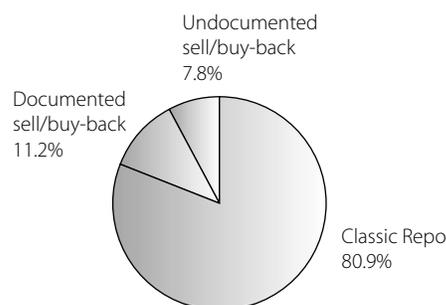
The share of government bonds in the business reported directly by the ATs was even higher at 97.4%.

Contract analysis (Q1.4)

The share of reported outstanding repo contracts taking the form of classic repos (also sometimes called "repurchase agreements") was

80.9% in June 2004 compared to 80.8% in December 2003 and 79.0% in June 2003. 11.2% were sell/buy-backs documented under agreements such as the TBMA/ISMA or PSA/ISMA Global Master Repurchase Agreements (GMRA) and 7.8% were undocumented sell/buy-backs. This compares to 9.7% and 9.6%, respectively, in December 2003, and 13.0% and 7.9%, respectively, in June 2003.

Figure 3.5 – Contract analysis

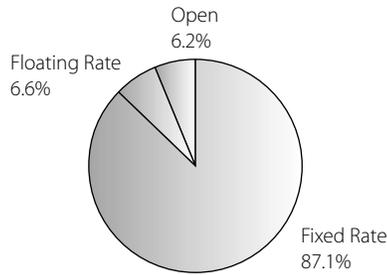


Repo rate analysis (Q1.5)

The share of fixed-rate repos increased over the year to 87.1% in June 2004 from 79.0% in June 2003, but off the high of 89.6% reported in December 2003. Floating-rate repos (largely indexed to EONIA) increased to 6.6% in June 2004 from 5.6% in December 2003, having been unchanged over the six months since June 2003. The share of open repo (no fixed maturity date but terminable on demand by either counterparty) also grew between December 2003 and June 2004, from 4.8% to 6.2%. There had been only modest growth over the previous six months from 4.5% in June 2003.

91.6% of the business reported directly by the ATs was fixed-rate and the remainder floating-rate.

Figure 3.6 – Repo rate analysis



Maturity analysis (Q1.6)

In line with previous patterns of seasonality, the average remaining term to maturity shortened over the six months to June 2004. 39.8% of business had remaining terms to maturity of one week or less, and 68.1% was for one month or less (compared to 36.9% and 63.8%, respectively, in December 2003, and 40.7% and 66.8%, respectively, in June 2003).

However, contracts with remaining terms of between 3 and 6 months contradicted the pattern by increasing to 7.3% from 6.4% in December 2003 and 7.1% in June 2003.

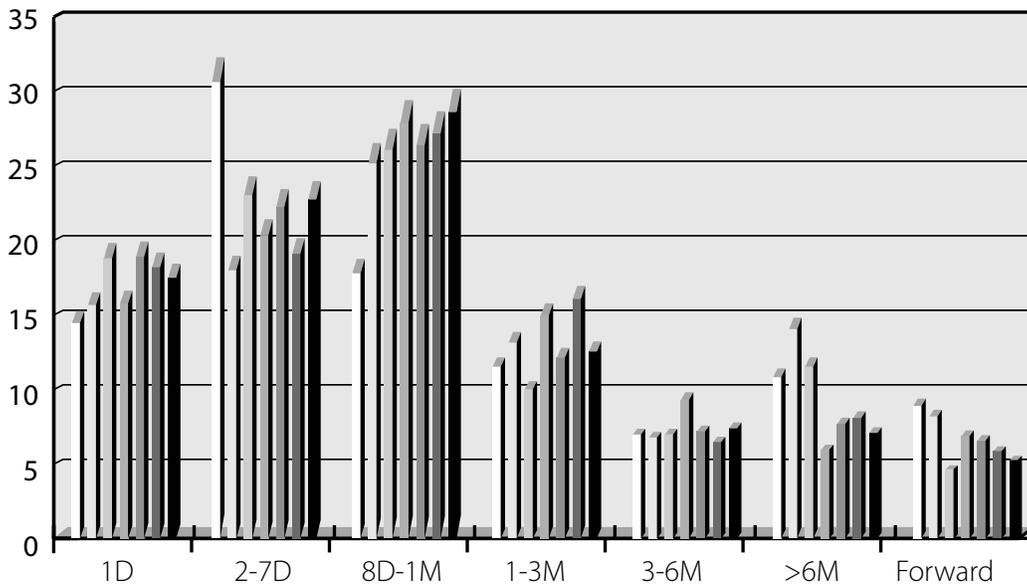
The share of remaining terms between 1 and 3 months and over 6 months decreased (to 12.4% and 7.0%, respectively, from 15.9% and 8.0%, respectively, in December 2003 and 12.0% and 7.6%, respectively, in June 2003), as did the share of forward-forward repos (to 5.2% from 5.8% in December 2003 and 6.5% in June 2003), suggesting less interest rate risk trading.

