



# **International Capital Market Association**

## **European repo market survey**

**Number 22 - conducted December 2011**

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International Capital Market  
Association  
Talacker 29  
P.O. Box  
CH-8022 Zurich  
[www.icmagroup.org](http://www.icmagroup.org)

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## EXECUTIVE SUMMARY

In December 2011, the European Repo Council (ERC) of the International Capital Market Association (ICMA) conducted the 22nd 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 7, 2011. Replies were received from 64 offices of 59 financial groups, mainly banks. Returns were also made directly by the principal automatic repo trading systems (ATS) and tri-party repo agents in Europe, and by the London-based Wholesale Market Brokers' Association (WMBA).

### Total repo business

The total value of the repo contracts outstanding on the books of the 64 institutions who participated in the latest survey was EUR 6,204 billion, compared with EUR 6,124 billion in June 2011. Using constant samples, the market contracted over the last six months by 3.3% but grew by 2.6% year-on-year.

### Counterparty analysis

The share of electronic trading in the main survey grew to 30.0% from 28.2%, but the value of electronic trading dropped back sharply to EUR 877 billion from EUR 995 billion. Voice-brokered business also grew.

### Geographical analysis

The share of anonymous electronic trading was virtually unchanged at 17.9%, compared to its peak of 18.5% in December 2010.

### Clearing and Settlement analysis

The overall share of CCP-cleared repos (which includes repos transacted on an ATS and automatically cleared across a CCP, or transacted directly with a counterparty or via a voice-broker, and then registered with a CCP post-trade) expanded to 32.0% from 30.5% in June 2011.

The share of tri-party repo remained steady at 11.4% but the value of tri-party repo, as reported directly by the major tri-party agents in Europe, contracted to EUR 992.9 billion from a record EUR 1,173.5 billion in June 2011.

### Cash currency analysis

The share of the euro fell back sharply to 59.8% from 63.5%. The euro also fell back in electronic and tri-party repo. In electronic repo, it gave ground to the Swiss franc, but in tri-party repo to the US dollar.

### Collateral analysis

The share of German collateral continued to retreat, as did Italian collateral, but for very different reasons. Smaller core eurozone member collateral gained share and Spanish collateral was broadly stable. Overall, the share of all

government bonds within the pool of EU-originated collateral bounced back sharply to 79.1% from a record low of 74.3%. The use of equity declined.

In the latest survey, respondents were asked for the first time to identify collateral securities issued by official international financial institutions, including multilateral development banks. These securities accounted for 0.8% of collateral.

### **Contract analysis**

Undocumented sell/buy-backs recovered to 3.3%.

### **Repo rate analysis**

Floating-rate repo grew at the expense of open repo.

### **Maturity analysis**

The shift in maturities seen in the last survey continued. Short dates continued to contract and transactions with more than a year remaining to maturity continued to expand. Forward-forward repos remain at elevated levels.

### **Product analysis**

Securities lending conducted on repo desks was little changed.

### **Concentration analysis**

The concentration of surveyed repo business was little changed.

## CHAPTER 1: THE SURVEY

On December 7, 2011, the European Repo Council (ERC) of the International Capital Market Association (ICMA) conducted the 22nd in its series of semi-annual surveys of the repo market in Europe.

The survey was managed and the results analysed on behalf of ICMA by the author at the ICMA 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 operating in a number of European financial centres for the value of the cash side of repo and reverse repo contracts still outstanding at close of business on Wednesday, December 7, 2011.

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, the method of settlement and the origin 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 Appendix C. An extract of the accompanying Guidance Notes is reproduced in Appendix A.

Separate returns were made directly by the principal automatic repo trading systems (ATS) and tri-party repo agents in Europe, and an aggregate return was made directly by the London-based Wholesale Market Brokers' Association (WMBA).

### 1.2 The response to the survey

The latest survey was completed by 64 offices of 59 financial groups. This is six more respondents than participated in June 2011 (the total for the last survey has been corrected to 58 from 59). Four institutions which participated in the last survey dropped out of the latest survey but six rejoined and four institutions (Jefferies Securities, LaCaixa, Newedge and Royal Bank of Canada) took part for the first time.

48 institutions were based in 14 European countries, as well as in Australia (1), North America (9) and Japan (5). 47 institutions were based in 13 of the 27 member states of the EU (no institutions from Finland, Ireland, Portugal and Sweden, and only two former Accession State, participated in the latest survey), and 41 were based in 10 of the 17 countries in the eurozone. However, although some institutions were based in one country, much of their business was conducted in others. Many institutions provided data for their entire European repo business. Others provided separate returns for one or more (but not necessarily all) of their European

offices. A list of the institutions that have participated in ICMA 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, June 13, 2012.

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.icmagroup.org/surveys/repo/participate](http://www.icmagroup.org/surveys/repo/participate).

Questions about the survey should be sent by e-mail to [reposurvey@icmagroup.org](mailto:reposurvey@icmagroup.org).

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

## CHAPTER 2: ANALYSIS OF SURVEY RESULTS

The aggregate results of the latest two surveys and of the surveys in each December in the four previous years (2007-2011) are set out in Appendix C. Full details for all previous surveys can be found at [www.icmagroup.org](http://www.icmagroup.org).

### Total repo business (Q1)

The total value, at close of business on December 7, 2011, of repos and reverse repos outstanding on the books of the 64 institutions which participated in the latest survey was slightly higher at EUR 6,204 billion from a corrected figure for June 2011 of EUR 6,124 billion. This is still well above the recent low of EUR 4,633 billion touched in December 2008.

Of the sample of 64 institutions, 26 were net lenders, compared to 28 (of 58) in the last survey. However, borrowing through repo and lending through reverse repo were almost in balance.

**Table 2.1 – Total repo business from 2001 to 2011**

survey	total	repo	reverse repo
<b>2011 December</b>	6,204	50.3%	49.7%
<b>2011 June</b>	6,124	50.7%	49.3%
<b>2011 June</b>	6,178	50.9%	49.1%
<b>2010 December</b>	5,908	51.0%	49.0%
<b>2010 June</b>	6,885	53.7%	46.3%
<b>2009 December</b>	5,582	50.0%	50.0%
<b>2009 June</b>	4,868	52.2%	47.8%
<b>2008 December</b>	4,633	49.9%	50.1%
<b>2008 June</b>	6,504	48.8%	51.2%
<b>2007 December</b>	6,382	49.4%	50.6%
<b>2007 June</b>	6,775	50.8%	49.2%
<b>2006 December</b>	6,430	50.7%	49.3%
<b>2006 June</b>	6,019	51.7%	48.3%
<b>2005 December</b>	5,883	54.6%	45.4%
<b>2005 June</b>	5,319	52.4%	47.6%
<b>2004 December</b>	5,000	50.1%	49.9%
<b>2004 June</b>	4,561	50.6%	49.4%
<b>2003 December</b>	3,788	51.3%	48.7%
<b>2003 June</b>	4,050	50.0%	50.0%
<b>2002 December</b>	3,377	51.0%	49.0%
<b>2002 June</b>	3,305	50.0%	50.0%
<b>2001 December</b>	2,298	50.4%	49.6%
<b>2001 June</b>	1,863	49.6%	50.4%



It is important to remember that the survey measures the value of outstanding transactions at close of business on the survey date. Measuring the stock of transactions at one date, rather than the flow between two dates, permits deeper analysis but is difficult to reconcile with the flow numbers published by other sources. As the survey is a 'snapshot' of the market, it can miss peaks and troughs in business between survey dates, especially of very short-term transactions. In addition, the values measured by the survey are gross figures, which mean 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. Central bank intervention has of course been very substantial during the recent market difficulties.

