



# **International Capital Market Association**

## **European repo market survey Number 9 – conducted June 2005**

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International Capital Market  
Association  
Rigistrasse 60  
P. O. Box  
CH-8033 Zurich  
[www.icma-group.org](http://www.icma-group.org)

# **CONTENTS**

<b>About the author</b>	<b>5</b>
<b>Executive summary</b>	<b>6</b>
<b>Chapter 1: The survey</b>	<b>8</b>
<b>Chapter 2: Methodological issues</b>	<b>10</b>
<b>Chapter 3: Analysis of survey results</b>	<b>11</b>
<b>Chapter 4: Conclusion</b>	<b>22</b>
<b>Appendix A: Survey guidance notes</b>	<b>23</b>
<b>Appendix B: Participants in the survey</b>	<b>28</b>
<b>Appendix C: ICMA's repo council structure</b>	<b>32</b>

This report has been commissioned by the International Capital Market Association (ICMA) in particular support of members of ICMA's European Repo Council (ERC) and in the interests of the international capital 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 ICMA, 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 ICMA's Operations Certification Programme, and is Course Director of the ICMA-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 June 2005, the European Repo Council (ERC) of the International Securities Market Association (ISMA) – which became the International Capital Market Association (ICMA) on merging with the International Primary Market Association in July 2005 – conducted the ninth 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 8, 2005. Replies were received from 81 offices of 74 financial groups, mainly banks. Returns were also made directly by tri-party repo agents in Europe, but it was not possible on this occasion to include the main automated trading systems (ATS) and the group of voice-brokers who normally report 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 5,319 billion, compared to EUR 5,000 billion in December 2004 and EUR 4,561 billion in June 2004.

It is important to note that some of the changes in these headline numbers 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 within banks. The organic year-on-year growth in the European repo market was therefore measured by comparing the aggregate returns from a constant sample of institutions (those that have participated in several surveys). Growth measured on this basis was between about 16% and 19% over the year to June 2005, most of which occurred over the six months between the December 2004 and June 2005 surveys.

### **Counterparty analysis**

The latest survey showed that the share of electronic trading was virtually unchanged at 21.2%, as were the shares of voice-brokers (24.6%) and direct inter-dealer trading (54.3%).

### **Geographical analysis**

The share of reported outstanding repo contracts that had been negotiated anonymously on an ATS and settled with a central clearing counterparty (CCP) fell back to 10.4% from 11.7% in December 2004 and 11.6% in June 2004. Domestic transactions recovered to 36.7% from 33.9% in December 2004, close to the 37.2% seen in June 2004. The share of cross-border transactions fell back to

52.8% from 54.3% in December 2004 and closer to the 51.1% recorded in June 2004.

### **Settlement analysis**

The share of tri-party repo recovered to 10.4% from 9.8% in December 2004, but is still below the peak of 11.2% reached in December 2003.

### **Cash currency analysis**

The shares of currencies tended to move back towards the levels seen in June 2004: 70.0% in euros, 11.8% in pounds sterling, 11.1% in US dollars and 3.4% in Japanese yen. The biggest change was the growth in the six months to June 2005 in the share of sterling (from 10.9% in December 2004).

### **Collateral analysis**

The share of repo collateral held by survey participants which was issued in countries in the eurozone recovered slightly to 67.4% from 66.3% in December 2004 but remained below the 69.0% seen in June 2004. The largest share of collateral continued to be issued in Germany (24.8%).

The share of collateral issued in EU countries accounted for by government bonds fell to 85.7%, its lowest level ever in the survey and down from 87.8% in December 2004.

The share of equity collateral remained very low at 0.4%.

### **Maturity analysis**

The bulk of repo activity continued to be in terms of one month or less (65.3% compared to 66.0% in December 2004).

### **Product analysis**

The share of total business conducted on repo desks that was accounted for by securities lending and borrowing was steady at 19.2% of the total business. The share of equity collateral in this securities lending and borrowing jumped to 11.4% from 5.9% in December 2004.

### **Concentration analysis**

In the latest survey, the top ten institutions accounted for some 55.5% of the survey sample, significantly down from 58.4% in December 2004. The share of the top twenty also fell, to 78.2% from 80.4% in December 2004, while the share of the top thirty fell slightly to 90.1% from 91.5% over the same period.

## **CHAPTER 1: THE SURVEY**

On June 8, 2005, the European Repo Council (ERC) of the International Securities Market Association (ISMA) – which became the International Capital Market Association (ICMA) on merging with the International Primary Market Association in July 2005 – conducted its ninth semi-annual survey of the repo market in Europe.

The 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 ICMA 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 8, 2005.

