

International Securities Market Association

European repo market survey
Number 8 – conducted December 2004

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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

This report was compiled by Richard Comotto, a Visiting Fellow at the ISMA Centre at the University of Reading in England, where he is responsible for teaching modules on money markets (including the repo market) and risk management in the Centre's MSc finance programmes. He also lectures on repo and securities lending on ISMA's Operations Certification Programme, and is Course Director of the ISMA-ACI annual Professional Repo Market Course.

The author 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.

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 December 2004, the European Repo Council (ERC) of the International Securities Market Association (ISMA) conducted the eighth 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 December 8, 2004. Replies were received from 76 offices of 69 financial groups, mainly banks. Returns were also made directly by the main automated trading systems (ATS) 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 76 institutions who participated in the latest survey was EUR 5,000 billion, compared to EUR 4,561 billion in June 2004 and EUR 3,788 billion in December 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, as well as bank mergers and the consolidation of repo books. In order to try to measure the year-on-year growth in the European repo market, a comparison was made of the returns from institutions that participated in several surveys. Growth was between about 22% and 32% depending on the sample over the year to December 2004, much 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 fell back slightly

from June 2004 to 21.3% but was still higher than the 20.0% reported in December 2003.

The share of voice-brokers continued to contract, reaching 24.2% from 27.2% in December 2003. The share of direct inter-dealer trading recovered to 54.5% from 52.8% in December 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 11.7% from 8.3% in December 2003. This was largely at the expense of domestic transactions (33.9% from 39.6% in December 2003). The share of cross-border transactions increased (to 54.3% from 52.1%), particularly transactions with eurozone counterparties (29.9% from 27.3%). Domestic transactions were more important for the WMBA voice-brokers (43.6%), reflecting their role in the large London repo market.

Settlement analysis

In the latest survey, 9.8% of total outstanding business was settled through tri-party repo arrangements. This represents a fall over the year (from 11.2% in December 2003) but is still substantially higher than in previous years (e.g. 6.2% in June 2003).

Cash currency analysis

In the latest survey, 70.4% of reported outstanding repos were denominated in euros, 10.9% in pounds sterling, 11.6% in US dollars and 3.6% in Japanese yen. The share of sterling grew largely at the expense of the euro. US dollars played a much larger role in tri-party repo (24.9%) and sterling was much more important for the London-based WMBA voice-brokers (26.4%).

Collateral analysis

The share of repo collateral held by survey participants which was issued in countries in the eurozone continued to fall, touching 66.3%, 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 (24.9%).

The bulk of outstanding contracts transacted across ATs was in German and Italian collateral (37.6% and 26.8% respectively).

The bulk of collateral continued to be government bonds (87.8% compared with 86.6% in December 2003). Government bonds accounted for 98.9% of outstanding ATS business.

The share of equity collateral fell back sharply to 0.4% from 2.2% in December 2003.

For the first time, the survey has been able to measure the share of specials business, at least in the brokered market. Specials were reported by the WMBA to account for 6.4% of the outstanding contracts brokered by its members.

Maturity analysis

The bulk of repo activity continues to be in terms of one month or less (66.0% compared to 63.8% in December).

The pattern established in previous December surveys was also broadly repeated in December 2004 in that the average term to maturity lengthened.

Data provided by the ATs confirmed the much shorter average term to maturity of electronic trading. Thus, 79.2% of the outstanding contracts reported by the ATs had only one day remaining to maturity compared to 17.7% in the

main survey and 2.9% reported by the WMBA voice-brokers. The largest share of voice-brokers' business was again accounted for by forward-forward repos (36.7%).

Product analysis

The share of total business conducted on repo desks that was accounted for by securities lending and borrowing recovered to 19.2% from 13.0% in June 2004 and 24.7% in December 2003. The share of equity collateral in this securities lending and borrowing was 5.9% compared with just 1.0% in December 2003.

Concentration analysis

In the latest survey, the top ten institutions accounted for some 58.4% of business, up from 56.7% in December 2003. The share of the top twenty also increased, reaching 80.4% from 78.1% in December 2003, while the share of the top thirty increased to 91.5% from 88.8% in December 2003. However, the degree of competition appears to remain high.

CHAPTER 1: THE SURVEY

On December 8, 2004, the European Repo Council (ERC) of the International Securities Market Association (ISMA) conducted its eighth 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 the University of Reading 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, December 8, 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 were

broken down by regional location of clients, currency, remaining term to maturity and type of collateral. In the latest survey, an estimate was also made of the share of specials in brokered business.

Automated trading systems (ATS) and tri-party repo agents were also asked to provide data on their European business.

1.2 The response to the survey

The latest survey was completed by 76 offices of 69 financial groups. This compares with 81 offices of 75 financial groups in June 2004 and an identical 76 offices of 69 groups in December 2003. While 8 institutions which participated in the June 2004 survey dropped out of the latest survey, 3 institutions rejoined.

The institutions surveyed were headquartered in 16 European countries, as well as in North America (6) and Japan (5). 62 institutions were headquartered in 15 countries of the EU and 55 were headquartered in 11 countries of the eurozone. However, 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 that have participated in ISMA repo surveys 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, June 9, 2005.