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 are

made of the aggregate outstanding contracts reported only by a sub-sample of institutions which have participated in several surveys.

The repo books of the 51 institutions that participated in all of the last three surveys shrunk by 3.3% over the six months from the June 2011 survey, while the business of the 54 institutions that also participated in the December 2010 survey (but not necessarily the June 2011 survey) grew year-on-year by 2.6%, therefore indicating a deceleration of growth in the most recent six-month period. This would be consistent with the difficult market conditions at the end of last year.

## Counterparty analysis (Q1.1)

**Table 2.2 – Counterparty analysis**

	December 2011		June 2011		December 2010	
	users	share	users	share	users	share
<b>direct</b>	64	49.7%	59	52.2%	57	51.5%
<b>of which tri-party</b>	40	11.4%	36	11.2%	37	11.5%
<b>voice-brokers</b>	55	20.3%	48	19.6%	52	20.2%
<b>ATS</b>	48	30.0%	44	28.2%	43	28.3%

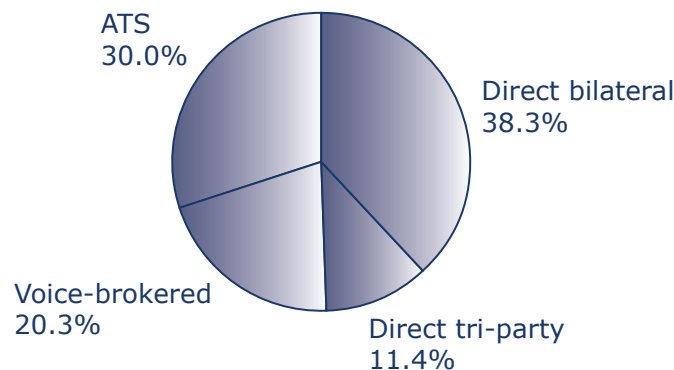
The shares of voice-brokered and electronic repo trading increased at the expense of directly-negotiated business. However, data provided directly by the principal automatic trading systems (ATS) operating in

Europe – BrokerTec, Eurex Repo and MTS – showed that the value of electronic trading dropped back sharply to EUR 877 billion from EUR 995 billion and a peak of EUR 1,001 billion in December 2010.

**Table 2.3 – Numbers of participants reporting particular types of business**

	Dec-11	Jun-11	Dec-10	Jun-10	Dec-09	Jun-09
<b>ATS</b>	48	44	43	40	44	46
<b>anonymous ATS</b>	40	37	37	34	37	33
<b>voice-brokers</b>	55	48	52	49	50	50
<b>tri-party repos</b>	40	36	37	31	32	31
<b>total</b>	64	59	57	57	58	61

**Figure 2.1 – Counterparty analysis**



## Geographical analysis (Q1.1)

**Table 2.4 – Geographical analysis**

	December 2011		June 2011		December 2010	
	share	users	share	users	share	users
<b>domestic</b>	30.0%		33.1%		33.5%	
<b>cross-border</b>	48.1%		49.5%		48.0%	
<b>anonymous</b>	17.9%	40	17.4%	37	18.5%	37

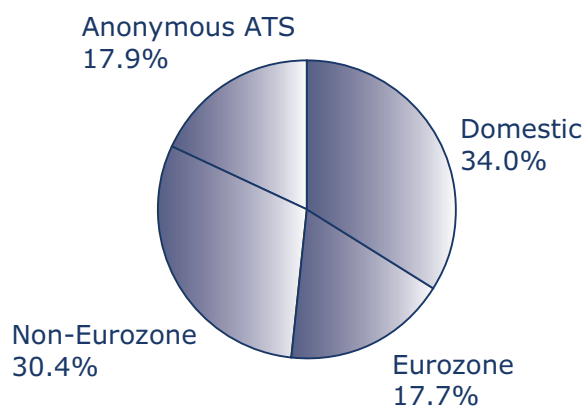
The share of anonymous electronic trading was a little higher at 17.9%, up from 7.7% in June 2010 and compared to its peak of 18.5% in December 2010. However, the value of directly-reported anonymous electronic trading dropped sharply by 10% to EUR 770 billion. The value of non-anonymous trading was unchanged at EUR 107 billion and therefore its share recovered to 12.2% of all electronic trading from its record low of 11.1% in June 2011.

According to data provided directly by the major tri-party agents in Europe, there was a dramatic shift into domestic tri-party repo business to 45.6% from 21.2%, almost exactly matching a fall in the share of business between eurozone counterparties to 28.1% from 53.8%.

**Table 2.5 – Geographical comparisons in December 2011**

	main survey	ATS	tri-party	WMBA
<b>domestic</b>	34.0%	38.9%	45.6%	42.8%
<b>cross-border</b>	48.1%	61.1%	54.4%	57.2%
<b>anonymous</b>	17.9%			

**Figure 2.2 – Geographical analysis**



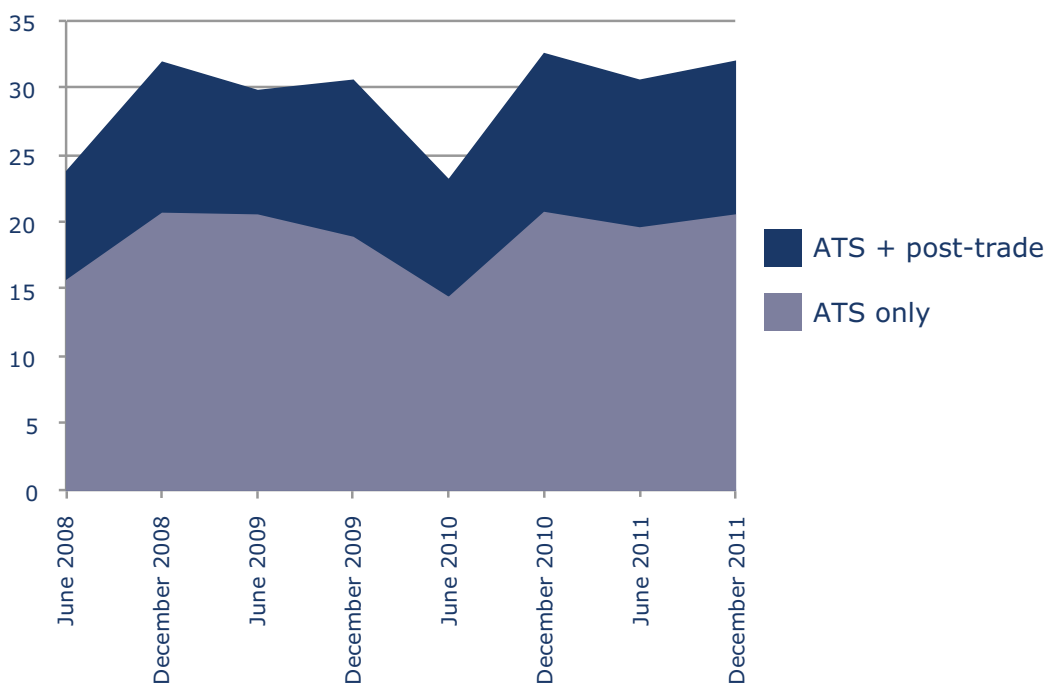
### Clearing and settlement analysis (Q1.2 and Q1.8)

The share of tri-party repo remained steady at 11.4% but the value of tri-party repo, as reported directly by the major tri-party agents in Europe, contracted to EUR 992.9 billion from a record EUR 1,173.5 billion.