The questionnaire also asked these institutions to analyse their business in terms of the currency, the type of counterparty, contract and repo rate, the remaining term to maturity, method of settlement and source of collateral. In

addition, institutions were 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) which is normally provided by the Wholesale Market Brokers’ Association (WMBA) was not available for this survey. Not all of the main automatic trading systems (ATS) were able to meet the deadline for returns, so it has not been possible on this occasion to produce an aggregate return for ATSs. However, returns were made by the main European tri-party repo agents.

### **1.2 The response to the survey**

The latest survey was completed by 81 offices of 74 financial groups. This compares with 76 offices of 69 financial groups in December 2004 and 81 offices of 75 groups in June 2004. While four institutions which participated in the December 2004 survey dropped out of the latest survey, eight institutions rejoined and one institution joined for the first time.



The institutions surveyed were headquartered in 16 European countries, as well as in North America (6) and Japan (5). 70 institutions were headquartered in 15 of the 25 countries of the EU and 60 were headquartered in 11 of the 12 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 survey is scheduled to take place at close of business on Wednesday, December 7, 2005.

Any financial institution wishing to participate in the next survey can download copies of the questionnaire and accompanying Guidance Notes from ICMA's web site. The latest forms will be published shortly at the following website: [www.icma-group.org/surveys/repo/participate](http://www.icma-group.org/surveys/repo/participate).

Questions about the survey should be sent by e-mail to [reposurvey@icma-group.org](mailto:reposurvey@icma-group.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 ICMA's website [www.icma-group.org](http://www.icma-group.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 eight previous surveys can be found at [www.icma-group.org](http://www.icma-group.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 8, 2005 (figures in EUR billions)					
	4,050	3,788	4,561	5,000	5,319
Of the amounts given in response to question (1) above:					
	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05
1.1 How much was transacted:					
direct with counterparties					
• in the same country as you	19.6%	20.5%	19.7%	19.3%	20.2%
• cross-border in (other) eurozone countries	14.5%	14.9%	13.0%	17.3%	15.6%
• cross-border in non-eurozone countries	17.7%	17.4%	19.2%	18.5%	18.1%
through voice-brokers					
• in the same country as you	13.6%	12.3%	11.7%	10.3%	10.9%
• cross-border in (other) eurozone countries	12.0%	9.5%	9.0%	9.0%	8.7%
• cross-border in non-eurozone countries	4.2%	5.4%	3.5%	4.4%	5.2%
on ATs with counterparties					
• in the same country as you	4.9%	6.8%	5.8%	4.3%	5.6%
• cross-border in (other) eurozone countries	3.0%	2.9%	3.6%	3.7%	3.7%
• cross border-border in non-eurozone countries	1.4%	2.0%	2.7%	1.5%	1.5%
• anonymously through a central clearing counterparty	9.0	8.3%	11.6%	11.7%	10.4%
1.2 How much of the cash is denominated in:					
• EUR	75.6%	72.7%	70.5%	70.4%	70.0%
• GBP	8.8%	10.3%	11.8%	10.9%	11.8%
• USD	9.4%	10.6%	10.8%	11.6%	11.1%
• SEK, DKK	2.0%	2.0%	2.0%	2.2%	2.2%
• JPY	3.3%	3.1%	3.5%	3.6%	3.4%
• other currencies	0.9%	1.4%	1.4%	1.3%	1.5%
1.3 How much is cross-currency?	1.0%	1.2%	1.1%	1.0%	0.9%

	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05
1.4 How much is:					
• classic repo	79.0%	80.8%	80.9%	80.6%	83.0%
• documented sell/buy-backs	13.0%	9.7%	11.2%	11.3%	10.5%
• undocumented sell/buy-backs	7.9%	9.6%	7.8%	8.0%	6.6%
1.5 How much is:					
• fixed rate	89.9%	89.6%	87.1%	86.6%	86.8%
• floating rate	5.6%	5.6%	6.6%	7.6%	7.6%
• open	4.5%	4.8%	6.2%	5.8%	5.6%
1.6 How much fixed and floating rate repo is (1.6.1) for value before June 8, 2005 and has a remaining term to maturity of:					
• 1 day	18.7%	18.0%	17.3%	17.7%	17.6%
• 2-7days	22.0%	18.9%	22.5%	22.4%	20.2%
• more than 7 days but no more than 1 month	26.1%	26.9%	28.3%	25.9%	27.5%
• more than 1 month but no more than 3 months	12.0%	15.9%	12.4%	17.5%	13.9%
• more than 3 months but no more than 6 months	7.1%	6.4%	7.3%	5.8%	7.0%
• more than 6 months	7.6%	8.0%	7.0%	5.4%	9.9%
• forward-forward repos	6.5%	5.8%	5.2%	5.2%	3.8%
1.7 How much is tri-party repo:	6.2%	11.2%	10.9%	9.8%	10.4%
• for fixed terms to maturity	90.8%	25.1%	83.1%	82.2%	93.1%
• on an open basis	9.2%	11.2%	16.9%	17.8%	6.9%
1.8 How much is against collateral issued in:					
Austria					
• by the central government	0.7%	0.7%	0.7%	0.7%	0.8%
• by other issuers	0.0%	0.1%	0.1%	0.0%	0.1%
Belgium					
• by the central government	5.0%	3.8%	4.1%	3.4%	3.6%
• by other issuers	0.2%	0.2%	0.2%	0.4%	0.5%
Denmark					
• by the central government	0.6%	0.4%	0.4%	0.3%	0.2%
• by other issuers	0.4%	0.4%	0.3%	0.4%	0.4%
Finland					
• by the central government	0.3%	0.2%	0.3%	0.3%	0.2%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%
France					
• by the central government	8.9%	7.7%	8.3%	9.3%	9.0%
• by other issuers	0.9%	0.9%	1.0%	0.9%	1.1%