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 previous ones are set out in Table 3.1. (full details for all seven 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 December 8, 2004 (figures in billions)					
	2,400	3,377	3,788	4,561	5,000
Of the amounts given in response to question (1) above:					
	Dec-01	Dec-02	Dec-03	Jun-04	Dec-04
1.1 How much was transacted:					
direct with counterparties					
• in the same country as you	19.1%	20.9%	20.5%	19.70%	19.3%
• cross-border in (other) eurozone countries	10.8%	10.5%	14.9%	13.0%	17.3%
• cross-border in non-eurozone countries	15.1%	15.4%	17.4%	19.2%	18.5%
through voice-brokers					
• in the same country as you	24.0%	15.2%	12.3%	11.7%	10.3%
• cross-border in (other) eurozone countries	10.8%	11.7%	9.5%	9.0%	9.0%
• cross-border in non-eurozone countries	7.3%	9.6%	5.4%	3.5%	4.4%
on ATs with counterparties					
• in the same country as you	4.8%	6.8%	6.8%	5.8%	4.3%
• cross-border in (other) eurozone countries	1.4%	2.0%	2.9%	3.6%	3.7%
• cross border-border in non-eurozone countries	0.6%	1.4%	2.0%	2.7%	1.5%
• anonymously through a central clearing counterparty	6.2%	6.6%	8.3%	11.6%	11.7%
1.2 How much of the cash is denominated in:					
• EUR	75.7%	77.2%	72.7%	70.5%	70.4%
• GBP	11.4%	10.0%	10.3%	11.8%	10.9%
• USD	7.8%	7.7%	10.6%	10.8%	11.6%
• SEK, DKK	1.2%	2.0%	2.0%	2.0%	2.2%
• JPY	2.6%	2.2%	3.1%	3.5%	3.6%
• other currencies	1.4%	0.8%	1.4%	1.4%	1.3%
1.3 How much is cross-currency?	3.1%	2.3%	1.2%	1.1%	1.0%
1.4 How much is:					
• classic repo	79.8%	79.5%	80.8%	80.9%	80.6%
• documented sell/buy-backs	8.5%	10.8%	9.7%	11.2%	11.3%
• undocumented sell/buy-backs	11.7%	9.7%	9.6%	7.8%	8.0%
1.5 How much is:					
• fixed rate	86.6%	89.7%	89.6%	87.1%	86.6%
• floating rate	8.1%	7.0%	5.6%	6.6%	7.6%
• open	5.3%	3.3%	4.8%	6.2%	5.8%

	Dec-01	Dec-02	Dec-03	Jun-04	Dec-04
1.6 How much fixed and floating rate repo is (1.6.1) for value before December 11, 2004 and has a remaining term to maturity of:					
• 1 day	15.5%	15.6%	18.0%	17.3%	17.7%
• 2-7days	17.8%	20.1%	18.9%	22.5%	22.4%
• more than 7 days but no more than 1 month	24.9%	27.6%	26.9%	28.3%	25.9%
• more than 1 month but no more than 3 months	13.0%	14.8%	15.9%	12.4%	17.5%
• more than 3 months but no more than 6 months	6.7%	9.2%	6.4%	7.3%	5.8%
• more than 6 months	13.9%	5.9%	8.0%	7.0%	5.4%
• forward-forward repos	8.1%	6.8%	5.8%	5.2%	5.2%
1.7 How much is tri-party repo:	4.2%	7.3%	11.2%	10.9%	9.8%
• for fixed terms to maturity	88.1%	79.3%	74.9%	83.1%	82.2%
• on an open basis	11.9%	20.7%	25.1%	16.9%	17.8%
1.8 How much is against collateral issued in:					
Austria					
• by the central government	0.4%	0.5%	0.7%	0.7%	0.7%
• by other issuers	0.1%	0.1%	0.1%	0.1%	0.0%
Belgium					
• by the central government	6.2%	5.1%	3.8%	4.1%	3.4%
• by other issuers	0.0%	0.2%	0.2%	0.2%	0.4%
Denmark					
• by the central government	0.3%	0.6%	0.4%	0.4%	0.3%
• by other issuers	0.3%	0.3%	0.4%	0.3%	0.4%
Finland					
• by the central government	0.1%	0.3%	0.2%	0.3%	0.3%
• by other issuers	0.0%	0.1%	0.0%	0.0%	0.0%
France					
• by the central government	6.3%	9.8%	7.7%	8.3%	9.3%
• by other issuers	0.7%	0.9%	0.9%	1.0%	0.9%
Germany					
• by the central government	33.2%	24.2%	25.6%	23.5%	20.8%
• pfandbrief	2.3%	2.2%	3.1%	2.6%	2.0%
• by other issuers	1.6%	2.5%	2.4%	2.5%	2.1%
Greece					
• by the central government	1.5%	1.7%	1.5%	1.7%	2.2%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland					
• by the central government	0.0%	0.1%	0.1%	0.2%	0.3%
• by other issuers	0.0%	0.0%	0.1%	0.1%	0.1%
Italy					
• by the central government	17.3%	17.2%	14.2%	14.0%	14.4%
• by other issuers	0.5%	1.3%	0.4%	0.3%	0.3%