The overall share of CCP-cleared repos (which includes

repos transacted on an ATS and automatically cleared across a CCP, or transacted directly with a counterparty or via a voice-broker, and then registered with a CCP post-trade) rose to 32.0% from 30.5% in June 2011. The average share of CCP-cleared repos in the business of those firms that reported this type of transaction was 37.4%.

**Figure 2.3 – Business cleared across CCPs**



**Cash currency analysis (Q1.3 and Q1.4)**

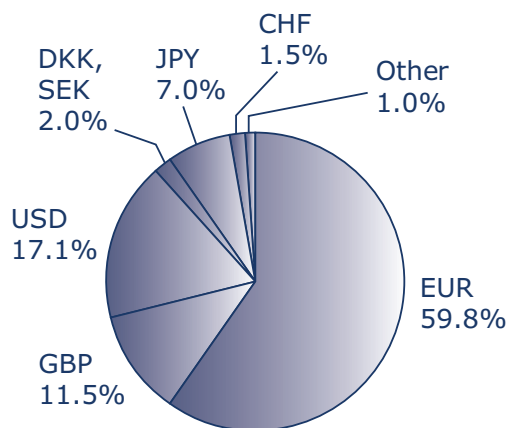
**Table 2.6 – Cash currency analysis**

	December 2011	June 2011	December 2010
<b>EUR</b>	59.8%	63.5%	62.7%
<b>GBP</b>	11.5%	10.3%	10.5%
<b>USD</b>	17.1%	16.2%	20.1%
<b>DKK, SEK</b>	2.0%	2.0%	2.0%
<b>JPY</b>	7.0%	6.4%	3.6%
<b>CHF</b>	1.5%	0.2%	0.2%
<b>etc</b>	1.0%	1.4%	1.0%
<b>cross-currency</b>	3.0%	5.4%	5.6%

The share of the euro fell back sharply to 59.8% from 63.5%. In directly-reported electronic trading, the share of the euro contracted to 88.9% from 93.3%. The main counterpart was the expansion of the Swiss franc to 6.4% from 3.3%. The euro has given up market share in electronic

trading to the Swiss franc every June since December 2009 and then recovered in the next survey. The share of the euro also contracted in tri-party repo (to 77.2% from 83.4%) but the counterpart here was the expansion of the US dollar (to 16.2% from 11.5%).

**Figure 2.4 – Currency analysis**

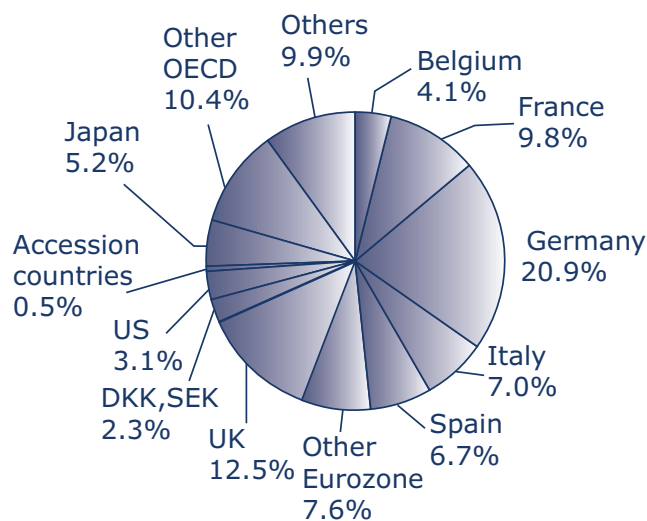


**Table 2.7 – Currency comparison in December 2011**

	main survey	ATS	tri-party	WMBA
<b>EUR</b>	59.8%	88.9%	77.2%	55.8%
<b>GBP</b>	11.5%	3.2%	5.5%	33.3%
<b>USD</b>	17.1%	1.5%	16.2%	5.9%
<b>DKK, SEK</b>	2.0%	N/A	0.1%	1.0%
<b>JPY</b>	7.0%	6.4%	0.3%	3.3%
<b>CHF</b>	1.5%	0.0%	0.3%	0.0%
<b>etc</b>	1.0%	88.9%	0.4%	0.8%
<b>cross-currency</b>	3.0%	N/A	15.2%	N/A

**Collateral analysis (Q1.9)****Table 2.8 – Collateral analysis**

	December 2011	June 2011	December 2010
<b>Germany</b>	20.9%	22.4%	24.3%
<b>Italy</b>	7.0%	10.0%	10.3%
<b>France</b>	9.8%	9.9%	9.4%
<b>Belgium</b>	4.1%	2.2%	2.3%
<b>Spain</b>	6.7%	7.1%	5.2%
<b>other eurozone</b>	7.6%	6.6%	6.5%
<b>UK</b>	12.5%	11.1%	11.6%
<b>DKK, SEK</b>	2.3%	2.4%	2.3%
<b>US</b>	3.1%	2.4%	3.1%
<b>Accession countries</b>	0.5%	0.8%	0.5%
<b>Japan</b>	5.2%	4.2%	2.5%
<b>other OECD</b>	10.4%	11.9%	13.7%
<b>other</b>	9.9%	8.0%	7.6%
<b>equity</b>	0.0%	0.9%	0.7%

**Figure 2.5 – Collateral analysis (main survey)**

The share of German collateral continued to fall back, reaching 20.9% from 22.4%, as risk-averse investors become ever more cautious about the lending of these safe-haven securities. Italian collateral contracted to 7.0% from 10.0%, possibly reflecting growing credit concerns. There was a sharp recovery in the share of Belgian collateral, perhaps in response to improved political stability. The shares of Austrian, Dutch and Finnish collateral also grew, while that of Spanish collateral was stable. Overall, the share of all

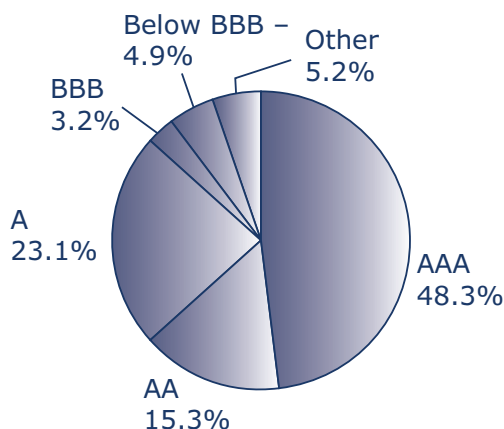
government bonds within the pool of EU-originated collateral bounced back sharply to 79.1% from a record low of 74.3%. Japanese collateral continued to expand.

In the latest survey, respondents were asked for the first time to identify collateral securities issued by official international financial institutions, including multilateral development banks and the various European financial assistance funds. These securities accounted for 0.8% of collateral.