	<b>Jun-03</b>	<b>Dec-03</b>	<b>Jun-04</b>	<b>Dec-04</b>	<b>Jun-05</b>
Germany					
• by the central government	26.6%	25.6%	23.5%	20.8%	20.1%
• pfandbrief	2.6%	3.1%	2.6%	2.0%	1.9%
• by other issuers	2.1%	2.4%	2.5%	2.1%	2.8%
Greece					
• by the central government	2.0%	1.5%	1.7%	2.2%	2.2%
• by other issuers	0.3%	0.0%	0.0%	0.0%	0.0%
Ireland					
• by the central government	0.1%	0.1%	0.2%	0.3%	0.2%
• by other issuers	0.1%	0.1%	0.1%	0.1%	0.1%
Italy					
• by the central government	15.1%	14.2%	14.0%	14.4%	14.9%
• by other issuers	0.9%	0.4%	0.3%	0.3%	0.4%
Luxembourg					
• by the central government	0.1%	0.0%	0.1%	0.0%	0.0%
• by other issuers	0.3%	0.3%	0.6%	0.5%	0.5%
Netherlands					
• by the central government	1.8%	1.7%	2.0%	2.0%	1.9%
• by other issuers	0.5%	0.7%	0.8%	0.7%	0.9%
Portugal					
• by the central government	0.3%	0.4%	0.4%	0.5%	0.6%
• by other issuers	0.4%	0.0%	0.0%	0.0%	0.0%
Spain					
• by the central government	6.0%	6.1%	5.4%	5.0%	5.1%
• by other issuers	0.2%	0.2%	0.2%	0.4%	0.5%
Sweden					
• by the central government	1.1%	0.9%	1.1%	1.8%	1.3%
• by other issuers	0.3%	0.4%	0.5%	0.4%	0.6%
UK					
• by the central government	8.5%	8.9%	10.3%	10.3%	10.3%
• by other issuers	1.1%	1.9%	1.3%	1.7%	2.0%
US but settled across EOC/CS	2.1%	2.9%	2.2%	2.5%	3.5%
• other countries	0.2%	0.4%			
Cyprus					
• by the central government			0.0%	0.0%	0.0%
• by other issuers			0.0%	0.0%	0.0%
Czech Republic					
• by the central government			0.0%	0.0%	0.0%
• by other issuers			0.0%	0.0%	0.0%
Estonia					
• by the central government			0.0%	0.0%	0.0%
• by other issuers			0.0%	0.0%	0.0%
Hungary					
• by the central government			0.0%	0.1%	0.1%
• by other issuers			0.0%	0.0%	0.0%