	Dec-01	Dec-02	Dec-03	Jun-04	Dec-04
Luxembourg					
• by the central government	0.0%	0.0%	0.0%	0.1%	0.0%
• by other issuers	0.2%	0.2%	0.3%	0.6%	0.5%
Netherlands					
• by the central government	1.2%	1.5%	1.7%	2.0%	2.0%
• by other issuers	0.3%	0.5%	0.7%	0.8%	0.7%
Portugal					
• by the central government	0.2%	0.2%	0.4%	0.4%	0.5%
• by other issuers	0.0%	0.1%	0.0%	0.0%	0.0%
Spain					
• by the central government	4.6%	6.7%	6.1%	5.4%	5.0%
• by other issuers	0.4%	0.3%	0.2%	0.2%	0.4%
Sweden					
• by the central government	0.7%	1.0%	0.9%	1.1%	1.8%
• by other issuers	0.2%	0.5%	0.4%	0.5%	0.4%
UK					
• by the central government	9.8%	9.3%	8.9%	10.3%	10.3%
• by other issuers	1.5%	1.4%	1.9%	1.3%	1.7%
US but settled across EOC/CS	2.3%	2.6%	2.9%	2.2%	2.5%
• other countries	6.5%				
EU Accession countries		0.3%	0.4%		
Cyprus					
• by the central government				0.0%	0.0%
• by other issuers				0.0%	0.0%
Czech Republic					
• by the central government				0.0%	0.0%
• by other issuers				0.0%	0.0%
Estonia					
• by the central government				0.0%	0.0%
• by other issuers				0.0%	0.0%
Hungary					
• by the central government				0.0%	0.1%
• by other issuers				0.0%	0.0%
Latvia					
• by the central government				0.0%	0.0%
• by other issuers				0.0%	0.0%
Lithuania					
• by the central government				0.0%	0.0%
• by other issuers				0.0%	0.0%
Malta					
• by the central government				0.0%	0.0%
• by other issuers				0.0%	0.0%
Poland					
• by the central government				0.1%	0.1%
• by other issuers				0.0%	0.0%

	Dec-01	Dec-02	Dec-03	Jun-04	Dec-04
Slovak Republic					
• by the central government				0.0%	0.0%
• by other issuers				0.0%	0.0%
Slovenia					
• by the central government				0.0%	0.0%
• by other issuers				0.0%	0.0%
• other					
OECD		6.9%	9.4%	9.8%	13.3%
non-OECD EMEA		0.2%	0.4%	1.3%	0.6%
non-OECD Asian & Pacific		0.1%	0.2%	0.1%	0.5%
non-OECD Latin America		0.1%	0.3%	0.5%	0.4%
equity		0.1%	2.2%	1.8%	0.4%
collateral of unknown origin	1.2%	0.9%	0.7%	1.2%	0.8%
Q2 What is the total value of securities loaned and borrowed by your repo desk:to/from counterparties					
in the same country as you	49.5%				
• in fixed income		49.7%	45.3%	53.8%	50.2%
• in equity		0.5%	0.3%	1.0%	2.6%
cross-border in (other) eurozone countries	15.9%				
• in fixed income		22.3%	13.4%	19.4%	24.3%
• in equity		0.1%	0.6%	0.2%	2.7%
cross-border in non-eurozone countries	34.7%				
• in fixed income		27.2%	40.3%	25.4%	19.5%
• in equity		0.2%	0.1%	0.3%	0.6%
for which the term to maturity is					
• fixed	70.8%	75.5%	80.8%	65.9%	55.0%
• open	29.2%	24.5%	19.2%	34.1%	45.0%

Total repo business (Q1)

The total value at close of business on December 8, 2004, of repos and reverse repos outstanding on the books of the 76 institutions which participated in the survey was **EUR 5,000 billion**, of which, 50.1% were repos and 49.9% 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. However, the ECB provided a value for "official" repos outstanding at close of business on December 8, 2004, 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 188 billion, which represents some 53% of the value of outstanding repos between all eligible banks and the ECB at close of business on December 8, 2004.

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, mergers between banks and the reorganization of repo books within banks. 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 30 institutions which have participated in all eight surveys grew by 22.3% year-on-year to December 2004. Most of this growth occurred in the six months from December 2003 to June 2004. From June 2004 to

December 2004, the rate of growth of this sample was only 5.9%. Of the 65 institutions that participated in the December 2004 and December 2003 surveys, growth was 31.6% over the year. Of the 71 institutions that participated in the December 2004 and June 2004 surveys, growth over the six months was 10.9%.

The average size of repo books in December 2004 was about EUR 66 billion (standard deviation EUR 106 billion). Of the 65 institutions that participated in both the December 2004 and December 2003 surveys, there was a clear bias towards growth, with the repo books of 42 expanding and 23 contracting. In contrast, between the December 2004 and June 2004 surveys, of the 71 institutions that participated in both these surveys, the repo books of 40 expanded and 36 contracted.

Counterparty analysis (Q1.1)

The share of reported outstanding repos that had been transacted directly with the other counterparties (i.e. not through a voice-broker or over an ATS) was 54.5%, up from 51.9% in June 2004 and 52.8% in December 2003.

A sub-set of direct repos, equivalent to 9.8% of the total outstanding business, was settled through tri-party repo arrangements. This is lower than in June 2004 (10.9%) and December 2003 (11.2%), but still significantly higher than in June 2003 (6.2%) and previous surveys. The number of institutions in the survey reporting tri-party repos fell to 34 from 38 in June 2004 but was up on the 32 in December 2003.

