International Capital Market Association

European repo market survey

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CONTENTS

EXECUTIVE SUMMARY

In June 2012, the European Repo Council (ERC) of the International Capital Market Association (ICMA) conducted the 23rd 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 13, 2012. Replies were received from 62 offices of 58 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 62 institutions who participated in the latest survey was EUR 5,647 billion, compared with EUR 6,204 billion in December 2011. Using constant samples, it is estimated that the market contracted over the last six months by 9.9% and by 14.2% year-on-year.

Counterparty analysis

The share of electronic trading in the main survey grew to 33.1%, largely at the expense of voice-brokered business. The shift from directly-negotiated and voice-brokered to electronic transactions probably reflected a variety of short and long-term factors, not least the fact that electronic trading provides easy access to CCP. Voice-brokered repo business, which appeared to have benefited in the aftermath of the crisis from the ability of voice-brokers to search out liquidity in difficult markets, may once again be losing market share to electronic trading.

Geographical analysis

There was a general shift from domestic business into transactions involving at least one non-eurozone counterparty, probably in London.

The share of anonymous (ie CCP-cleared) electronic trading continued to grow and set a new record, touching 18.8%, once again reflecting the high level of risk aversion.

Clearing and settlement analysis

The share of all CCP-cleared repos (which includes those transacted on an ATS and automatically cleared across a CCP, but also those transacted directly with a counterparty or via a voice-broker, and then registered with a CCP post trade) retreated to 26.1%. This was unexpected but may reflect the growth of longer-term repos, which are likely to be more difficult to clear, as they tend to be structured transactions.

There was a small decline in the share of tri-party repo to 10.9%. However, the value of tri-party repo reported directly by the major tri-party agents in Europe rebounded.

This tends to confirm anecdotal evidence that the growth in tri-party repo is with counterparties who are not participants in the survey, probably non-bank financial institutions.

Cash currency analysis

The share of the euro continued to decline, touching 57.0%. There were also sharp reductions in the shares of the Japanese yen and Swiss franc. The beneficiaries of these declines were the pound sterling and US dollar. The decline in the share of the euro may be related to the extra-ordinary provision of liquidity to the market by the ECB, not least, through its two 3-year LTROs on 21 December 2011 and 28 February 2012 (after the previous survey).

Collateral analysis

The share of German collateral was very slightly lower, but German government bond collateral fell sharply, reflecting continued scarcity due to hoarding as safe assets. The share of other core Eurozone collateral also contracted. Spanish collateral also fell back to 5.0%, but Italian collateral recovered to 8.3% (although not in electronic trading or tri-party repo). Overall, the share of all government bonds within the pool of EU-originated collateral faded slightly, touching 78.7%.

The overall share of government bonds in tri-party repo was dragged down by flights out of Italian and Spanish bonds. On the other hand, the share of tri-party collateral issued by official international financial institutions expanded to 6.5% and the share of pfandbrief jumped to 17.4%, reflecting the perceived safety of this class of asset and the regulatory imprimatur it has received.

The share of UK collateral continued to expand, reaching 15.0%, possibly reflecting its safe haven status.

Maturity analysis

The share of short-dated repo recovered slightly to 49.9%. Transactions with more than a year remaining to maturity continued to expand, reaching a new record high of 13.3%.

Some of the contraction in the maturity distribution of repo may be due to the shorter terms which are being offered to Spanish banks, even on CCP-cleared electronic trading systems. This may also help to explain the revival in open repo.

CHAPTER 1: THE SURVEY

On June 13, 2012, the European Repo Council (ERC) of the International Capital Market Association (ICMA) conducted the 23rd 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, June 13, 2012.

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 the 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 62 offices of 58 financial groups. This is two fewer respondents than participated in December 2011. Seven institutions which participated in the last survey dropped out of the latest but four rejoined and one (Banc Sabadell) took part for the first time.

51 of the participants were based across 15 European countries, as well as in Australia (1), North America (6) and Japan (4). 49 participants were based across 14 of the 27 member states of the EU (no institutions from Finland, Portugal and Sweden, and only two former Accession States, participated in the latest survey), and 43 were based in 11 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, December 12, 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 before the next survey at the following website: www.icmagroup.org/surveys/repo/participate.

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

Institutions who participate in a 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 June in the four previous years (2006-2011) are set out in Appendix C. Full details for all previous surveys can be found at www.icmagroup.org.

Total repo business (Q1)

The total value, at close of business on June 13, 2012, of repos and reverse repos outstanding on the books of the 62 institutions which participated in the latest survey was EUR 5,647 billion. This is sharply down from EUR 6,204 billion in December 2011, but still well above the low of EUR 4,633 billion touched in December 2008.