	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05
Latvia					
• by the central government			0.0%	0.0%	0.0%
• by other issuers			0.0%	0.0%	0.0%
Lithuania					
• by the central government			0.0%	0.0%	0.0%
• by other issuers			0.0%	0.0%	0.0%
Malta					
• by the central government			0.0%	0.0%	0.0%
• by other issuers			0.0%	0.0%	0.0%
Poland					
• by the central government			0.1%	0.1%	0.2%
• by other issuers			0.0%	0.0%	0.0%
Slovak Republic					
• by the central government			0.0%	0.0%	0.0%
• by other issuers			0.0%	0.0%	0.0%
Slovenia					
• by the central government			0.0%	0.0%	0.0%
• by other issuers			0.0%	0.0%	0.0%
OECD	7.0%	9.4%	9.8%	13.3%	11.2%
non-OECD EMEA	0.4%	0.4%	1.3%	0.6%	0.5%
non-OECD Asian & Pacific	0.2%	0.2%	0.1%	0.5%	0.3%
non-OECD Latin America	0.2%	0.3%	0.5%	0.4%	0.6%
equity	1.0%	2.2%	1.8%	0.4%	0.4%
collateral of unknown origin	1.5%	0.7%	1.2%	0.8%	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	44.6%	45.3%	53.8%	50.2%	47.4%
	2.3%	0.3%	1.0%	2.6%	7.7%
cross-border in (other) eurozone countries	20.5%	13.4%	19.4%	24.3%	21.7%
	0.8%	0.6%	0.2%	2.7%	3.0%
cross-border in non-eurozone countries	30.5%	40.3%	25.4%	19.5%	19.5%
	1.2%	0.1%	0.3%	0.6%	0.7%
for which the term to maturity is					
• fixed	72.9%	80.8%	65.9%	55.0%	53.7%
• open	27.1%	19.2%	34.1%	45.0%	46.3%

*Total repo business (Q1)*

The total value at close of business on June 8, 2005, of repos and reverse repos outstanding on the books of the 81 institutions which participated in the survey was **EUR 5,319 billion**, of which, 52.4% were repos and 47.6% 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 have 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 31 institutions which have participated in all nine

surveys grew by 18.7% year-on-year to June 2005. Most of this growth occurred in the six months from December 2004, during which the rate of growth of this sample was 12.1%. Of the 72 institutions that participated in both the June 2005 and June 2004 surveys, growth was 16.1% over the year. Of the 70 institutions that participated in the June 2005 and December 2004 surveys, growth over the six months was 5.1%.

The average size of repo books was unchanged at about EUR66 billion. Of the 72 institutions that participated in both the June 2005 and June 2004 surveys, there was a clear bias towards growth, with the repo books of 49 expanding and 23 contracting.

*Counterparty analysis (Q1.1)*

In June 2005, the business share of inter-dealer ATSS was 21.2%, very little changed from 21.3% in December 2004 but down from 23.8% in June 2004. However, the number of institutions in the latest survey reporting use of ATSS increased to a record 53 from 50 in December 2004 and 49 in June 2004.

The share of voice-brokers in June 2005 was 24.6%, very similar to the 24.2% seen in December 2004 and the 24.8% in June 2004.

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 54.3%, virtually unchanged from 54.5% in December 2004 but up from 51.4% in June 2004.

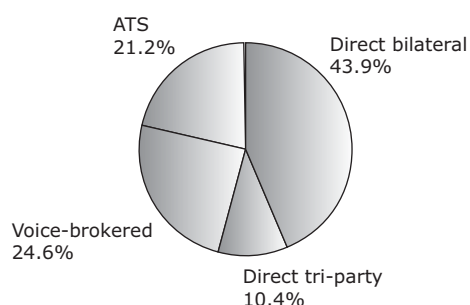
A sub-set of direct repos, equivalent to 10.4% of the total outstanding business, was settled through tri-party repo arrangements. This was higher than in December 2004 (9.8%) but below the peak (11.2%) recorded in December 2003, although still significantly higher than the shares in June 2003 (6.2%) and previous surveys. The number of institutions in the survey reporting tri-party repos in June 2005 was a record 40.

The main tri-party repo agents in Europe again contributed data to the survey. Returns were received from Bank of New York, Citigroup, Clearstream, Euroclear, JP Morgan Chase and SegInterSettle (SIS). The total value of outstanding tri-party repo contracts on June 8, 2005, reported by these service providers was EUR 430.2 billion compared with EUR 297.2 billion in December 2004 and EUR 260.6 billion in June 2004, equivalent to 8.1% of the total value of outstanding repos reported in the main survey. This compares to the share of 10.4% reported by users 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 reported by the tri-party repo agents was very different from the composition of overall activity reported in the main survey. 31.4% was domestic (compared with 30.5% in December 2004 and 38.4% in June 2004) and 61.4% was cross-border with counterparties outside the eurozone (compared with 62.9% in December 2004 and 60.8% in June 2004). 51.6% was against euro, 12.9% against sterling and 32.2% against US dollars (compared with 58.0%, 13.3% and 24.9%, respectively, in December 2004 and 59.8%, 11.6% and 28.1%, respectively, in June 2004). 42.9% of tri-party contracts were cross-currency compared with 59.0% in December 2004 and 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. 71.8% of outstanding tri-party contracts were for 1 month or less compared with 74.9% in December 2004 and 76.8% in June 2004. 85% were fixed-term compared with 84.8% in December 2004 and 87.4% in June 2004: the remainder was largely open contracts. The share of tri-party repo collateral issued in the EU jumped to 76.2% in June 2005 after having fallen sharply to 66.9% in December 2004 from 76.5% in June 2004. Collateral