The voice-brokered business reported by the WMBA continued to have a much longer average remaining term to maturity and a larger share in forward-forward repos, although less than in December 2003. Thus, only 8.7% was for one week or less, and 22.5% for one month or less (compared to 11.2% and 30.4%, respectively, in December 2003). The share of forward-forwards jumped to 47.7% in June 2004 from 31.4% in December 2003 and 26.4% in June 2003.

In sharp contrast to the maturity distribution of the business reported by voice-brokers, but much as expected, the bulk of outstanding contracts reported directly by the ATs had a remaining term to maturity of one day

Figure 3.7 – Maturity analysis comparison

(left to right columns show June 2001, December 2001, June 2002, December 2002, June 2003, December 2003, June 2004)

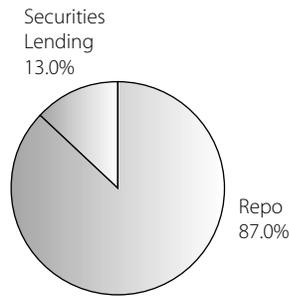


(82.2%). Most of the remaining business was out to 1 week (6.3%) and from 1 week to 1 month (8.6%). Terms of more than 1 month accounted for only 1.2% and forward-forward repos for 1.6%. The short average term of maturity of repo transacted over ATs confirms that there is a very big difference between the value of outstanding contracts measured in the survey and the turnover numbers usually published by ATs. In this sense, the survey understates the importance of electronic trading in the repo market.

Product analysis (Q2)

50 institutions undertook securities lending and borrowing on their repo desks (separately from their securities lending and borrowing desks), compared with 45 in December 2003. However, the share of total business accounted for by securities lending and borrowing fell back sharply to 13.0% from a record 24.7% in December 2003, closer to the 13.5% reported in June 2003. Nevertheless, the share of fixed income securities remained high at 98.6% compared to 99.0% in December 2003 and 95.7% in June 2003.

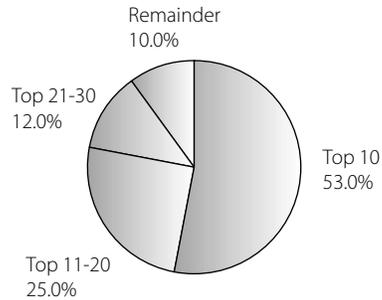
Figure 3.8 – Product analysis



Concentration analysis

In the latest survey, the top ten institutions accounted for 53.0% of total reported business, down from 56.7% in December 2003 and 53.1% in June 2003, while the top twenty accounted for 78.0%, compared to 78.1% and 75.6%, respectively. The share of the top thirty increased to 90.0% from 88.8% and 87.8%, respectively.

Figure 3.9 – Concentration analysis



Although the apparent concentration of business is 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 Herfindahl Index. The Index for the survey fell back to 0.040 from 0.045 in December 2003 and closer to the 0.041 estimated in June 2003.

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 9, 2004 once again confirmed the enormous size of the European repo market by setting the lower boundary of that market at the impressive figure of EUR 4,561 billion in terms of outstanding contracts. It also revealed robust year-on-year growth of between about 16% and 19%, largely due to a recovery in the December-June period from the disappointing second half of 2003.

The survey showed an acceleration in the growth of electronic trading, which now accounts for 23.8% of reported business, while anonymous electronic trading captured a market share of 11.6%. Further light was thrown on the electronic trading of repo by data reported directly by the main automated trading systems (ATSs) operating in Europe. This revealed, much as expected, a very much shorter average term to maturity for electronic transactions. Thus, 97.1% of the outstanding contracts reported by the ATSs had one month or less remaining to maturity compared to 68.1% in the main survey and 22.5% reported by the WMBA voice-brokers. In addition, the euro accounted for a much higher share of electronic business (89.2% compared with 69.0% in the main survey), as did "other currencies" (7.3%), while sterling was much smaller (3.5% compared to 11.8%). Electronic trading was also dominated by German and Italian collateral (38.8% and 29.4%, respectively, compared to 28.5% and 14.3%, respectively, in the main survey).