Of the sample of 62 institutions, 29 were net lenders, compared to 26 (of 64) in the last survey and the balance between borrowing through repo and lending through reverse repo swung towards net lending.

Table 2.1 – Total repo business from 2001 to 2012

survey	total	repo	reverse repo
2012 June	5,647	48.7%	51.3%
2011 December	6,204	50.3%	49.7%
2011 June	6,124	50.7%	49.3%
2010 December	5,908	51.0%	49.0%
2010 June	6,885	53.7%	46.3%
2009 December	5,582	50.0%	50.0%
2009 June	4,868	52.2%	47.8%
2008 December	4,633	49.9%	50.1%
2008 June	6,504	48.8%	51.2%
2007 December	6,382	49.4%	50.6%
2007 June	6,775	50.8%	49.2%
2006 December	6,430	50.7%	49.3%
2006 June	6,019	51.7%	48.3%
2005 December	5,883	54.6%	45.4%
2005 June	5,319	52.4%	47.6%
2004 December	5,000	50.1%	49.9%
2004 June	4,561	50.6%	49.4%
2003 December	3,788	51.3%	48.7%
2003 June	4,050	50.0%	50.0%
2002 December	3,377	51.0%	49.0%
2002 June	3,305	50.0%	50.0%
2001 December	2,298	50.4%	49.6%
2001 June	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 the same 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, not least, through the Long-Term Refinancing Operations (LTRO) of the European Central Bank.

In order to gauge the year-on-year growth of the European repo market (or at least of that segment represented by the institutions who 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 continuously in several surveys.

Overall, the gross repo positions of the 51 institutions that participated in all of the last three surveys shrank by 9.9% over the six months from the December 2011 survey and by 14.2% year-on-year. The business of the 57 institutions that also participated in the December 2011 survey (but not necessarily the June 2011 survey) fell back by 5.7% over the last six months. The repo books of 30 of the sample of 62 institutions shrank.

Counterparty analysis (Q1.1)

Table 2.2 – Counterparty analysis

	June 2012		December 2011		June 2011	
	users	**share**	**users**	**share**	**users**	**share**
direct	62	48.6%	64	49.7%	58	52.2%
of which tri-party	*34*	*10.9%*	*40*	*11.4%*	*36*	*11.2%*
voice-brokers	51	18.3%	55	20.3%	48	19.6%
ATS	45	33.1%	48	30.0%	44	28.2%

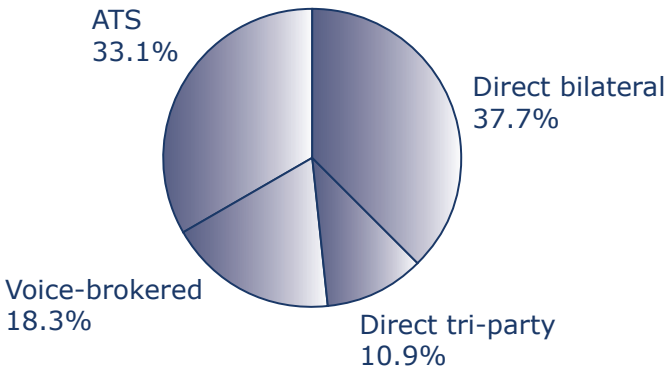
The share of electronic repo trading increased at the expense of directly-negotiated and voice-brokered business. Voice-brokered transactions touched a record low (18.3%), while directly-negotiated repro plumbed levels not seen since 2001. The shift from directly-negotiated and voice-brokered towards electronic repo transactions probably reflects a mixture of long-term trends and short-term shifts. In the long term, cost and regulatory pressures seem likely to increase the share of electronic trading, particularly across CCP-cleared systems. In the short term, electronic trading may be favoured over directly-negotiated transactions, because risk aversion is encouraging greater use of CCP-cleared repos, most of which are originated on electronic trading systems. Voice-brokered repo business, which appeared to have benefited in the aftermath of the crisis from the ability of voice-brokers to search out liquidity in difficult markets, may now be suffering from the general reductions in trading activity and may once again by losing market share to electronic trading.

Data provided directly by the principal automatic repo trading systems (ATS) operating in Europe – BrokerTec, Eurex Repo and MTS – showed that the value of electronic trading grew to a record EUR 1,010 billion, up sharply from EUR 877 billion. The previous peak was EUR 1,001 billion in December 2010.