**Table 2.9 – Tri-party repo collateral analysed by credit rating**

	December 2011	June 2011	December 2010
<b>AAA</b>	48.3%	49.8%	46.6%
<b>AA</b>	15.3%	21.8%	19.7%
<b>A</b>	23.1%	13.1%	20.1%
<b>BBB</b>	3.2%	6.9%	4.3%
<b>below BBB-</b>	4.9%	2.2%	5.1%
<b>A1/P1</b>	3.9%	4.7%	3.8%
<b>A2/P2</b>	0.0%	0.0%	0.0%
<b>Non-Prime</b>	0.0%	0.2%	0.0%
<b>unrated</b>	1.3%	1.5%	0.4%

**Figure 2.6 – Collateral analysis (triparty agents) by credit rating**



The use of equity dropped across the board. In the main survey, its share fell to virtually zero from 0.9%. In tri-party repo, it dropped to 12.8% from 19.2%.

The shift seen in tri-party repo in the last survey, out of A-rated and sub-investment grade fixed-

income securities into AAA and AA-rated securities, was reversed. The share of A-rated collateral increased dramatically to 23.1% from 13.1%, and sub-investment grade collateral expanded to 3.2% from 6.9%, while A-rated collateral fell back to 15.3% from 21.8%.

**Table 2.10 – Tri-party repo collateral analysed by type of collateral**

	<b>Dec 2011</b>	<b>June 2011</b>	<b>Dec 2010</b>
<b>government securities</b>	45.2%	37.8%	40.6%
<b>public agencies / sub-national</b>	7.2%	5.6%	3.4%
<b>supranational agencies</b>	2.8%	2.2%	1.8%
<b>corporate bonds</b>	18.3%	23.3%	25.5%
<b>covered bonds</b>	9.7%	9.1%	6.5%
<b>residential mortgage-backed</b>	1.4%	0.3%	0.4%
<b>commercial mortgage-backed</b>	0.2%	0.3%	0.2%
<b>other asset-backed</b>	1.0%	0.6%	0.8%
<b>CDO, CLN, CLO, etc</b>	0.5%	0.7%	0.6%
<b>convertible bonds</b>	0.2%	0.1%	0.0%
<b>equity</b>	12.8%	19.2%	19.0%
<b>other</b>	0.8%	0.9%	1.1%

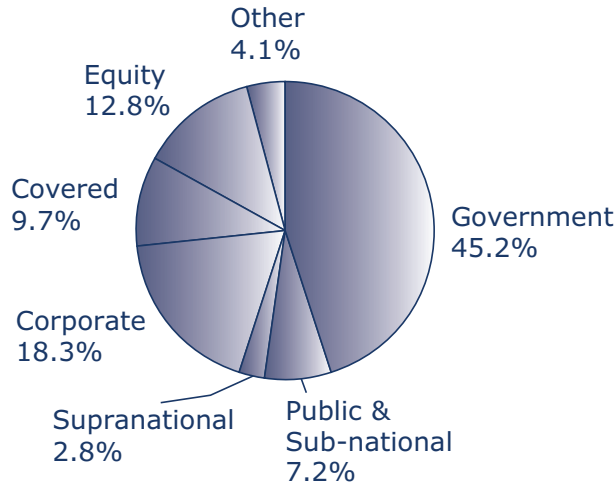
The share of government bonds within the pool of EU-originated collateral in directly-reported tri-party business recovered to 50.3% from 42.3%, in part, because of greater use of Italian and Spanish government securities (to 7.6% and 4.8% from 5.0% and 3.2%, respectively). Pfandbrief grew to 3.5% from 1.8%, but other non-government

German fixed-income securities fell to 11.4% from 13.2%.

In electronic trading, the share of German collateral continued to fall, reaching 28.4% from 31.9%. Italian collateral fell back to 24.3% from 26.4%. Austrian, Dutch and Spanish collateral increased in electronic trading (to 2.6%, 5.8% and 10.6% from 1.7%, 3.4% and 9.5%).

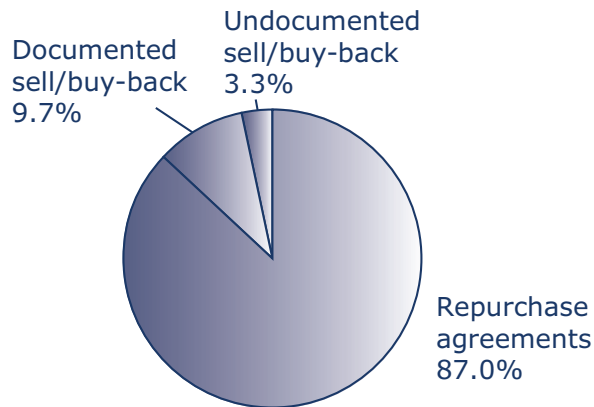


**Figure 2.7 – Collateral analysis (triparty agents) by type of security**



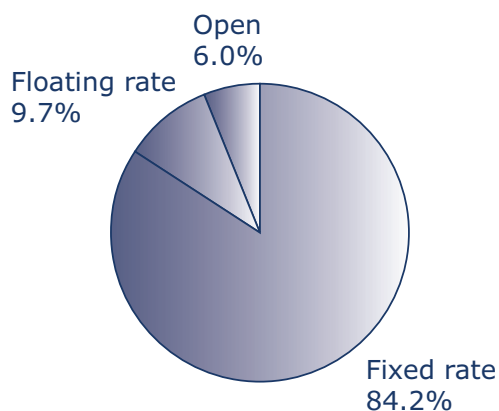
**Contract analysis (Q1.5)**

**Figure 2.8 – Contract analysis**



**Table 2.11 – Contract comparison in December 2011**

	main survey	ATS	tri-party
<b>repurchase agreements</b>	87.0%	77.0%	100.0%
<b>documented sell/buy-backs</b>	9.7%	23.0%	0.0%
<b>undocumented sell/buy-backs</b>	3.3%	0.0%	0.0%

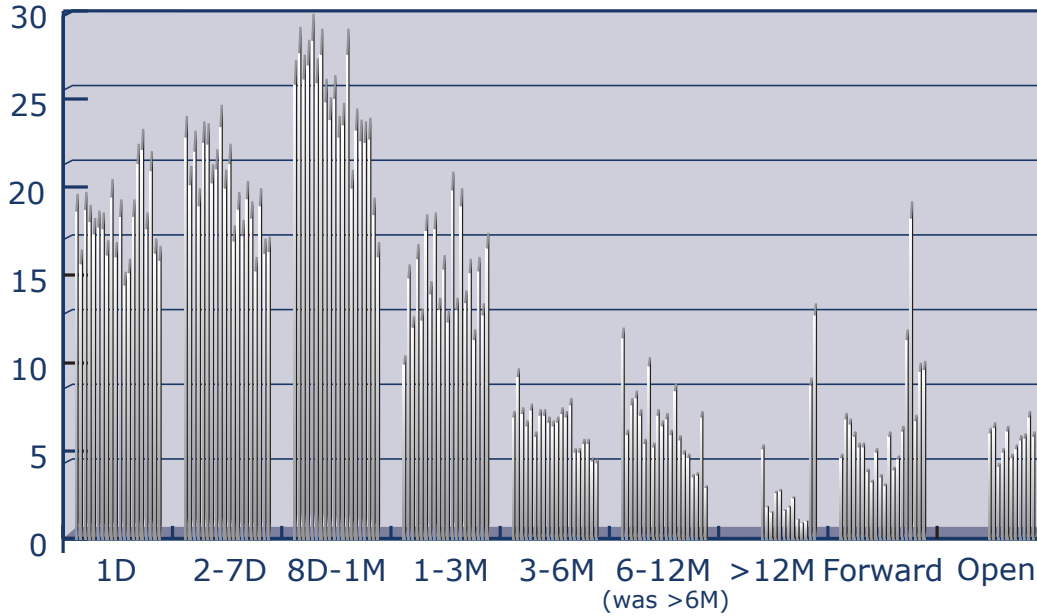
**Repo rate analysis (Q1.6)****Figure 2.9 – Repo rate analysis****Table 2.12 – Repo rate comparison in December 2011**

	main survey	ATS	tri-party
<b>fixed rate</b>	84.2%	90.9%	16.5%
<b>floating rate</b>	9.7%	9.1%	0.0%
<b>open</b>	6.0%	0.0%	83.5%