issued in the eurozone accounted for 58.8%, up from the 52.7% recorded in December 2004 but still lower than the 64.9% seen in June 2004. Former Accession countries accounted for just 1.3% of collateral in tri-party repos. There were a continued fall in the share of collateral issued in Germany (14.9% from 18.0% in December 2004 and 27.2% in June 2004), but recoveries in collateral issued in the US (8.1% from 6.5% and 11.1%), France (8.1% from 6.9% and 8.2%) and Italy (5.5% from 5.2% and 5.5%). There were further increases in the shares of collateral issued in the UK (13.8% from 11.8% and 8.6%) and Netherlands (9.3% from 8.0% and 7.7%). The share of EU government bonds dropped sharply to 26.8% from 44.2% in December 2004 and 36.3% in June 2004. [see Table 3.2]



### Figure 3.1 – Counterparty analysis

#### *Geographical analysis (Q1.1)*

36.7% of reported outstanding repo contracts were with domestic counterparties, compared with 33.9% in December 2004 and 37.3% in June 2004. 52.8% of contracts were cross-border, compared with 54.3% in December 2004 and 51.0% in June 2004. The share of contracts that had been transacted anonymously on an ATS and settled with a central clearing counterparty (CCP) fell back to 10.4% from 11.7% in December 2004 and 11.6% in June 2004 but was still well up on the 8.3% reported in December 2003. The number of institutions reporting anonymous electronic trading in June 2005 was steady at 36.

In the cross-border business reported in the main survey, the largest share continued to be with counterparties in the eurozone. In June 2005, this accounted for 28.0% of outstanding contracts compared with 29.9% in December 2004 and 25.6% in June 2004. 24.8% of reported transactions were with counterparties outside the eurozone, similar to the 24.4%

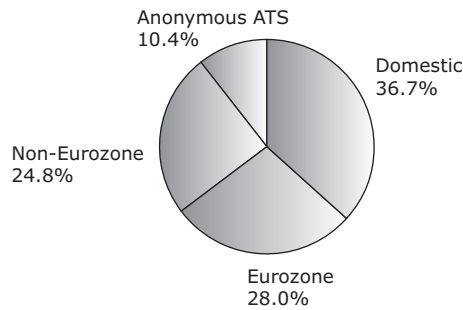
**Table 3.2**

#### **Numbers of participants reporting particular types of business**

	Dec-01	Dec-02	Jun-03	Dec-03	Jun-04	Dec-04	Jun-05
ATS	28	48	51	50	49	50	53
anonymous ATS	16	35	31	29	32	36	36
voice-brokers	43	65	61	58	56	55	57
tri-party repo	22	32	34	32	38	34	40
total	61	82	84	76	81	76	81

in June 2004. 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 reporting counterparties are located inside the eurozone.

**Figure 3.2 – Geographical analysis**



*Settlement analysis (Q1.7)*

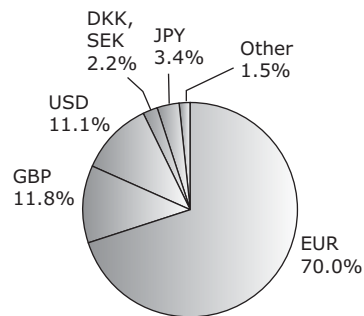
Of reported tri-party repo business, the share of fixed-term repos was a record 93.1%, well up from the 82.2% reported in December 2004.

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

Apart from sterling, the shares of currencies in this survey was little changed. 70.0% of reported outstanding repos were denominated in euros (EUR), compared to 70.4% reported in December 2004 and 70.5% in June 2004. The share of the pound sterling jumped to 11.8% from 10.9% in December 2004, but was unchanged from June 2004. There were small falls in the shares of the US dollar (11.1% from 11.6%) and Japanese yen (3.4% from 3.6%).

The reported share of cross-currency repos remained insignificant at 0.9%. However, the response rate to this question remains low.