Table 2.3 – Numbers of participants reporting particular types of business

	Jun-12	Dec-11	Jun-11	Dec-10	Jun-10	Dec-09
ATS	45	48	44	43	40	44
anonymous ATS	37	40	37	37	34	37
voice-brokers	51	55	48	52	49	50
tri-party repos	34	40	36	37	31	32
total	62	64	58	57	57	58

Figure 2.1 – Counterparty analysis



Geographical analysis (Q1.1)

Table 2.4 – Geographical analysis

	June 2012		December 2011		June 2011	
	share	users	share	users	share	users
domestic	31.5%		34.0%		33.1%	
cross-border	49.7%		48.1%		49.5%	
anonymous	18.8%	37	17.9%	40	17.4%	37

There was a general shift over the last six months from domestic business into transactions involving at least one counterparty in a non-eurozone country. In the main survey, banks reported that contracts with domestic counterparties accounted for 31.5% of outstanding repo business compared with 34.0% in December 2011. The share of cross-border business involving at least one counterparty in a non-eurozone country rose to 19.1% from 17.7%. Data provided directly by tri-party repo agents saw domestic business fall to 42.0% from 45.6% and transactions involving at least one non-eurozone counterparty rise to 28.9% from 26.3% (slightly reversing the huge swing to domestic business seen in December 2011). Finally, direct data from ATS saw the share of domestic business fall even more sharply to 31.6% from 38.9% and the share of cross-border business involving at least one non-eurozone counterparty rise to 45.8% from 40.5%.

In the case of voice-brokers, domestic business increased to 45.9% from 42.8%. This may reflect the fact that the reporting voice-brokers are all London-based and the principal non-eurozone origin or destination of European repo is likely to be London. Increased cross-border business from or to London probably has a positive knock-on effect on domestic business in London.

The share of anonymous electronic trading continued to grow and set a new record, touching 18.8% compared with 17.9%. The value of directly-reported anonymous electronic trading surged to EUR 934 billion from EUR 770 billion and took a record 92.4% of electronic business (up from 87.8%).

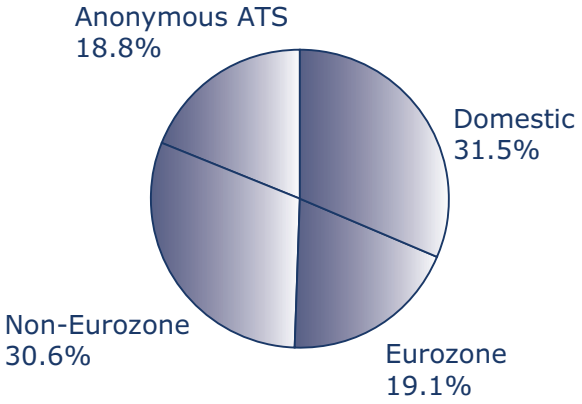
However, data provided in the main survey put total outstanding electronic repo business considerably higher, at EUR 1,794 billion. The main difference is likely to be the result of double-counting between themselves by banks in the main survey (whereas the system-providers report only one side of each transaction). However, it is not clear why the share of anonymous electronic trading (18.8%) is only 57% of all electronic trading reported in the main survey (33.1%), compared to the 92.4% reported by the system-providers. It may be that some directly-negotiated and voice-brokered business that is

registered with a CCP post trade is being misreported as non-anonymous electronic trading. This is being investigated with survey participants.

Table 2.5 – Geographical comparisons in June 2012

	main survey	ATS	tri-party	WMBA
domestic	31.5%	31.6%	42.0%	45.9%
cross-border	49.7%	68.4%	58.0%	54.1%
anonymous	18.8%			

Figure 2.2 – Geographical analysis

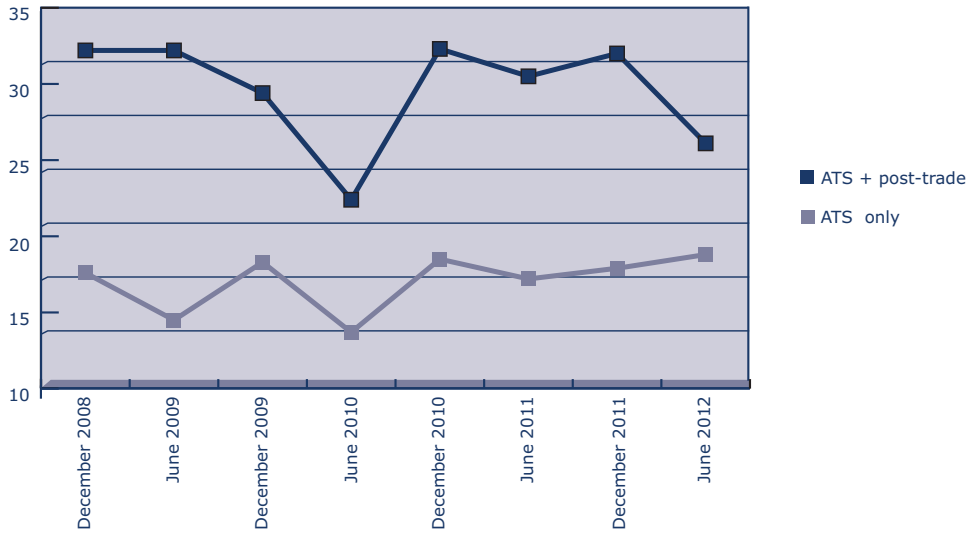


Clearing and settlement analysis (Q1.2 and Q1.8)