The main tri-party repo agents in Europe again contributed data to the survey. Returns were received from Bank of New York, Clearstream, Euroclear, JP Morgan Chase and SegalInterSettle (SIS). The total value of outstanding tri-party repo contracts on December 8, 2004, was EUR 297.2 billion

compared with EUR 260.6 billion in June 2004, equivalent to 5.9% of the total value of outstanding repos reported in the main survey. This compares to the share of 9.8% 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 in the main survey. 30.5% was domestic (compared with 38.4% in June 2004) and 62.9% was cross-border with counterparties outside the eurozone (compared with 60.8% in June 2004). 58.0% was against euro, 13.3% against sterling and 24.9% against US dollars compared with 59.8%, 11.6% and 28.1%, respectively, in June 2004. 59.0% of tri-party contracts were cross-currency compared with 60.5% in June 2004. 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 in the main survey, which suggests that there is much more cross-currency repo business than that reported directly. 74.9% of outstanding tri-party contracts were for 1 month or less compared with 76.8% in June 2004. 84.8% were fixed-term compared with 87.4% in June 2004: the remainder was largely open contracts. The share of collateral issued in the EU fell sharply to 66.9% from 76.5% in June 2004 and collateral issued in the eurozone fell to 52.7% from 64.9%. There were falls in the shares of collateral issued in Germany (18.0% from 27.2%), US (6.5% from 11.1%), France (6.9% from 8.2%) and Italy (5.2% from 5.5%), but increases in the shares of collateral issued in the UK (11.8% from 8.6%) and Netherlands (8.0% from 7.7%). The share of government bonds increased to 44.2% from 36.3%.

The share of voice-brokers in December 2004 was 24.2% compared with 24.8% in June 2004 and 27.2% in December 2003. In the case of the voice-brokers represented in the WMBA data, of the contracts negotiated through those firms and still outstanding on the survey date, the proportion between domestic counterparties was 43.6%, very little changed from June 2004 (43.1%). The share of cross-border business by voice-brokers between counterparties both outside the eurozone reached 11.8% compared to 9.6% in June 2004 and just 2.1% in December 2003. The remaining cross-border business was between counterparties both within the eurozone (down to 18.7% from 23.8% in June 2004 and 21.1% in December 2003) and between counterparties of which only one was in the eurozone (up to 25.8% from 23.4% in June 2004 and 21.2% in December 2003).

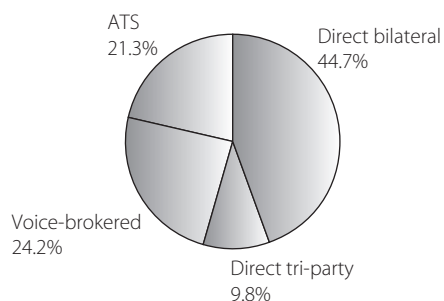
The share of inter-dealer ATs was 21.3% compared with 23.8% in June 2004 and 20.0% in December 2003. The number of institutions in the latest survey reporting use of ATs increased to 50 from 49 in June 2004, level with the number in December 2003.

The principal automated trading systems (ATS) operating in Europe provided data directly to the survey. Returns were received from BrokerTec, Eurex Repo and MTS. The aggregate value of their transactions outstanding on December 8, 2004, was equivalent to 12.5% of the value of the main survey, unchanged from June 2004. This is over half the main survey estimate of 21.3%. The difference is likely to be due mainly to double-counting in the main survey as the ATS data count only one side of each transaction. Another difference is that the main survey includes business over at least one additional ATS.

[See Table 3.2 on pg 17]

	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04
ATS	19	28	39	48	51	50	49	50
anonymous ATS	13	16	21	35	31	29	32	36
voice-brokers	41	43	67	65	61	58	56	55
tri-party repo	21	22	29	32	34	32	38	34
total	48	61	86	82	84	76	81	76

Figure 3.1 – Counterparty analysis

*Geographical analysis (Q1.1)*

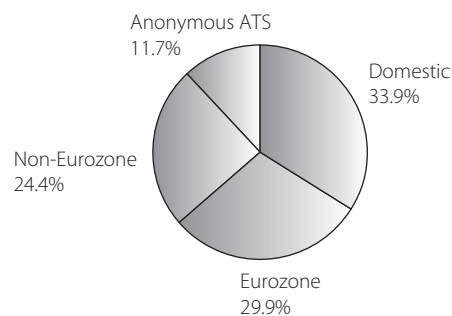
The shares of domestic and cross-border business fell sharply over the year to December 2004. 33.9% of reported outstanding repo contracts were with domestic counterparties, compared with 37.3% in June 2004 and 39.6% in December 2003. 54.3% of contracts were cross-border, compared with 51.0% in June 2004 and 52.1% in December 2003. The share of contracts that had been transacted anonymously on an ATS and settled with a central clearing counterparty (CCP) rose slightly to 11.7% in December 2004 from 11.6% in June 2004 but was well up on the 8.3% reported in December 2003. The number of institutions reporting anonymous electronic in December 2004 was up to 36 from 29 in June 2004 and 31 in December 2003.

Of the business reported directly by the ATSs, 59.5% was transacted anonymously, almost exactly the same as in June 2004 (59.4%). This corresponds to a share of 7.5% of the total value of outstanding contracts, virtually unchanged

from June 2004 (7.4%) and compared to the 11.7% share reported in the main survey. Double-counting of business in the main survey is the likely reason for the discrepancy.

In the cross-border business reported in the main survey, a larger share was with counterparties in the eurozone. In December 2004, this accounted for 29.9% of outstanding contracts compared with 25.6% in June 2004 and 27.3% in December 2003. 24.4% of reported transactions were with counterparties outside the eurozone, compared to 25.4% in June 2004 and 24.8% in December 2003. 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.