**Maturity analysis (Q1.7)****Table 2.13 – Maturity analysis**

	December 2011	June 2011	December 2010
<b>1 day</b>	15.8%	16.2%	20.9%
<b>2 days to 1 week</b>	16.3%	16.2%	18.9%
<b>1 week to 1 month</b>	16.0%	18.4%	22.7%
<b>&gt;1 month to 3 months</b>	16.5%	12.7%	15.2%
<b>&gt;3 months to 6 months</b>	4.3%	4.4%	5.4%
<b>&gt;6 months to 12 months</b>	2.9%	6.9%	3.6%
<b>&gt;12 months</b>	12.7%	8.7%	1.0%
<b>forward-start</b>	9.6%	9.5%	6.7%
<b>open</b>	5.8%	6.9%	5.7%

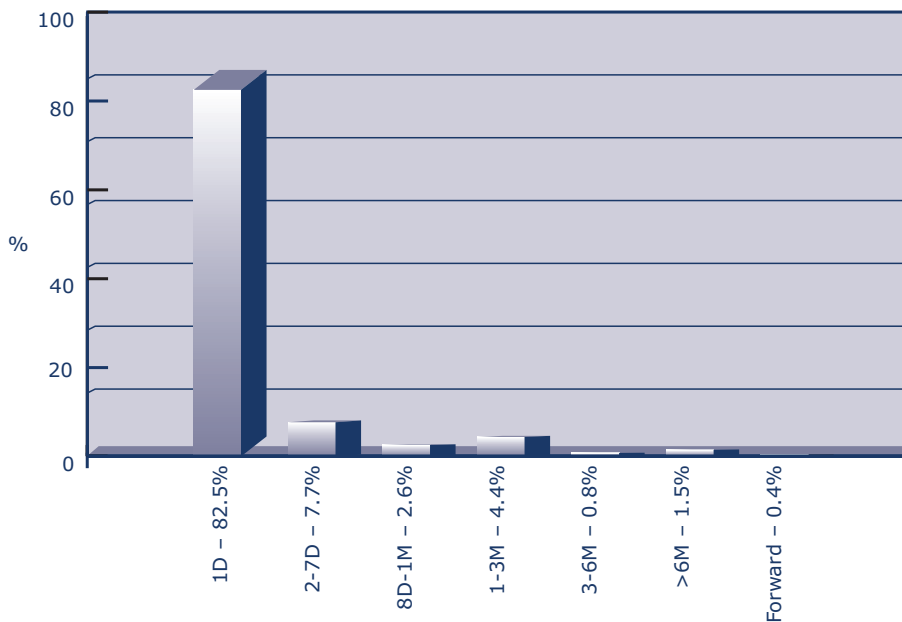
**Figure 2.10 – Maturity analysis (main survey)**



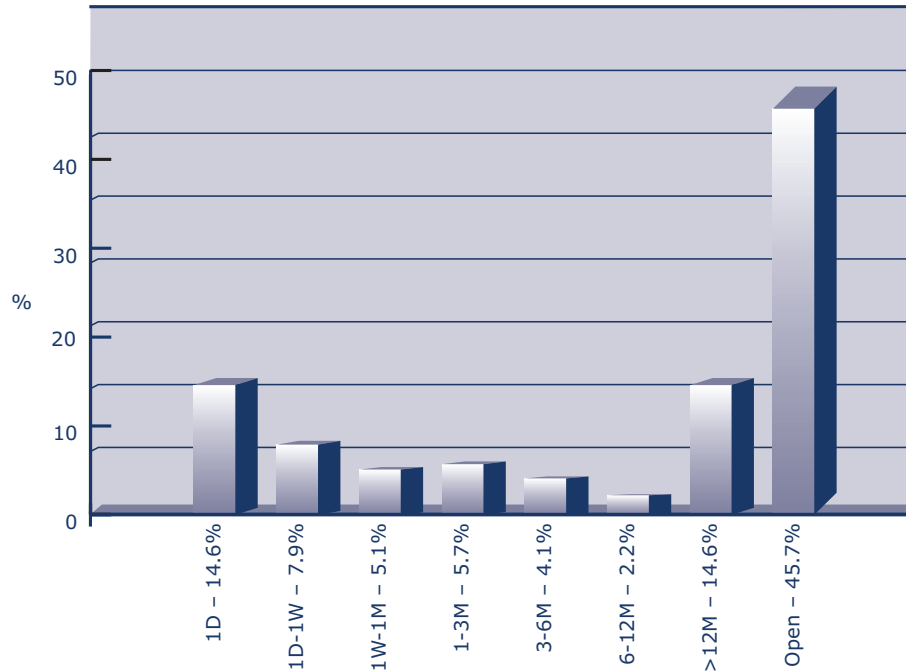
The shift in maturities seen in the last survey continued. Short dates continued to contract (to a record low of 48.1% from 50.9%) and transactions with more than a

year remaining to maturity continued to expand (to a record high of 12.7% from 8.7%). Forward-forward repos remain at historically high levels (9.6% compared to 9.5%).

**Figure 2.11 – Maturity analysis (ATS)**



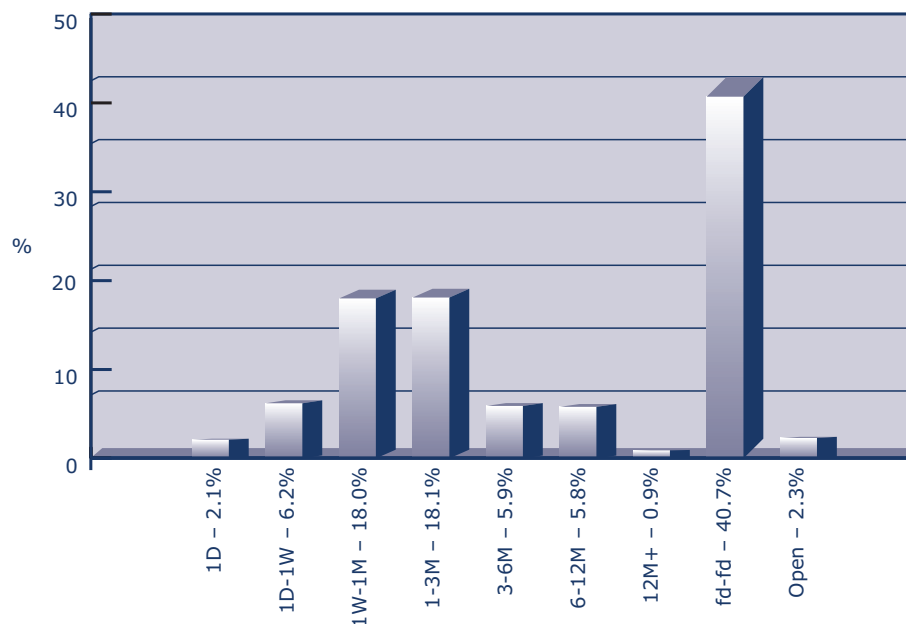
**Figure 2.12 – Maturity analysis (triparty agents)**



In directly-reported tri-party repo, there was a sharp switch from one-day to open repos (to 14.6% and

45.7% respectively, from 35.0% and 21.4%). This was, however, due to a correction to reporting.