The share of tri-party repo dropped back slightly to 10.9% from 11.4% in December 2011 but the value of tri-party repo reported directly by the major tri-party agents in Europe rebounded to EUR 1,109 billion in December from EUR 992.9 billion (although it remained below the record EUR 1,173.5 billion reached in June 2011). Given that the main survey showed tri-party repo taking a reduced share of a smaller total, whereas direct data showed strong growth, one must assume, as has been suggested previously and as indicated by anecdotal evidence, that the recent growth in tri-party repo is with counterparties who are not participants in the survey, probably non-bank financial institutions. Tri-party repo allows such entities to invest their surplus liquidity securely against collateral without having to build their own collateral management and settlement functions.

The share of all CCP-cleared repos (which includes those transacted on an ATS and automatically cleared across a CCP, but also those transacted directly with a counterparty or via a voice-broker, and then registered with a CCP post trade) retreated to 26.1% from 32.0%. However, this is an understatement, as not all survey participants report this figure. Of those firms that did, the average share of CCP-cleared repos was 33.6%, compared with 37.4%. The reduction in the share of CCP-cleared repos was unexpected but may reflect the growth of longer-term repos, which are likely to be more difficult to clear, as they tend to be structured transactions.

Figure 2.3 –Business cleared across CCPs



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

Table 2.6 – Cash currency analysis

	June 2012	December 2011	June 2011
EUR	57.0%	59.8%	63.5%
GBP	15.8%	11.5%	10.3%
USD	19.4%	17.1%	16.2%
DKK, SEK	2.8%	2.0%	2.0%
JPY	3.6%	7.0%	6.4%
CHF	0.3%	1.5%	0.2%
etc	1.2%	1.0%	1.4%
cross-currency	1.5%	3.0%	5.4%

The share of the euro continued to decline, touching 57.0% from 59.8% in December 2011. This is close to the record low of 56.6% in June 2010 (although that number reflected exceptional transactions in US dollars). There were also sharp reductions in the shares of the Japanese yen and Swiss franc. The beneficiaries of these declines were the pound sterling and US dollar.

The share of the euro also continued to decline in tri-party repo (to 74.2% from 77.2%), matched largely by a further increase in the share of the US dollar (to 18.2% from 16.2%).

The same pattern was repeated in directly-reported voice-brokered business. The euro fell back to a record low of 49.8% from 55.8%, while sterling grew to 35.7% from 33.3% and the dollar to 8.2% from 5.9%. However, in contrast to other trading venues, the share of the yen grew in voice-brokered business to 4.5% from 3.3%.

The one trading venue where the euro did not retreat was directly-reported electronic trading. Here, the share of the euro recovered to 92.5% from 88.9%, once again, largely at the expense of the Swiss franc, which fell back to a record low of 1.7% from 6.4%, continuing (albeit more markedly on this occasion) a trend in which the euro has given up market share in electronic trading to the Swiss franc in every December survey since 2009 and then recovered in the following June survey.

There was a further recovery in cross-currency trading in tri-party repo to 16.4% from 15.2%.

The decline in the share of the euro may be related to the extraordinary provision of liquidity to the market by the ECB, not least, through its two 3-year LTROs. These were on 21 December 2011 and 28 February 2012, after the previous survey.