Figure 3.2 – Geographical analysis

*Settlement analysis (Q1.7)*

Of reported tri-party repo business, the share of fixed-term repos was 82.2%, similar to the

83.1% reported in June 2004 but significantly up from the 74.9% reported in December 2003, although still below previous levels. These numbers are similar to those reported by the WMBA.

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

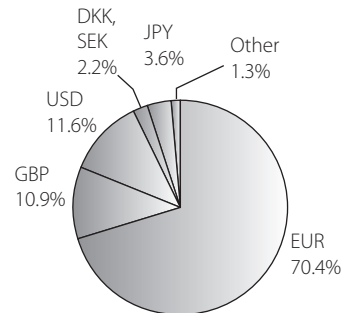
In this survey, 70.4% of reported outstanding repos were denominated in euros, virtually identical to the share of 70.5% reported in June 2004 but lower than the 72.7% reported in December 2003. The pound sterling accounted for 10.9%, US dollars for 11.6% and Japanese yen for 3.6%, compared with 11.8%, 10.8% and 3.5%, respectively, in June 2004 and 10.3%, 10.6% and 3.3%, respectively, in December 2003.

The reported share of cross-currency repos remained insignificant at 1.0%. It was 1.1% in June 2004 and 1.2% in December 2003. However, the response rate to this question remains low.

In the case of the voice-brokers contributing data through the WMBA, the euro continued to account for a much smaller share than in the main survey (64.1% compared to 60.0% in June 2004 and 64.5% in December 2003). The share of the US dollar fell back to 5.5% from 9.7% in June 2004 and closer to the 5.2% reported in December 2003. The share of the pound sterling remained much higher than the main survey at 26.4%, virtually unchanged from the 26.3% reported in June 2004 but slightly up from the 25.6% reported in December 2003. Again, this would seem to reflect the primary location of these voice-brokers in London.

The euro was by far the largest currency in ATS business, accounting for 86.3% compared with 89.2% in June 2004. Sterling accounted for 6.9%, up from 3.5% in June 2004. The 'other currencies' category in ATS business was probably dominated by Swiss francs, reflecting the Swiss franc market operated by Eurex Repo.

Figure 3.3 – Currency analysis



Collateral analysis (Q1.8)

66.3% of repo collateral held by survey participants was issued in countries in the eurozone, compared with 69.0% in June 2004 and 70.5% in December 2003. Collateral issued in Germany continued to account for the largest single share at 24.9%, but this was much lower than the 28.5% reported in June 2004 and the 31.1% reported in December 2003. The share of Italian collateral held up at 14.7% compared to 14.3% in June 2004 and 14.7% in December 2003. The share of collateral issued in France was higher at 10.1% from 9.3% in June 2004 and 8.5% in December 2003. Another important source of collateral was the UK (12.0% compared to 11.6% and 10.8%, respectively, in the two previous surveys). There were reductions in the shares of collateral issued in Spain (5.4% compared to 5.6% and 6.3%) and Belgium (3.8% compared to 4.3% and 4.0%).

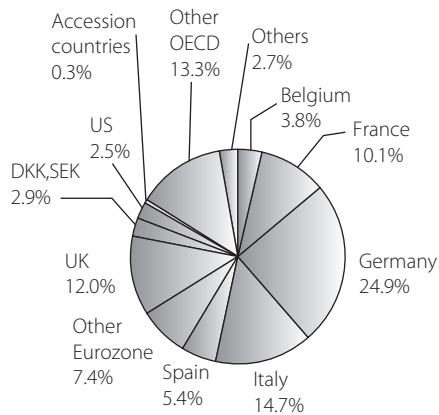
The 10 countries which recently joined the EU accounted for 0.3% of collateral. This was largely issued in Hungary and Poland.

The share of collateral issued in "other OECD countries" (i.e. not the EU or the US) jumped to 13.3% from 9.8% in June 2004 and 9.4% in December 2003.

The share of equity collateral fell sharply to 0.4% from 1.8% in June 2004 and 2.2% in December 2003.

Business reported by ATS was overwhelmingly in collateral issued in Germany (37.6% compared with 38.8% in June 2004) and Italy (26.8% compared with 29.4%). Other significant shares were held by collateral issued in France (up to 13.6% from 8.6%), UK (7.6% compared with 3.5%), Belgium (2.3% compared with 2.9%), Netherlands (3.4% compared with 2.8%), Spain (2.4% compared with 1.9%), Greece (2.3% compared with 1.6%) and Austria (1.7% compared with 1.0%). The share of "other OECD countries" fell from 7.3% to zero. This possibly anomalous change meant that the share of collateral issued in EU countries and repoed electronically increased to 99.7% from 92.4% in June 2004 and the share of collateral issued in eurozone countries increased to 92.1% from 88.9%.

Figure 3.4 – Collateral analysis



The share of collateral in the main survey issued by central governments was 87.8% compared with 87.4% in June 2004 and a low of 86.6% in December 2003.

The share of government bonds in the business reported directly by the ATs remained very much higher at 98.9% compared with 97.4% in June 2004.