Another important result of the latest survey is evidence that the big surprise of the previous survey, the jump in the share of tri-party repo to 11.2%, was not an anomaly. The share of tri-party repo was sustained at 10.9%. As with electronic trading, further insights were provided in the latest survey by data reported directly by the main providers of that service in the Europe. The minimum outstanding value of tri-party repo

in Europe was reported at EUR 261 billion. In contrast to the main survey, tri-party repo is less focused on the euro (59.8% compared to 70.5%) and more on the US dollar (28.1% compared to 10.8%). The bulk is cross-currency (60.5%). More tri-party is for terms of one month or less (76.8% compared to 68.1% for the survey as a whole). A greater share of collateral is US (11.1% compared to 2.2%) and Dutch (7.7% compared to 2.8%), but much less is Italian (5.5% compared to 14.3%) or in the form of government bonds (36.3% compared to 87.4%).

The values of outstanding transactions reported by both the ATSs and tri-party repo agents suggested a much smaller market share than the main survey. The implied share of electronic trading was 12.5% overall and 7.4% for anonymous trading, while the share of tri-party repo was 5.7%. These compare with figures of 23.8%, 11.6% and 10.9%, respectively, from the main survey. The difference can be explained by double-counting, as the data provided by the ATSs and tri-party repo agents measures only one side of each contract, whereas the main survey may be including reports by both counterparties to contracts.

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 9, 2004.

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 9, 2004, 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) If your institution does not transact a certain type of repo business, please enter zeros in the relevant fields. On the other hand, if your institution does that type of business but is not providing the data requested by the survey, please do not enter anything into the relevant field.

c) 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.

d) Please do not re-format the survey form, ie change its lay-out, and do not leave formulae in the cells of the underlying spreadsheet.

e) 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).

f) 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.

g) 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 9, 2004*. This means the value of transactions at their repurchase prices.

h) "Outstanding" means repos and reverse repos *which will mature or roll over on or after Thursday, June 10, 2004*. You should therefore include all *open repos and reverse repos* that have been rolled over from Wednesday, June 9, 2004 to a later date and all *forward-forward repos and reverse repos that are still outstanding at close on Wednesday, June 9, 2004*.

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

j) 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 9, 2004, even if their value dates are later.

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

l) 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 and 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 9, 2004, that will mature on Thursday, June 10, 2004;
- overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, June 9, 2004.

Q(1.6.1.2) 2–7 days – this means:

- all contracts transacted prior to Wednesday, June 9, 2004, that will mature on Friday, June 11, 2004, or any day thereafter up to and including Wednesday, June 16, 2004;
- contracts transacted on Wednesday, June 9, 2004, 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 9, 2004, that will mature on Thursday, June 17, 2004, or any day thereafter up to and including Friday, July 9, 2004;
- contracts transacted on Wednesday, June 9, 2004, 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 9, 2004, that will mature on Monday, July 12, 2004, or any day thereafter up to and including Wednesday, September 9, 2004;
- contracts transacted on Wednesday, June 9, 2004, 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 9, 2004, that will mature on Friday, September 10, 2004, or any day thereafter up to and including Thursday, December 9, 2004;
- contracts transacted on Wednesday, June 9, 2004, 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 9, 2004, that will mature on Friday, December 10, 2004, or any day thereafter;
- contracts transacted on Wednesday, June 9, 2004, 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 14, 2004, 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 (1.8.31).

Q(1.8.26) “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(1.8.27) “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 (1.8.27). US collateral settled across Euroclear and Clearstream should be recorded in (1.8.26).

Q(1.8.31) “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
- AXA Bank Belgium
- Banca Monte dei Paschi di Siena
- Banco Nacional del Lavoro
- Banco Popular Espanol
- Bank Urquijo
- Bank fuer Arbeit und Wirtschaft AG (BAWAG)
- 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
- Belgian Debt Agency
- BNP Paribas
- Bundesrepublik Deutschland Finanzagentur
- Capitalia
- CCF
- CDC IXIS Capital Markets Zweigniederlassung Deutschland
- Citigroup
- Commerzbank
- Confederación Española de Cajas de Ahorros (CECA)
- Calyon
- CSFB
- Daiwa Securities SMBC Europe
- DePfa ACS
- DePfa Bank
- Deutsche Bank
- Deutsche Postbank
- Dexia
- Dresdner Bank
- DZ Bank
- Egnatia Bank
- Erste Bank der Oesterreichischen Sparkassen
- Eurobank
- Euroclear Bank
- European Investment Bank
- Fortis Bank
- Goldman Sachs
- Halifax Bank of Scotland
- HSH Nordbank
- HypoVereinsbank
- ING BHF-Bank
- ING BHF-Bank Luxembourg
- IntesaBCI
- JP Morgan Chase
- KBC
- KfW
- Landesbank Baden-Württemberg, Stuttgart
- Landesbank Hessen-Thüringen -Girozentrale (Helaba)
- Landesbank Rheinland Pfalz
- Landesbank Sachsen Girozentrale
- Lehman Brothers International
- Merrill Lynch
- Mizuho International
- Morgan Stanley
- National Bank of Greece
- Nomura International
- Norddeutsche Landesbank Girozentrale
- Nordea Markets
- Norinchukin Bank
- Nova Ljubljanska Banka d.d.
- Sal. Oppenheim Jr.
- Rabobank
- Royal Bank of Scotland
- RZB
- Sinvest (Santander Central Hispano)
- Société Générale
- Tokyo Mitsubishi International
- UBS
- Ulster Bank
- Unicredit Banca Mobiliare
- Vereins und Westbank
- Westdeutsche Landesbank Girozentrale