Figure 2.4 – Currency analysis

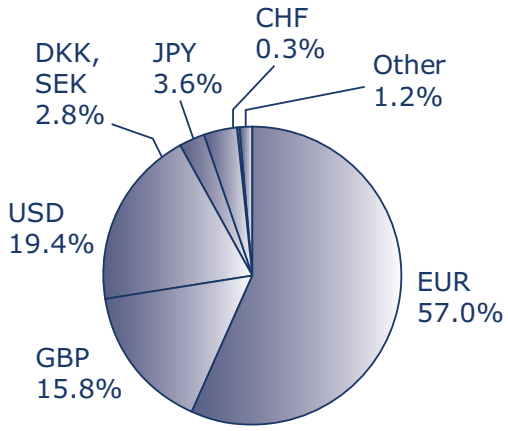


Table 2.7 – Currency comparison in June 2012

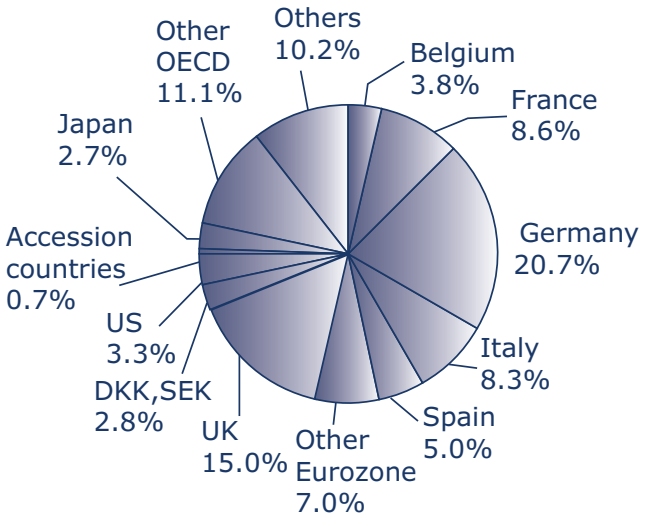
	main survey	ATS	tri-party	WMBA
EUR	57.0%	92.5%	74.2%	49.8%
GBP	15.8%	3.7%	5.8%	35.7%
USD	19.4%	2.0%	18.2%	8.2%
DKK, SEK	2.8%		0.4%	0.9%
JPY	3.6%		0.4%	4.5%
CHF	0.3%	1.7%	0.4%	0.0%
etc	1.2%	0.0%	0.6%	0.9%
cross-currency	1.5%		16.4%	

Collateral analysis (Q1.9)

Table 2.8 – Collateral analysis

	June 2012	December 2011	June 2011
Germany	20.7%	20.9%	22.4%
Italy	8.3%	7.0%	10.0%
France	8.6%	9.8%	9.9%
Belgium	3.8%	4.1%	2.2%
Spain	5.0%	6.7%	7.1%
other eurozone	7.0%	7.6%	6.6%
UK	15.0%	12.5%	11.1%
DKK, SEK	2.8%	2.3%	2.4%
US	3.3%	3.1%	2.4%
Accession countries	0.7%	0.5%	0.8%
Japan	2.7%	5.2%	4.2%
other OECD	11.1%	10.4%	11.9%
other fixed income	10.0%	9.9%	8.0%
equity	0.2%	0.0%	0.9%

Figure 2.5 – Collateral analysis (main survey)



There seems to have been a modest shift out of core Eurozone collateral. The share of German collateral was very slightly lower, at 20.7% compared with 20.9% while in December 2011 but German government bond collateral fell much more sharply, to 14.2% from 15.4%, while French collateral declined to 8.6% from 9.8% and Belgian to 3.8% from 4.1%. The smaller share of German government bond collateral reflected continued scarcity due to hoarding by investors seeking safe haven assets. Other German fixed-income, excluding pfandbrief, expanded to 5.5% from 4.4%, possibly reflecting greater resort to non-government public sector bonds to compensate for the scarcity of high-quality government debt.

Italian collateral recovered to 8.3% from 7.0% but Spanish fell back to 5.0% from 6.7%, reflecting fluctuating perceptions of relative country risk.

Overall, the share of all government bonds within the pool of EU-originated collateral faded slightly after the surge seen in December 2011, touching 78.7% compared with 79.1%.

A notable development was the sharp contraction in the use of Japanese collateral, which fell back to 2.7% from 5.2%, almost completely reversing the strong growth seen since 2010.

UK collateral continued to expand, reaching 15.0% from 12.5%, possibly reflecting its safe haven status. The Delivery-By-Value (DBV) facility – an equivalent to a tri-party collateral management or GC financing service – may also have helped to sustain activity in sterling and UK collateral.

In directly-reported electronic trading, the share of German collateral continued to fall, reaching 24.9% from 28.4%, and there was a reversal in the share of

Spanish collateral to 8.2% from 10.6%, which was more than offset by a surge in Italian collateral to 33.5% from 24.3%.

The share of government bonds within the pool of all collateral in directly-reported tri-party business contracted to 41.6% from 45.2% and within the pool of EU-originated collateral fell back even more sharply, to 42.3% from 50.3%. The largest falls were in Italian government bonds (to 2.4% from 7.6%), Spanish government bonds (to 1.6% from 4.8%) and Spanish non-government bonds (to 4.2% from 6.3%).

In contrast, the share of French government bonds in tri-party collateral expanded to 7.1% from 4.8% and German government bonds to 10.8% from 8.4%. There was also a substantial increase in the use of collateral issued by official international financial institutions (to 6.5% from 3.9%). However, the most dramatic increase was in pfandbrief, which jumped to a record 17.4% from 11.4%.

The growing use of German government bonds as collateral in tri-party contrasts with the situation in the wider market, where parties seem reluctant to repo out these bonds in case they are not returned. The difference may be that buyers in most tri-party repo systems are not able to re-use collateral outside the system, so the seller can be confident of receiving his bonds back at the maturity of a tri-party repo.