**Figure 3.3 – Currency analysis**



*Collateral analysis (Q1.8)*

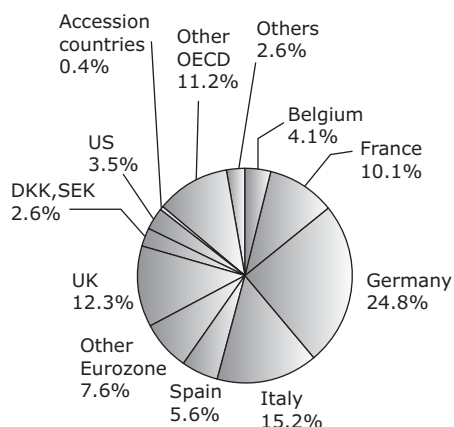
67.4% of repo collateral held by survey participants was issued in countries in the eurozone, compared with 66.3% in December 2004 and 69.0% in June 2004. Collateral issued in Germany continued to account for the largest single share at 24.8%, almost the same as in December 2004 (24.9%), but much lower than previous levels. The share of Italian collateral continued to rise, reaching 15.2% from 14.7% in December 2004 and 14.3% in June 2004. The share of collateral issued in France was unchanged at 10.1%. The UK remained another important source of collateral (12.3% compared to 12.0% in December 2004).

The ten countries which recently joined the EU accounted for 0.4% of collateral. This was largely issued in Hungary and Poland.

The share of collateral issued in "other OECD countries" (ie not the EU or the US) fell back to 11.2% from 13.3% in December 2004, but still higher than the 9.8% reported in June 2004.

The share of equity collateral remained insignificant at 0.4%.

**Figure 3.4 – Collateral analysis**

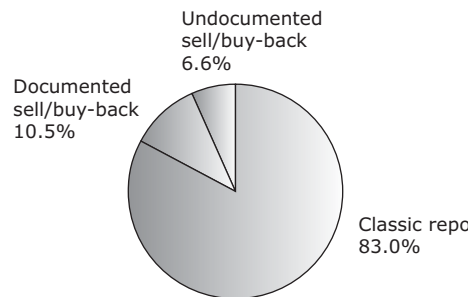


The share of EU collateral in the main survey issued by central governments fell to 85.7%, a new low, from 87.8% in December 2004 and 87.4% in June 2004.

*Contract analysis (Q1.4)*

The share of reported outstanding repo contracts taking the form of classic repos (also called "repurchase agreements") was a record high of 83.0% compared to 80.6% in December 2004. 10.5% were sell/buy-backs documented under agreements such as the TBMA/ISMA or PSA/ISMA Global Master Repurchase Agreements (GMRA) and 6.6% were undocumented sell/buy-backs.

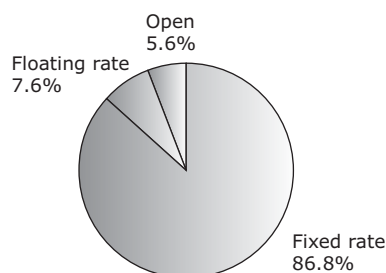
**Figure 3.5 – Contract analysis**



*Repo rate analysis (Q1.5)*

The share of fixed-rate repos was little changed at 86.8% compared with 86.6% in December 2004. Floating-rate repos (largely indexed to EONIA) remained at a high of 7.6% from 6.6% in June 2004. The share of open repo (no fixed maturity date but terminable on demand by either counterparty) fell further to 5.6% from 5.8% in December 2004.

**Figure 3.6 – Repo rate analysis**



*Maturity analysis (Q1.6)*

The largest share of outstanding repo contracts (65.3%) continued to have less than one month remaining to maturity, although slightly less than in December 2004 (66.0%) and June 2004 (68.1%). The share of contracts with more than six

months jumped to 9.9% from a low of 5.4% in December 2004. Forward-forward repos continued to contract in relative terms touching 3.8% in June 2005 from 5.2% in December 2004.

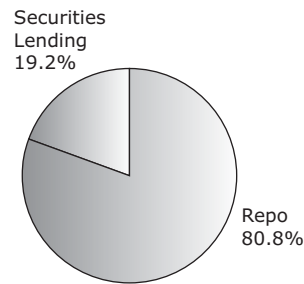
Seasonal patterns were repeated by contracts with remaining terms of between one and three months. As in previous June surveys, their share fell back. In June 2005, it was 13.9%, down from 17.5% in December 2004.

*Product analysis (Q2)*

The share of total business accounted for by securities lending and borrowing conducted on repo desks was 19.2%, unchanged from December 2004 but up from 13.0% in June 2004. The share of fixed income securities dropped

sharply to 88.6% from 94% in December 2004 and 98.6% in June 2004, the counterpart being a sharp increase in the share of equity to 11.4% from 6.0% and 1.4%, respectively.