**Figure 2.13 – Maturity analysis (voice-brokers)**



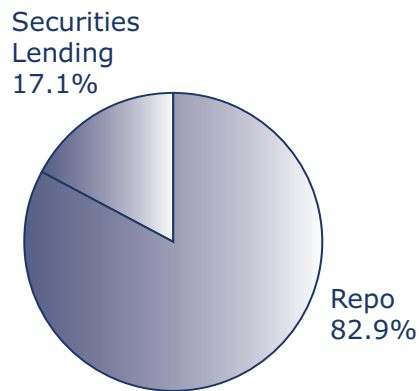
**Table 2.14 – Maturity comparison in December 2011**

	main survey	ATS	tri-party	WMBA
<b>1 day</b>	15.8%	82.5%	14.6%	2.1%
<b>2 days to 1 week</b>	16.3%	7.7%	7.9%	6.2%
<b>1 week to 1 month</b>	16.0%	2.6%	5.1%	18.0%
<b>&gt;1 month to 3 months</b>	16.5%	4.4%	5.7%	18.1%
<b>&gt;3 months to 6 months</b>	4.3%	0.8%	4.1%	5.9%
<b>&gt;6 months to 12 months</b>	2.9%	1.5%	2.2%	5.8%
<b>&gt;12 months</b>	12.7%	0.0%	14.6%	0.9%
<b>forward-start</b>	9.6%	0.4%	N/A	40.7%
<b>Open</b>	5.8%	N/A	45.7%	2.3%

**Product analysis (Q2)**

Securities lending conducted on repo desks was almost unchanged at 17.1%.

**Figure 2.14 – Product analysis**

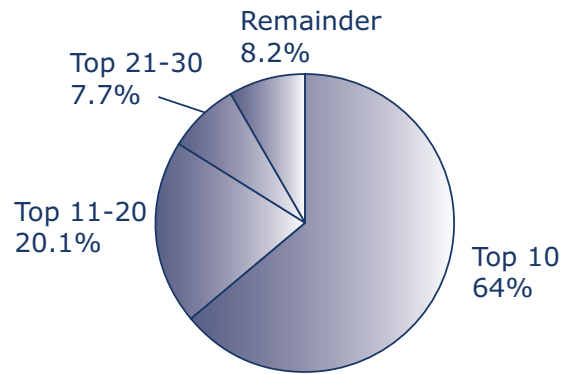


**Concentration analysis**

**Table 2.15 – Concentration analysis**

	<b>December 2011</b>	<b>June 2011</b>	<b>December 2010</b>
<b>top 10</b>	64.0%	65.5%	61.7%
<b>top 20</b>	84.1%	85.5%	84.4%
<b>top 30</b>	94.8%	94.9%	94.3%
<b>other</b>	5.2%	5.1%	5.7%

**Figure 2.15 – Concentration analysis**



## **CHAPTER 3: CONCLUSION**

The recovery of the European repo market stalled, probably at the end of last year, as increasing tensions in the Eurozone and the approach of the year-end made investors more cautious and reduced trading.

The rebound in the overall share of government securities in the main survey and in tri-party repo may be evidence of greater risk aversion. This is also evident in the continued reduction in the use of German government securities, which seem to have been hoarded as a safe-haven asset that investors are reluctant to lend. To some extent, collateral issued by smaller core Eurozone members has taken up the slack. UK and Japanese collateral may also have benefited from safe haven status. Spanish collateral has retained its market share, reflecting the success of Spanish banks in maintaining access to term funding by using CCP-cleared trading, as well as greater confidence in Spain than in other peripheral eurozone members, although anecdotal evidence suggests the horizon of term funding in Spain has shortened to about one month.

The lengthening of the maturity profile of the European repo market continues, driven by regulatory requirements and caution.

## **ABOUT THE AUTHOR**

This report was compiled by Richard Comotto, who is a Senior Visiting Fellow at the ICMA Centre at the University of Reading in England, where he is responsible for the FX and money markets module of the Centre's postgraduate finance programme. He is also Course Director of the ICMA Professional Repo Market Course conducted in Europe and Asia in co-operation with the ACI and AFME, and of the ICMA-ISLA GMRA-GMSLA Workshop.

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

The author 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. In July 2010, he produced a 'White paper on the operation of the European repo market, the role of short-selling, the problem of settlement failures and the need for reform of the market infrastructure' for ICMA's European Repo Council.

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.



## 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 7, 2011

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, 2011, 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. If your institution does that type of business but has no transactions outstanding, please enter zero 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 repurchase agreements (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 7, 2011*. This means the

value of transactions at their repurchase prices.

h) "Outstanding" means repos and reverse repos with a repurchase date, or which will roll over, on or after Thursday, December 8, 2011. You should include all *open repos and reverse repos* that have been rolled over from Wednesday, December 7, 2011 to a later date and all *forward-forward repos and reverse repos* that are still outstanding at close on Wednesday, December 7, 2011.

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 purchase 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 7, 2011, even if their purchase 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

1.1 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).

(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.

(1.1.3) "ATSs" are automatic trading systems (e.g. BrokerTec, Eurex Repo and MTS, but not voice-assisted electronic systems such as e-speed and GFInet). Transactions through voice-assisted systems should be included in (1.1.2). Anonymous transactions through an ATS with a central counterparty (e.g. CC&G, LIFFE-Clearnet, MEFF and Eurex Clearing) should be recorded in (1.1.3.4).

1.2 This item includes all the transactions recorded in (1.1.3) **plus** any transactions executed directly with counterparties and via voice-brokers which are then registered with and cleared through a central counterparty.

1.6 1.6 "Repurchase agreements" (also known as "classic repos") include transactions documented under the Global Master Repurchase Agreement (GMRA) 1995, the Global Master Repurchase Agreement (GMRA) 2000 or the Global Master Repurchase Agreement (GMRA) 2011 *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. Repurchase agreements include pensions livrées. Repurchase agreements 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 repurchase date of the sell/buy-back and deducts the manufactured or substitute payment (plus reinvestment income) from the repurchase price 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 GMRA 1995, GMRA 2000 or GMRA 2011), periodic adjustments to the relative amounts of collateral or cash – which, for a repurchase agreement, would be performed by margin maintenance transfers or payments – are likely to be made by early termination and adjustment or re-pricing. All open repos are likely to be repurchase agreements.

1.7 This section asks for the *remaining* term to maturity (not the original term to maturity) of repos to be broken down as follows:

(1.7.1.1) 1 day – this means:

- all contracts transacted prior to Wednesday, December 7, 2011, with a repurchase date on Thursday, December 8, 2011;

- overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, December 7, 2011.