APPENDIX C: PARTICIPANTS IN PREVIOUS SURVEYS

June 2001	June 2002	June 2003	December 2003
ABN Amro Bank	ABN Amro Bank	ABN Amro Bank	ABN Amro Bank
Artesia Banking Corporation	Allied Irish Banks	Allied Irish Banks	Allied Irish Banks
Banca d'Intermediazione Mobiliare IMI	AXA Bank Belgium	Alpha Bank	AXA Bank Belgium
Banco Privado Portugues	Banca di Roma	Arab Banking Corporation (Italy)	Banca d'Intermediazione Mobiliare (IMI)
Bank of Aland	Banca d'Intermediazione Mobiliare (IMI)	AXA Bank Belgium	Banca Monte dei Paschi di Siena
Barclays Capital	Bank Austria	Banca Cassa di Risparmio di Asti	Banco Nazionale del Lavoro
Bayerische Landesbank	Bank Brussels Lambert	Banca d'Intermediazione Mobiliare (IMI)	Banco Popular Espanol
Bank Brussels Lambert	Bank fuer Arbeit und Wirtschaft AG (Bawag)	Banca Monte dei Paschi di Siena	Banco Urquijo
BBVA	Bank of Ireland	Banco Nazionale del Lavoro	Bank Austria
Bankgesellschaft Berlin	Bankgesellschaft Berlin	Bank Austria	Bank fuer Arbeit und Wirtschaft AG (BAWAG)
BHF Bank	Banque du Luxembourg	Bank of Cyprus, Greece	Bank of Ireland
BNP Paribas	Banque et Caisse d'Epargne de l'Etat	Bank of Ireland	Bank Przemyslowo-Handlowy PBK
CDC Ixis Capital Markets, Frankfurt	Barclays Capital	Bank Przemyslowo-Handlowy PBK	Bankgesellschaft Berlin
CECA	Bayerische Landesbank	Bankgesellschaft Berlin	Banque du Luxembourg
Commerzbank	BBVA	Banque du Luxembourg	Banque et Caisse d'Epargne de l'Etat
CSFB	BHF Bank	Banque et Caisse d'Epargne de l'Etat	Barclays Capital
Daiwa Securities SMBC Europe	BNP Paribas	Barclays Capital	Bayerische Landesbank
Deutsche Bank	Bundesrepublik Deutschland Finanzagentur	Bayerische Landesbank	BBVA
Dexia Hypothekenbank Berlin	Caixa Geral de Depositos	BBVA	BNP Paribas
DGZ-DekaBank	Caja Madrid	BNP Paribas	Bundesrepublik Deutschland Finanzagentur
Dresdner Bank	CCF	Bundesrepublik Deutschland Finanzagentur	Caja de Ahorros y Monte de Piedad de Madrid (Caja Madrid)
Erste Bank der Oesterreichischen Sparkassen	CDC Ixis Capital Markets	Caixa d'Estalvis de Catalunya	CCF