The collateral composition of tri-party repo has proved a sensitive indicator of risk tolerance since the start of the crisis, so the latest shifts suggest heightened risk aversion.

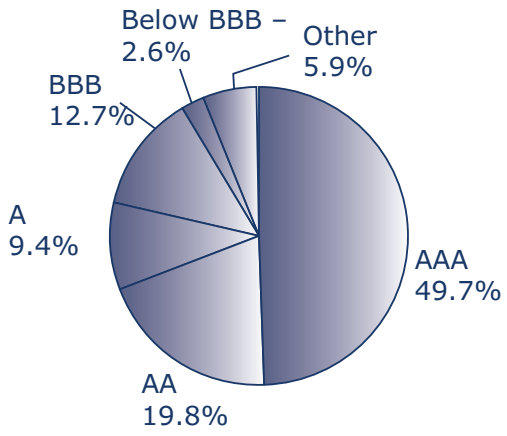
In tri-party repo, the use of equity collateral partly recovered, reaching 14.7% from 12.8%. But the use of equity by most survey participants remains negligible. It has been suggested that this reflects, not just issues such as ensuring the survey reaches the desks trading equity and the greater use of synthetic structures for equity repos, but also a preference for documenting equity repo as securities loans.

GC financing is reported to account for 22.3% of electronic trading. This is almost entirely across the Euro GC Pooling facility operated by Eurex Repo.

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

	June 2012	December 2011	June 2011
AAA	49.7%	48.3%	49.8%
AA	19.8%	15.3%	21.8%
A	9.4%	23.1%	13.1%
BBB	12.7%	3.2%	6.9%
below BBB-	2.6%	4.9%	2.2%
A1/P1	4.0%	3.9%	4.7%
A2/P2	0.9%	0.0%	0.0%
Non-Prime	0.0%	0.0%	0.2%
unrated	1.0%	1.3%	1.5%

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

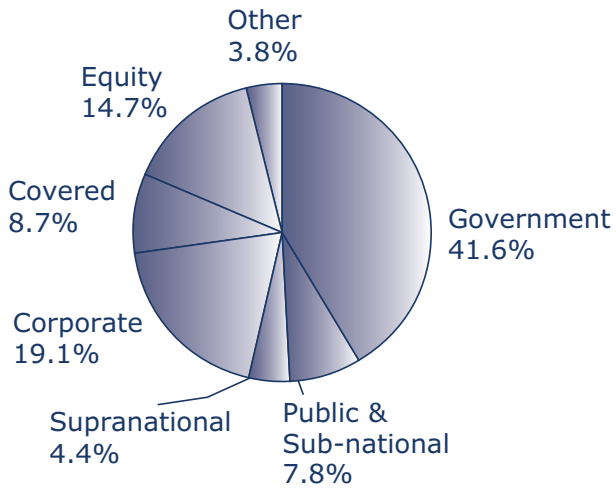


According to data reported directly from the tri-party agents, there was an underlying shift back to more highly-rated collateral, with the combined share of AAA and AA-rated collateral rising to 68.5% from 63.6% in December 2011. This was offset by an apparent shift out of A-rated collateral (9.4% from 23.1%) into BBB (12.7% from 3.2%), but this seems to have been due mainly to the downgrading to BBB of the credit ratings of Italy in January and Spain in April.

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

	June 2012	Dec 2011	June 2011
government securities	41.6%	45.2%	37.8%
public agencies / sub-national	7.8%	7.2%	5.6%
supranational agencies	4.4%	2.8%	2.2%
corporate bonds	19.1%	18.3%	23.3%
covered bonds	8.7%	9.7%	9.1%
residential mortgage-backed	1.3%	1.4%	0.3%
commercial mortgage-backed	0.3%	0.2%	0.3%
other asset-backed	0.5%	1.0%	0.6%
CDO, CLN, CLO, etc	0.5%	0.5%	0.7%
convertible bonds	0.1%	0.2%	0.1%
equity	14.7%	12.8%	19.2%
other	1.1%	0.8%	0.9%

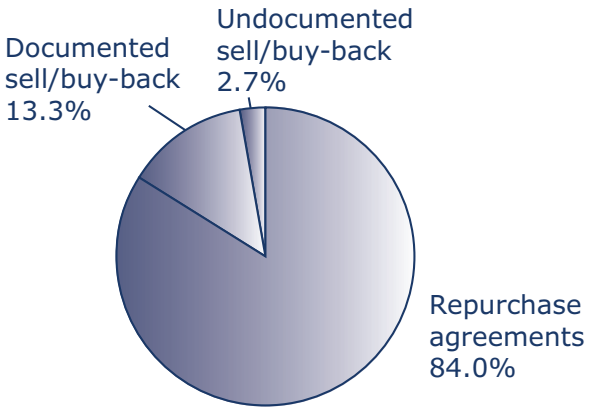
Figure 2.7 – Collateral analysis (triparty agents) by type of security



Contract analysis (Q1.5)

There was a significant rebound in the share of documented sell/buy-backs to 13.3% from 9.7% in December 2011.