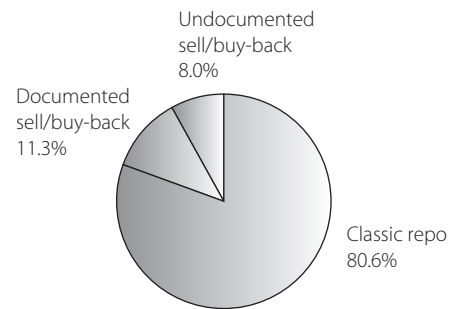
The latest data reported by the WMBA measured, for the first time, the share of specials.

These are repo transactions in collateral for which there is such strong demand that buyers are willing to offer cash in exchange at below the normal 'general collateral' (GC) repo rate. The share of specials in the brokered market turned out to be 6.4%. This is on the low side of expectations, but entirely plausible.

Contract analysis (Q1.4)

The share of reported outstanding repo contracts taking the form of classic repos (also sometimes called "repurchase agreements") was 80.6%, very similar to the 80.9% reported in June 2004 and the 80.8% reported in December 2003. 11.3% were sell/buy-backs documented under agreements such as the TBMA/ISMA or PSA/ISMA Global Master Repurchase Agreements (GMRA) and 8.0% were undocumented sell/buy-backs. This compares to 11.2% and 7.8%, respectively, in June 2004, and 9.7% and 9.6%, respectively, in December 2003.

Figure 3.5 – Contract analysis

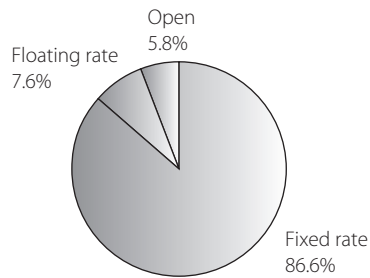


Repo rate analysis (Q1.5)

The share of fixed-rate repos was 86.6% compared with 87.1% in June 2004 and a high of 89.6% in December 2003. Floating-rate repos (largely indexed to EONIA) increased to 7.6% from 6.6% in June 2004 and 5.6% in December 2003. The share of open repo (no fixed maturity date but terminable on demand by either counterparty) fell back to 5.8% from 6.2% in June 2004 but up from 4.8% in December 2003.

87.8% of the business reported directly by the ATs was fixed-rate compared with 91.6% in June 2004. The remainder was 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 lengthened over the six months to December 2004. 33.9% of outstanding business had remaining terms to maturity of more than one month, compared with 31.9% in June 2004 and 36.1% in December 2003. The share of contracts with remaining terms of one month or less fell to 66.0% compared with 68.1% in June 2004 and 63.8% in December 2003. However, the share of

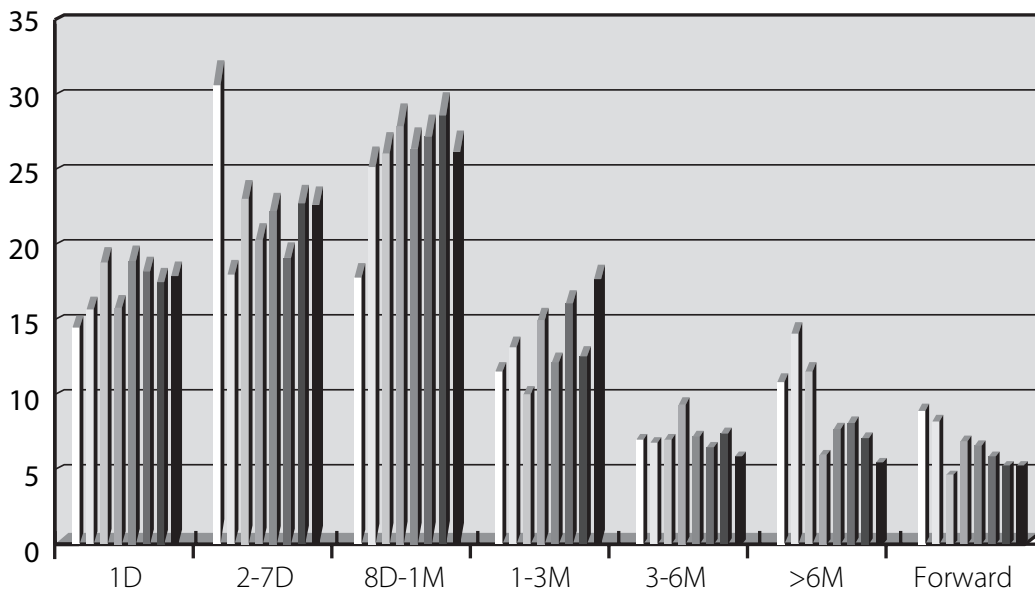
contracts with more than 3 months remaining to maturity has been on a declining trend, reaching 16.4% from 19.5% in June 2004 and 20.2% in December 2003. The share of contracts of 3 months or less has been on a rising trend, reaching 83.5% from 80.5% in June 2004 and 79.7% in December 2003.

The share of forward-forward repos was unchanged at 5.2%, the same level as in June 2004 but down from 5.8% in December 2003.

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 average term to maturity shortened in December 2004 compared with June 2004. Thus, only 10.7% was for one week or less, and 27.9% for one month or less (compared with 8.7% and 22.5%, respectively, in June 2004 and 11.2% and 30.4%, respectively, in December 2003). The share of forward-forwards fell back to 36.7% from 47.7% in June 2004 closer to the 31.4% reported in December 2003.