(1.7.1.2) 2–7 days – this means:

- all contracts transacted prior to Wednesday, December 7, 2011, with a repurchase date on Friday, December 9, 2011, or any day thereafter up to and including Wednesday, December 14, 2011;
- contracts transacted on Wednesday, December 7, 2011, with an original repurchase date no later than Wednesday, December 14, 2011 (irrespective of the purchase date, which will vary).

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

- all contracts transacted prior to Wednesday, December 7, 2011, with a repurchase date on Thursday, June 16, 2011, or any day thereafter up to and including Monday, January 9, 2012;
- contracts transacted on Wednesday, December 7, 2011, with an original repurchase date no later than Monday, January 9, 2012 (irrespective of the purchase date, which will vary).

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

- all contracts transacted prior to Wednesday, December 7, 2011, with a repurchase date on Tuesday, January 10, 2012, or any day thereafter up to and including Wednesday, March 7, 2012;

- contracts transacted on Wednesday, December 7, 2011, with an original repurchase date no later than Wednesday, March 7, 2012 (irrespective of the purchase date, which will vary).

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

- all contracts transacted prior to Wednesday, December 7, 2011, with a repurchase date on Thursday, March 8, 2012, or any day thereafter up to and including Thursday, June 7, 2012;
- contracts transacted on Wednesday, December 7, 2011, with an original repurchase date no later than Thursday, June 7, 2012 (irrespective of the purchase date, which will vary).

(1.7.1.6) More than 6 months but no more than 12 months – this means;

- all contracts transacted prior to Wednesday, December 7, 2011, with a repurchase date on Friday, June 8, 2012, or any day thereafter up to and including Friday, December 7, 2012;
- contracts transacted on Wednesday, December 7, 2011, with an original repurchase date no later than Friday, December 7, 2012 (irrespective of the purchase date, which will vary).

(1.7.1.7) More than 12 months – this means;

- all contracts transacted prior to Wednesday, December 7, 2011, with a repurchase date on Monday, December 10, or any day thereafter;

- contracts transacted on Wednesday, December 7, 2011, with an original repurchase date on or after Monday, December 10, 2012 (irrespective of the purchase date, which will vary).

(1.7.2) Forward-forward repos are defined for the purposes of this survey as contracts with a purchase date of Monday, December 12, 2011, 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.

(1.7.3) Open repos are defined for the purposes of this survey as contracts that have no fixed repurchase date when negotiated but are terminable on demand by either counterparty. This item should be equal to item (1.6.3).

1.8 Please confirm whether the transactions recorded in the various questions in (1.7) include your tri-party repo business. Some institutions do not consolidate their tri-party repo transactions with their direct or voice-brokered business because of delays in receiving reports from tri-party agents or the complexity of their tri-party business.

1.9 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 (1.9.10) and the UK (1.9.15). Equity collateral should be recorded in (1.9.34).

(1.9.28) "Official international financial institutions, including multilateral development banks" include:

African Development Bank (AfDB)  
 Asian Development Bank (AsDB)  
 Caribbean Development Bank (CDB)  
 Central American Bank for Economic Integration (CABEI)  
 Corporacion Andina de Fomento (CAF)  
 East African Development Bank (EADB)  
 European Bank for Reconstruction and Development (EBRD)  
 European Commission (EC)/European Financial Stability Mechanism (EFSM)  
 European Financial Stability Facility (EFSF)  
 European Stabilisation Mechanism (ESM)  
 Inter-American Development Bank Group (IADB)  
 International Fund for Agricultural Development (IFAD)  
 Islamic Development Bank (IDB)  
 Nordic Development Fund (NDF)  
 Nordic Investment Bank (NIB)  
 OPEC Fund for International Development (OPEC Fund)  
 West African Development Bank (BOAD)  
 World Bank Group (IBRD and IFC)

An up-to-date list of multilateral development banks (MBD) is available on <http://go.worldbank.org/F3REECO MB1>.

(1.9.29) "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 were issued. This will typically be Luxembourg (1.9.10) and the UK (1.9.15).

(1.9.31) "Other OECD countries" are Australia, Canada, Chile, Iceland, 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 (1.9.30). US collateral settled across Euroclear and Clearstream Luxembourg should be recorded in (1.9.28).

(1.9.35) "Equity" includes ordinary shares, preference shares and equity-linked debt such as convertible bonds.

2 "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.

3 "Active" means about once a week or more often.

**For further help and information**

If, having read the Guidance Notes, you have any further queries, please e-mail the ICMA Centre at [reposurvey@icmagroup.org](mailto:reposurvey@icmagroup.org) or contact one of the following members of the ERC Steering Committee:

*German speakers*

**Eduard Cia**, HVB,  
[eduard.cia@unicreditgroup.de](mailto:eduard.cia@unicreditgroup.de)  
[stefano.bellani@jpmorgan.com](mailto:stefano.bellani@jpmorgan.com)  
+49 89 378 14172

*Italian speakers*

**Stefano Bellani**, JP Morgan,  
[stefano.bellani@jpmorgan.com](mailto:stefano.bellani@jpmorgan.com),  
+44 20 7779 2399

*English speakers*

**Edward McAleer**, Morgan Stanley,  
[edward.mcaleer@morganstanley.com](mailto:edward.mcaleer@morganstanley.com),  
+44 20 7677 9595

*French speakers*

**Godfried de Vidts**, ICAP,  
[godfried.devidts@icap.com](mailto:godfried.devidts@icap.com),  
+44 20 7000 5803

*Spanish speakers*

**Herminio Crespo Ureña**,  
Caja Madrid,  
[hrespou@cajamadrid.es](mailto:hrespou@cajamadrid.es),  
+34 91 423 92 85

This survey is being conducted by the ICMA Centre, University of Reading, UK, at the request of ICMA's European Repo Council (ERC).













## APPENDIX C: SUMMARY OF SURVEY RESULTS

Q1 What are the total gross values of cash due to be repaid by you and repaid to you on repo transactions maturing after (survey date)? (figures in EUR billions)						
	6,382	4,633	5,758	5,908	6,124	6,127
Of the amounts given in response to question (1) above:						
	Dec-07	Dec-08	Dec-09	Dec-10	Jun-11	Dec-11
1.1 How much was transacted:						
<b>direct</b> with counterparties						
• in the <b>same country</b> as you	19.4%	17.6%	19.7%	18.6%	17.1%	16.3%
• cross-border in (other) <b>eurozone countries</b>	14.9%	14.7%	14.5%	12.7%	10.6%	10.6%
• cross-border in <b>non-eurozone countries</b>	19.8%	19.3%	19.8%	20.3%	24.5%	22.8%
through <b>voice-brokers</b>						
• in the <b>same country</b> as you	11.3%	10.4%	9.8%	11.0%	11.3%	11.9%
• cross-border in (other) <b>eurozone countries</b>	8.1%	5.5%	5.0%	4.5%	3.9%	4.0%
• cross-border in <b>non-eurozone</b> countries	5.5%	4.3%	3.8%	4.8%	4.3%	4.4%
on <b>ATs</b> with counterparties						
• in the <b>same country</b> as you	4.1%	3.3%	4.2%	4.0%	4.7%	5.7%
• cross-border in (other) <b>eurozone countries</b>	3.2%	3.9%	2.4%	2.9%	3.5%	3.2%
• cross border-border in <b>non-eurozone</b> countries	3.2%	3.4%	2.6%	2.9%	2.7%	3.2%
• anonymously through a central clearing counterparty	10.5%	17.6%	18.3%	18.5%	17.4%	17.9%
1.2 total through a central clearing counterparty		33.2%	29.4%	32.3%	30.5%	32.0%
1.3 How much of the cash is denominated in:						
• EUR	64.8%	70.6%	65.6%	62.7%	63.5%	59.8%
• GBP	15.5%	13.0%	12.3%	10.5%	10.3%	11.5%
• USD	11.7%	9.6%	15.9%	20.1%	16.2%	17.1%
• SEK, DKK	2.4%	2.4%	2.4%	2.0%	2.0%	2.0%
• JPY	3.7%	3.1%	2.7%	3.6%	6.4%	7.0%
• CHF	0.2%	0.6%	0.5%	0.2%	0.2%	1.5%
• other currencies	1.7%	0.8%	0.5%	1.0%	1.4%	1.0%
1.4 How much is cross-currency?	2.3%	0.6%	2.6%	5.6%	5.4%	3.0%