**Figure 3.8 – Product analysis**

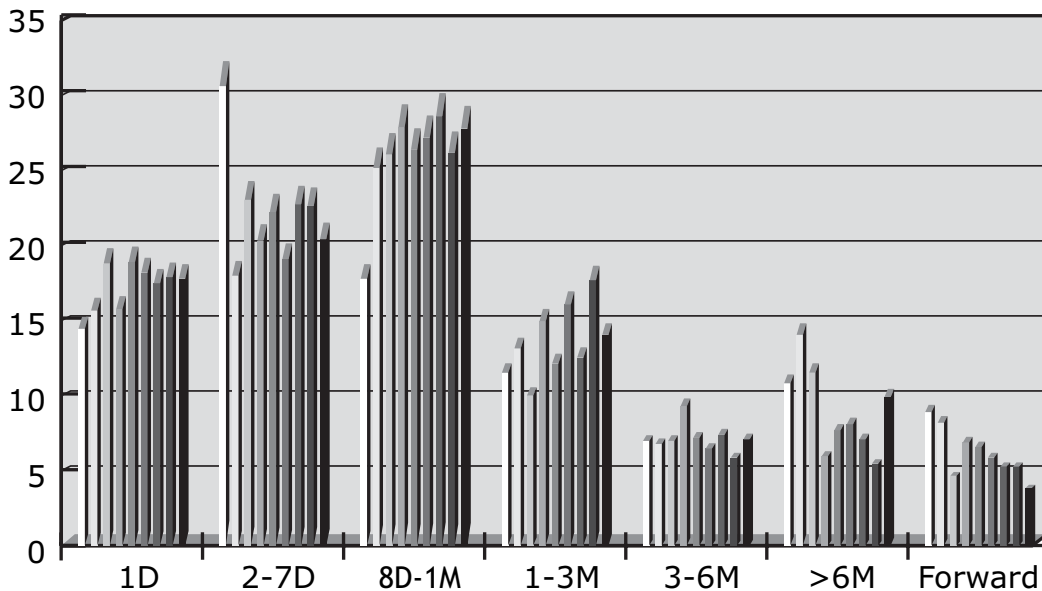


*Concentration analysis*

In the latest survey, the top ten institutions accounted for 55.5% of total reported business, down from 58.4% in December

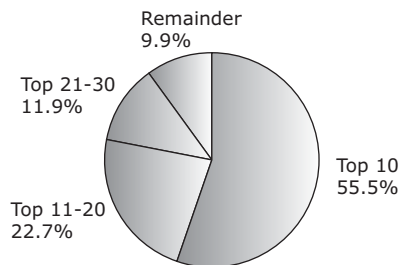
**Figure 3.7 – Maturity analysis comparison**

**(left to right columns show June 2001, December 2001, June 2002, December 2002, June 2003, December 2003, June 2004, December 2004, June 2005)**



2004 but up from 53.0% in June 2004. The share of the top twenty also dropped, reaching 78.2% from 80.4% in December 2004 but similar to the 78.0% reported in June 2004. The share of the top thirty fell back to 90.1% from 91.5% in December 2004 and 90.0% in June 2004.

**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 0.043 from the previous low of 0.047 in December 2004.

<sup>1</sup> 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 ICMA survey on June 8, 2005 continues to demonstrate the enormous size of the European repo market by fixing the lower boundary of that market at EUR 5,319 billion in terms of outstanding contracts. It again revealed healthy year-on-year growth of between 16% and 19%, despite generally lacklustre conditions in the fixed income market in Europe.

The share of electronic trading has stabilized for the moment at 21.2% of reported business, but anonymous electronic trading has contracted in relative terms to 10.4%, which may reflect the delay in the introduction of new services by the main CCP in Europe.

Tri-party repo has resumed its upward trend, reaching 10.4%. It remains below its peak of 11.2% in December 2003 but is well up on the 6.2% reported in June 2003.

The share of government bonds in collateral issued in the EU fell back to a record low of 85.7%, probably reflecting the growing role of credit repo in Europe.

Many other figures in the survey are little changed from December 2004, or showed a tendency to revert back to the levels recorded in June 2004, suggesting no great shifts in the structure of the repo market.

## 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 8, 2005.

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 8, 2005, 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, 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 8, 2005*.

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 9, 2005*. You should therefore include all *open repos and reverse repos* that have been rolled over from Wednesday, June 8, 2005 to a later date and all *forward-forward repos and reverse repos that are still outstanding at close* on Wednesday, June 8, 2005.

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 8, 2005, 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 Q(1.1.1) direct with counterparties or Q(1.1.2) through voice-brokers should *exclude* all repos transacted over an ATS (see below). These should be recorded under Q(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 Q(1.1.2). Anonymous transactions through an ATS with a central counterparty (e.g. LIFFE-Clearnet systems and Eurex Clearing) should be recorded in Q(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 Q(1.5.1) and the floating-rate repos reported in Q(1.5.2) to be broken down as follows:

Q(1.6.1.1) One day – this means:

- all contracts transacted prior to Wednesday, June 8, 2005,

that will mature on Thursday, June 9, 2005;

- overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, June 8, 2005.