Figure 2.8 – Contract analysis



Repo rate analysis (Q1.6)

Open repo recovered market share, reaching 10.0% from 6.0% in December 2011, entirely at the expense of fixed-rate repo. The share of open transactions, having peaked at 11.1% in December 2006, declined sharply after the crisis.

Figure 2.9 – Repo rate analysis

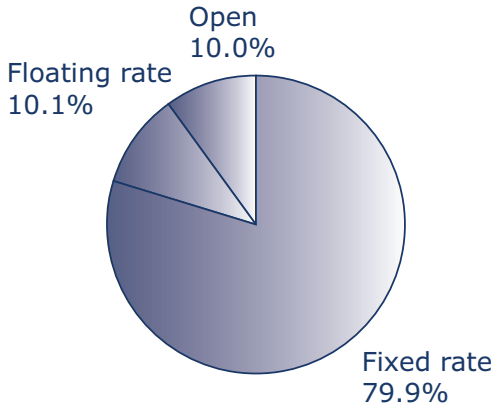


Table 2.11 – Repo rate comparison in June 2012

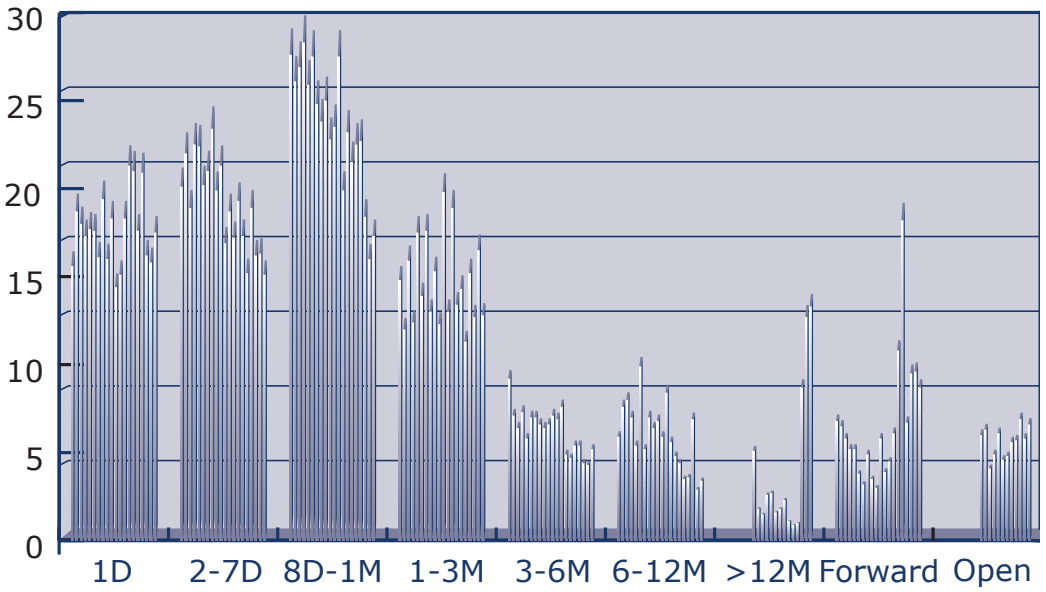
	main survey	ATS	tri-party
fixed rate	79.9%	90.8%	54.9%
floating rate	10.1%	9.2%	0.0%
open	10.0%	0.0%	45.1%

Maturity analysis (Q1.7)

Table 2.12 – Maturity analysis

	June 2012	Dec 2011	June 2011
1 day	17.5%	15.8%	16.2%
2 days to 1 week	15.1%	16.3%	16.2%
1 week to 1 month	17.3%	16.0%	18.4%
>1 month to 3 months	12.8%	16.5%	12.7%
>3 months to 6 months	5.2%	4.3%	4.4%
>6 months to 12 months	3.4%	2.9%	6.9%
>12 months	13.3%	12.7%	8.7%
forward-start	8.7%	9.6%	9.5%
open	6.6%	5.8%	6.9%

Figure 2.10 – Maturity analysis (main survey)



Short-dated repos (one month or less to maturity) recovered slightly to 49.9% from 48.1% in December 2011. Contracts with 1 to 3 months remaining to maturity fell back to 12.8% from 16.5%. Transactions with more than a year remaining to maturity continued to expand, reaching a new record high of 13.3% from 12.7%. Forward-forward repos contracted slightly but remain at historically high levels.

Short dates also recovered in directly-reported electronic repos, reaching 94.9% from 92.8%, reflecting an expansion in the share of transactions with one day remaining to 85.8% from 82.5%.