June 2001	June 2002	June 2003	December 2003
Fortis Bank	Commerzbank	Caja Madrid	CDC IXIS Capital Markets Zweigniederlassung Deutschland
Goldman Sachs International	CECA	CCF	Citigroup
GZ-Bank	Credit Agricole Indosuez	CDC Ixis Capital Markets	Commerzbank
Halifax	Credit Lyonnais	Citigroup	Confederación Española de Cajas de Ahorros (CECA)
Hamburgische Landesbank	CSFB	Commerzbank	Credit Agricole Indosuez
HypoVereinsbank	Daiwa Securities SMBC Europe Ltd	CECA	CSFB
IntesaBCI	Deutsche Bank	Credit Agricole Indosuez	Daiwa Securities SMBC Europe
JP Morgan Chase	Deutsche Postbank	Credit Lyonnais	DePfa Bank
KBC	Dexia	Credito Valtellinese	Deutsche Bank
Landesbank Baden- Württemberg	DGZ-DekaBank	Croatian National Bank	Deutsche Postbank
Landesbank Schleswig- Holstein	Dresdner Bank	CSFB	Dexia
Landesbank Rheinland/Pfalz Girozentrale	DZ Bank	Daiwa Securities SMBC Europe Ltd	Dexia BIL
Maple Bank	EFG Eurobank Ergasias	Delta Lloyd Securities	Dresdner Bank
Merrill Lynch International	EIB	DePfa Bank	DZ Bank
Mizuho International	Erste Bank der Oesterreichischen Sparkassen	Deutsche Bank	Erste Bank der Oesterreichischen Sparkassen
Morgan Stanley	Fortis Bank	Deutsche Postbank	Eurohypo
National Bank of Greece	General Bank of Greece	Dexia	Fortis Bank
Nomura International	Goldman Sachs	Dresdner Bank	Goldman Sachs
Norddeutsche Landesbank Girozentrale	Halifax	DZ Bank	Halifax Bank of Scotland
Sal Oppenheim	Hamburgische Landesbank	Egnatia Bank	HSH Nordbank
Raiffeisen Zentralbank Oesterreich	HSBC Athens	Erste Bank der Oesterreichischen Sparkassen	HypoVereinsbank
Landesbank Sachsen Girozentrale	HypoVereinsbank	Euroclear Bank	ING Bank
Sampo Bank	IntesaBCI	Fortis Bank	ING Belgium
Schroder Salomon Smith Barney (Citigroup)	JP Morgan Chase	Goldman Sachs	ING BHF-Bank
UBS Warburg	KBC	Halifax Bank of Scotland	IntesaBCI

June 2001	June 2002	June 2003	December 2003
Westdeutsche Landesbank	Landesbank Baden-Württemberg, Stuttgart	HypoVereinsbank	JP Morgan Chase
	Landesbank Sachsen Girozentrale	IIB Bank Ltd	KBC
	Lehman Brothers	ING Bank NV	Landesbank Baden-Württemberg, Stuttgart
	LRP Landesbank Rheinland Pfalz	ING Belgium	Landesbank Hessen-Thüringen -Girozentrale (Helaba)
	Maple Bank	ING BHF-Bank	Landesbank Rheinland Pfalz
	Mizuho International	IntesaBCI	Landesbank Sachsen Girozentrale
	Merill Lynch	JP Morgan Chase	Merrill Lynch
	Morgan Stanley	KBC	Mizuho International
	Natexis Banques Populaires	Kingdom of Belgium Federal Public Service Debt Agency	Morgan Stanley
	National Bank of Greece	Landesbank Baden-Württemberg, Stuttgart	Natexis Banques Populaires
	Nomura International	Landesbank Hessen-Thüringen -Girozentrale	National Bank of Greece
	Norddeutsche Landesbank Girozentrale	Landesbank Rheinland Pfalz	Norddeutsche Landesbank Girozentrale
	Nordea Bank Finland	Landesbank Sachsen Girozentrale	Nordea Markets
	Omega Bank	Lehman Brothers	Norinchukin International
	Piraeus Bank	Merrill Lynch	Sal. Oppenheim Jr.
	Rabobank	Mizuho International	Rabobank
	Raiffeisen Zentral Bank	Morgan Stanley	Royal Bank of Scotland
	Royal Bank of Scotland	National Bank of Greece	Sinvest (Santander Central Hispano)
	Sal Oppenheim	Nomura International	Société Générale
	Sampo Bank	Norddeutsche Landesbank Girozentrale	Tokyo Mitsubishi International
	Santander Central Hispano	Nordea Bank Finland Plc	Toronto Dominion Bank
	Schroder Salomon Smith Barney (Citigroup)	Nordea Markets Denmark	UBS
	SEB	Rabobank	Unicredit Banca Mobiliare
	Société Générale	Raiffeisen Zentral Bank AG	Vereins und Westbank
	Tokyo Mitsubishi International	Royal Bank of Scotland	Westdeutsche Landesbank Girozentrale
	UBS Warburg	Santander Central Hispano	

June 2001	June 2002	June 2003	December 2003
	Ulster Bank Ireland	Société Générale	
	Unicredit Banca Mobiliare	Tokyo Mitsubishi International	
	Vereins und Westbank	Toronto Dominion Bank	
	Westdeutsche Immobilien Bank	UBS	
	Westdeutsche Landesbank	Unicredit Banca Mobiliare	
		UniCredito Italiano Bank (Ireland) p.l.c.	
		Vereins und Westbank	

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.