Q(1.6.1.2) two–seven days – this means:

- all contracts transacted prior to Wednesday, June 8, 2005, that will mature on Friday, June 10, 2005, or any day thereafter up to and including Wednesday, June 15, 2005;
- contracts transacted on Wednesday, June 8, 2005, 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 seven days but no more than one month – this means:

- all contracts transacted prior to Wednesday, June 8, 2005, that will mature on Thursday, June 16, 2005, or any day thereafter up to and including Friday, July 8, 2005;
- contracts transacted on Wednesday, June 8, 2005, 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 one month but no more than three months – this means:

- all contracts transacted prior to Wednesday, June 8, 2005, that will mature on Monday, July 11, 2005, or any day thereafter up to and including Thursday,

September 8, 2005;

- contracts transacted on Wednesday, June 8, 2005, 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 three months but no more than six months – this means:

- all contracts transacted prior to Wednesday, June 8, 2005, that will mature on Friday, September 9, 2005, or any day thereafter up to and including Thursday, December 8, 2005;
- contracts transacted on Wednesday, June 8, 2005, 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 six months – this means:

- all contracts transacted prior to Wednesday, June 8, 2005, that will mature on Friday, December 9, 2005, or any day thereafter;
- contracts transacted on Wednesday, June 8, 2005, 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 13, 2005, 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 Q(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 Q(1.8.10) and the UK Q(1.8.15). Equity collateral should be recorded in Q(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 Q(1.8.10) and the UK Q(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 Q(1.8.27). US collateral settled across Euroclear and Clearstream Luxembourg should be recorded in Q(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.





	Jun -01	Dec -01	Jun -02	Dec -02	Jun -03	Dec -03	Jun -04	Dec -04	Jun -05
Halifax Bank of Scotland	x	x	x	x	x	x	x	x	x
HSBC Athens			x						
HSBC CCF			x	x	x	x	x	x	x
HSH Nordbank	x	x	x	x	x	x	x	x	x
HypoVereinsbank	x	x	x	x	x	x	x	x	x
IIB Bank					x				
ING Bank					x	x		x	x
ING Belgium	x		x	x	x	x			
ING BHF-Bank			x	x	x	x	x	x	x
ING BHF-Bank Luxembourg							x		
IntesaBCI	x	x	x	x	x	x	x	x	x
JP Morgan	x	x	x	x	x	x	x	x	x
KBC	x	x	x	x	x	x	x	x	x
KfW							x	x	x
Kingdom of Belgium Federal Public Service Debt Agency					x		x		x
Landesbank Baden- Württemberg, Stuttgart	x	x	x	x	x	x	x	x	x
Landesbank Hessen-Thüringen -Girozentrale (Helaba)					x	x	x	x	x
Landesbank Rheinland Pfalz	x	x	x	x	x	x	x	x	x
Landesbank Sachsen Girozentrale	x	x	x	x	x	x	x	x	x
Lehman Brothers		x	x	x	x		x	x	x
Maple Bank	x	x	x						
Merrill Lynch	x	x	x	x	x	x	x	x	x
Mitsubishi Securities International		x	x	x	x	x	x	x	x
Mizuho International	x	x	x	x	x	x	x	x	x
Morgan Stanley	x		x	x	x	x	x	x	x
Natexis Banques Populaires		x	x	x		x			
National Bank of Greece	x	x	x	x	x	x	x	x	x
Nomura International	x	x	x	x	x		x	x	x
Norddeutsche Landesbank Girozentrale	x	x	x	x	x	x	x	x	x
Nordea Markets			x	x	x	x	x	x	x
Norinchukin Bank						x	x	x	x
Nova Ljubljanska Banka d.d.							x		
Omega Bank			x	x					
Piraeus Bank			x						
Rabobank		x	x	x	x	x	x	x	x
Royal Bank of Scotland			x	x	x	x	x	x	x

	Jun -01	Dec -01	Jun -02	Dec -02	Jun -03	Dec -03	Jun -04	Dec -04	Jun -05
RZB	x	x	x		x		x	x	x
Sal. Oppenheim Jr.	x	x	x			x	x	x	
Sampo Bank			x	x					x
SEB		x		x					
Société Générale		x	x	x	x	x	x	x	x
Toronto Dominion Bank					x	x			
UBS	x	x	x	x	x	x	x	x	x
Ulster Bank			x	x			x	x	x
Unicredit Banca Mobiliare			x	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	

## **APPENIDX C: ICMA'S REPO COUNCIL STRUCTURE**

The International Repo Council (IRC) is a special interest group established by ICMA 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.

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