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, December 2004)

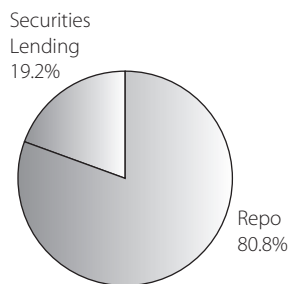


The bulk of outstanding contracts reported directly by the ATs had a remaining term to maturity of one day (79.2% compared with 82.2% in June 2004). Most of the remaining business was from 2 days to 1 week (11.6% compared with 6.3% in June 2004) and from 1 week to 1 month (6.6% compared with 8.6% in June 2004). Terms of more than 1 month accounted for only 2.5% (compared with 1.2% in June 2004) and forward-forward repos for 0.9% (compared with 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)

The share of total business accounted for by securities lending and borrowing conducted on repo desks jumped to 19.2% from 13.0% in June 2004, compared to the record 24.7% reported in December 2003. The share of fixed income securities dropped to 94% from 98.6% in June 2004 and 99.0% in December 2003.

Figure 3.8 – Product analysis

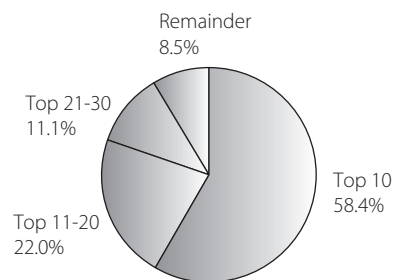


Concentration analysis

In the latest survey, the top ten institutions accounted for 58.4% of total reported business, up from 53.0% in June 2004 and 56.7% in

December 2003, while the top twenty accounted for 80.4% compared to 78.0% and 78.1%, respectively. The share of the top thirty increased to 91.5% from 90.0% 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 rose sharply to 0.047 but from a low base of 0.040 in June 2004 and 0.045 in December 2003. This change partly reflected the exit of smaller institutions from the survey.

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 December 8, 2004 again confirmed the enormous size of the European repo market by fixing the lower boundary of that market at EUR 5,000 billion in terms of outstanding contracts. It also revealed strong year-on-year growth of between about 22% and 32%, much of it between December 2003 and June 2004.

While 2004 saw important advances in electronic trading compared with previous years, the rate of growth of market share slowed over the year. Electronic trading now accounts for 21.3% of reported business, while anonymous electronic trading has a market share of 11.7%.

A similar story applied to tri-party repo. After a dramatic jump in market share to 11.2% in December 2003 from 6.2% in June 2003, tri-party repo had drifted down to 9.8% by the time of the latest survey.

The latest survey reveals a decline in the share of eurozone collateral to 66.3% from 70.5% in December 2003. This reflects primarily a reduction in the share of German collateral (from 31.1% to 24.9%). This may indicate an overall slowdown in the eurozone repo market, although certain sectors of that market are buoyant (e.g. the share of French collateral grew from 8.6% to 10.1%). On the other hand, there has been an as yet unexplained jump in the share of collateral issued in 'other OECD countries' from 9.4% to 13.3%.

One of most interesting additions in the latest survey is an estimate for the share of specials. The WMBA reported that specials accounted for 6.4% of the outstanding contracts brokered by its members.

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 December 8, 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, December 8, 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 'N/A' 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, i.e. 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, December 8, 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, December 9, 2004*. You should therefore include all *open repos and reverse repos* that have been rolled over from Wednesday, December 8, 2004 to a later date and all *forward-forward repos and reverse repos that are still outstanding at close on Wednesday, December 8, 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, December 8, 2004, even if their value dates are later.

k) 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.

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. LIFFE-Clearnet systems 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, December 8, 2004, that will mature on Thursday, December 9, 2004;
- overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, December 8, 2004.

Q(1.6.1.2) 2–7 days – this means:

- all contracts transacted prior to Wednesday, December 8, 2004, that will mature on Friday, December 10, 2004, or any day thereafter up to and including Wednesday, December 15, 2004;
- contracts transacted on Wednesday, December 8, 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, December 8, 2004, that will mature on Thursday, December 16, 2004, or any day thereafter up to and including Monday, January 10, 2005;
- contracts transacted on Wednesday, December 8, 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, December 8, 2004, that will mature on Tuesday, January 11, 2005, or any day thereafter up to and including Tuesday, March 8, 2005;
- contracts transacted on Wednesday, December 8, 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, December 8, 2004, that will mature on Wednesday, March 9, 2005, or any day thereafter up to and including Wednesday, June 8, 2005;
- contracts transacted on Wednesday, December 8, 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, December 8, 2004, that will mature on Thursday, June 9, 2005, or any day thereafter;
- contracts transacted on Wednesday, December 8, 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, December 13, 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 Luxembourg should be recorded in (1.8.26).