	Dec-07	Dec-08	Dec-09	Dec-10	Jun-11	Dec-11
1.5 How much is:						
• classic repo	84.6%	84.7%	86.2%	85.8%	85.1%	87.0%
• documented sell/buy-backs	10.3%	11.1%	10.9%	10.6%	13.0%	9.7%
• undocumented sell/buy-backs	5.0%	4.1%	2.9%	3.6%	1.9%	3.3%
1.6 How much is:						
• fixed rate	82.2%	85.6%	88.9%	86.4%	84.0%	84.2%
• floating rate	13.3%	9.3%	7.0%	7.6%	8.9%	9.7%
• open	4.5%	5.1%	4.1%	5.9%	7.1%	6.0%
1.7 How much fixed and floating rate repo is for value before (survey date) and has a remaining term to maturity of:						
• <b>1 day</b>	14.4%	18.3%	22.1%	20.9%	16.2%	15.8%
• <b>2-7days</b>	16.9%	17.2%	18.2%	18.9%	16.2%	16.3%
• more than <b>7 days</b> but no more than <b>1 month</b>	23.5%	19.9%	22.6%	22.7%	18.4%	16.0%
• more than <b>1 month</b> but no more than <b>3 months</b>	19.8%	18.9%	15.1%	15.2%	12.7%	16.5%
• more than <b>3 months</b> but no more than <b>6 months</b>	7.1%	7.6%	4.9%	5.4%	4.4%	4.3%
• more than <b>6 months</b>	5.9%	5.6%	4.6%	3.6%	6.9%	2.9%
• more than <b>12 months</b>	2.7%	1.8%	1.1%	1.0%	8.7%	12.7%
• <b>forward-forward repos</b>	5.8%	4.5%	11.3%	6.7%	9.5%	9.6%
• <b>open</b>	4.1%	6.1%	5.1%	5.7%	6.9%	5.8%
1.8 How much is tri-party repo:	9.1%	10.7%	11.5%	11.6%	11.2%	11.4%
• for <b>fixed terms to maturity</b>	96.7%	89.3%	88.5%	89.5%	87.8%	87.7%
• on an <b>open</b> basis	5.0%	9.4%	8.0%	10.5%	12.2%	12.3%
1.9 How much is against collateral issued in:						
Austria						
• by the central government	1.1%	1.0%	0.8%	1.0%	0.8%	1.4%
• by other issuers	0.2%	0.1%	0.2%	0.2%	0.2%	0.1%
Belgium						
• by the central government	2.8%	2.6%	1.6%	2.2%	2.1%	3.2%
• by other issuers	0.1%	0.1%	0.1%	0.1%	0.2%	0.9%
Denmark						
• by the central government	0.1%	0.2%	0.2%	0.4%	0.4%	0.5%
• by other issuers	0.2%	0.3%	0.4%	0.6%	0.6%	0.4%
Finland						
• by the central government	0.2%	0.3%	0.3%	0.3%	0.4%	0.6%
• by other issuers	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%
France						
• by the central government	8.7%	8.4%	6.5%	7.3%	7.2%	8.1%
• by other issuers	1.0%	1.7%	2.2%	2.1%	2.6%	1.6%



	Dec-07	Dec-08	Dec-09	Dec-10	Jun-11	Dec-11
Hungary						
• by the central government	0.2%	0.1%	0.1%	0.1%	0.3%	0.2%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Latvia						
• by the central government	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Lithuania						
• by the central government	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Malta						
• by the central government	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland						
• by the central government	0.2%	0.1%	0.2%	0.2%	0.2%	0.2%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania						
• by the central government	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Slovak Republic						
• by the central government	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Slovenia						
• by the central government	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
official international institutions						0.8%
Japan	2.3%	2.9%	2.1%	2.6%	4.2%	5.2%
other OECD	7.4%	7.3%	10.5%	13.7%	11.9%	10.4%
non-OECD EMEA	0.7%	0.5%	0.5%	0.6%	0.5%	0.8%
non-OECD Asian & Pacific	0.4%	0.3%	0.1%	0.3%	0.3%	0.6%
non-OECD Latin America	0.5%	0.3%	0.2%	0.4%	0.4%	0.7%
equity	1.3%	1.1%	0.5%	0.7%	0.9%	0.0%
collateral of unknown origin	2.1%	2.1%	6.8%	6.3%	6.8%	7.0%
Q2 What is the total value of securities loaned and borrowed <i>by your repo desk: to/from counterparties</i>						
in the <b>same country</b> as you						
• in fixed income	35.4%	35.0%	38.4%	46.8%	41.3%	39.8%
• in equity	4.6%	6.3%	1.9%	1.7%	1.1%	1.8%
cross-border in (other) <b>eurozone</b> countries						
• in fixed income	31.8%	17.5%	20.9%	16.8%	19.6%	20.2%
• in equity	5.1%	6.8%	3.5%	3.6%	1.6%	0.3%

	Dec-07	Dec-08	Dec-09	Dec-10	Jun-11	Dec-11
cross-border in <b>non-eurozone</b> countries						
• in fixed income	20.3%	33.2%	35.4%	30.3%	34.5%	35.8%
• in equity	2.7%	1.3%	1.4%	0.8%	1.9%	2.1%
for which the term to maturity is						
• fixed	61.5%	65.1%	74.9%	75.3%	71.3%	70.1%
• open	38.5%	34.9%	25.1%	24.7%	28.7%	29.9%



## **APPENDIX D: THE ICMA EUROPEAN REPO COUNCIL**

The ICMA European Repo Council (ERC) is the forum where the repo dealer community meets and forges consensus solutions to the practical problems of a rapidly evolving marketplace. In this role, it has been consolidating and codifying best market practice. The contact and dialogue that takes place at the ERC underpins the strong sense of community and common interest that characterises the professional repo market in Europe.

The ERC was established in December 1999 by the International Capital Market Association (ICMA, which was then called the International Securities Market Association or ISMA) as a body operating under ICMA auspices.

Membership of the ERC is open to any ICMA member who has commenced, or has undertaken to commence, a dedicated repo activity, is willing to abide by the rules applicable to its and has sufficient professional expertise, financial standing and technical resources to meet its obligations as a member.

The ERC meets twice a year (usually in February/March and September) at different financial centres across Europe. The Steering Committee now comprises 19 members elected annually and meets four times a year.

More information about the ERC is available on [www.icmagroup.org](http://www.icmagroup.org).