(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: SURVEY PARTICIPANTS

List of respondents	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04
ABN Amro Bank	x	x	x	x	x	x	x	x
Algemeine Hypothekenbank Rheinboden	x		x					
Allied Irish Banks		x	x	x	x	x	x	x
Alpha Bank				x	x			
Arab Banking Corporation (Italy)					x			
AXA Bank Belgium			x	x	x	x	x	x
Banca Cassa di Risparmio di Asti					x			
Banca d'Intermediazione Mobiliare (IMI)		x	x	x	x	x		
Banca Monte dei Paschi di Siena				x	x	x	x	x
Banco Nazional del Lavoro		x		x	x	x	x	x
Banco Pastor		x						
Banco Popular Espanol				x		x	x	
Banco Santander Central Hispano			x	x	x	x	x	x
Banco Urquijo		x				x	x	x
Bank Austria			x	x	x	x	x	
Bank fuer Arbeit und Wirtschaft AG (BAWAG)			x			x	x	x
Bank od Aland	x							
"Bank of Cyprus, Greece"					x			
Bank of Ireland			x	x	x	x	x	x
Bank Przemyslowo-Handlowy PBK					x	x	x	x
Bankgesellschaft Berlin	x	x	x	x	x	x	x	x
Banque de Luxembourg			x	x	x	x	x	x
Banque et Caisse d'Epargne de l'Etat			x	x	x	x	x	x
Barclays Capital	x	x	x	x	x	x	x	x
Bayerische Landesbank	x	x	x	x	x	x	x	x
BBVA	x	x	x	x	x	x	x	x
BNP Paribas	x	x	x	x	x	x	x	x
Bundesrepublik Deutschland Finanzagentur			x	x	x	x	x	
BW-Bank		x						
Caixa d'Estalvis de Catalunya					x			
Caixa Geral de Depositos			x	x				
Caja de Ahorros y Monte de Piedad de adrid (Caja Madrid)			x	x	x	x		
Calyon		x	x	x	x	x	x	x
Capitalia			x				x	x
CDC IXIS Capital Markets								
Zweigniederlassung Deutschland			x	x	x	x	x	x
Citigroup	x	x	x	x	x	x	x	x
Commerzbank	x		x	x	x	x	x	x
Confederación Española de Cajas de Ahorros (CECA)	x		x	x	x	x	x	x
Credito Valtellinese					x			
Croatian National Bank		x			x			
CSFB	x	x	x	x	x	x	x	x
Daiwa Securities SMBC Europe	x	x	x	x	x	x	x	x
Delta Lloyd Securities					x			

List of respondents	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04
DePfa ACS				X	X	X	X	X
DePfa Bank				X	X	X	X	X
Deutsche Bank			X	X	X	X	X	X
Deutsche Postbank			X	X	X	X	X	X
Dexia	X	X	X	X	X	X	X	X
Dexia BIL						X		
Dexia Hypo	X	X						
Dresdner Bank	X	X	X	X	X	X	X	X
DZ Bank	X	X	X	X	X	X	X	X
EFG Eurobank Ergasias			X	X			X	
Egnatia Bank					X		X	
Erste Bank der Oesterreichischen Sparkassen	X	X	X	X	X	X	X	X
Euroclear Bank				X	X		X	X
Eurohypo						X		X
European Investment Bank			X				X	X
Fortis Bank	X	X	X	X	X	X	X	X
General Bank of Greece			X	X				
Goldman Sachs	X	X	X	X	X	X	X	X
Halifax Bank of Scotland	X	X	X	X	X	X	X	X
HSBC Athens			X					
HSBC CCF			X	X	X	X	X	X
HSH Nordbank	X	X	X	X	X	X	X	X
HypoVereinsbank	X	X	X	X	X	X	X	X
IIB Bank					X			
ING Bank					X	X		X
ING Belgium	X		X	X	X	X		
ING BHF-Bank			X	X	X	X	X	X
ING BHF-Bank Luxembourg							X	
IntesaBCI	X	X	X	X	X	X	X	X
JP Morgan	X	X	X	X	X	X	X	X
KBC	X	X	X	X	X	X	X	X
KfW							X	X
Kingdom of Belgium Federal Public Service Debt Agency					X		X	
Landesbank Baden-Württemberg, Stuttgart	X	X	X	X	X	X	X	X
Landesbank Hessen-Thüringen -Girozentrale (Helaba)					X	X	X	X
Landesbank Rheinland Pfalz	X	X	X	X	X	X	X	X
Landesbank Sachsen Girozentrale	X	X	X	X	X	X	X	X
Lehman Brothers		X	X	X	X		X	X
Maple Bank	X	X	X					
Merrill Lynch	X	X	X	X	X	X	X	X
Mitsubishi Securities International		X	X	X	X	X	X	X
Mizuho International	X	X	X	X	X	X	X	X
Morgan Stanley	X		X	X	X	X	X	X
Natexis Banques Populaires		X	X	X		X		

List of respondents	Jun-01	Dec-01	Jun-02	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04
National Bank of Greece	x	x	x	x	x	x	x	x
Nomura International	x	x	x	x	x		x	x
Norddeutsche Landesbank Girozentrale	x	x	x	x	x	x	x	x
Nordea Markets			x	x	x	x	x	x
Norinchukin Bank						x	x	x
Nova Ljubljanska Banka d.d.							x	
Omega Bank			x	x				
Piraeus Bank			x					
Rabobank		x	x	x	x	x	x	x
Royal Bank of Scotland			x	x	x	x	x	x
RZB	x	x	x		x		x	x
Sal. Oppenheim Jr.	x	x	x			x	x	x
Sampo Bank			x	x				
SEB		x		x				
Société Générale		x	x	x	x	x	x	x
Toronto Dominion Bank					x	x		
UBS	x	x	x	x	x	x	x	x
Ulster Bank			x	x			x	x
Unicredit Banca Mobiliare			x	x	x	x	x	x
Unicredito Italiano Bank (Ireland)					x			
Vereins und Westbank			x	x	x	x	x	
Westdeutsche Immobilien Bank		x	x					
Westdeutsche Landesbank Girozentrale	x		x			x	x	
Zagrabacka Banka				x				x

APPENDIX C: 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.