Some of the shortening in the maturity distribution of repo in both the main survey and in directly-reported electronic repos may be due to the shorter terms which are being offered to Spanish banks, even on CCP-cleared electronic trading systems. Offers of three months or more are now much rarer and most activity is reported to be focused at 2 weeks. This may also explain some of the revival in open repo, which is functionally the same as one-day repo.

On the other hand, short dates contracted in directly-reported tri-party repo, to 25.6% from 27.7%. There appears to have been a dramatic shift in tri-party repo from long-term transactions (1.7% from 14.6%) to open transactions (58.6% from 45.7%).

Figure 2.11 – Maturity analysis (ATS)

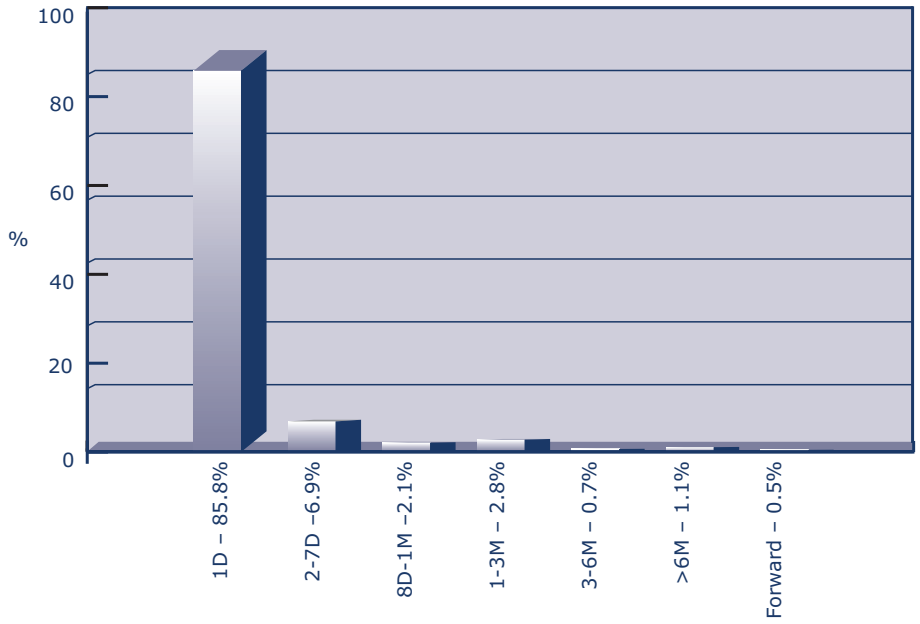


Figure 2.12 – Maturity analysis (triparty agents)

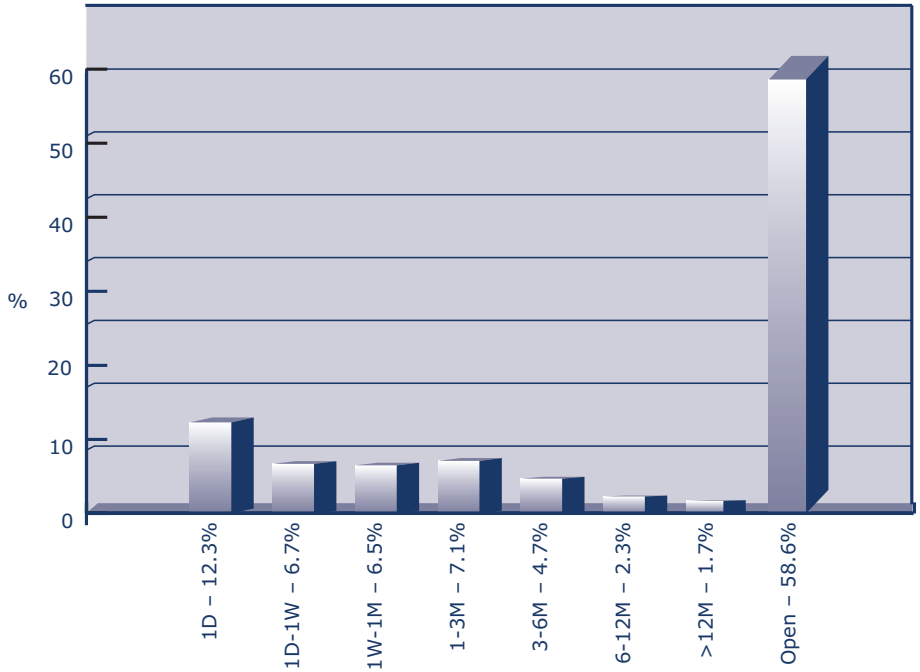


Figure 2.13 – Maturity analysis (voice-brokers)

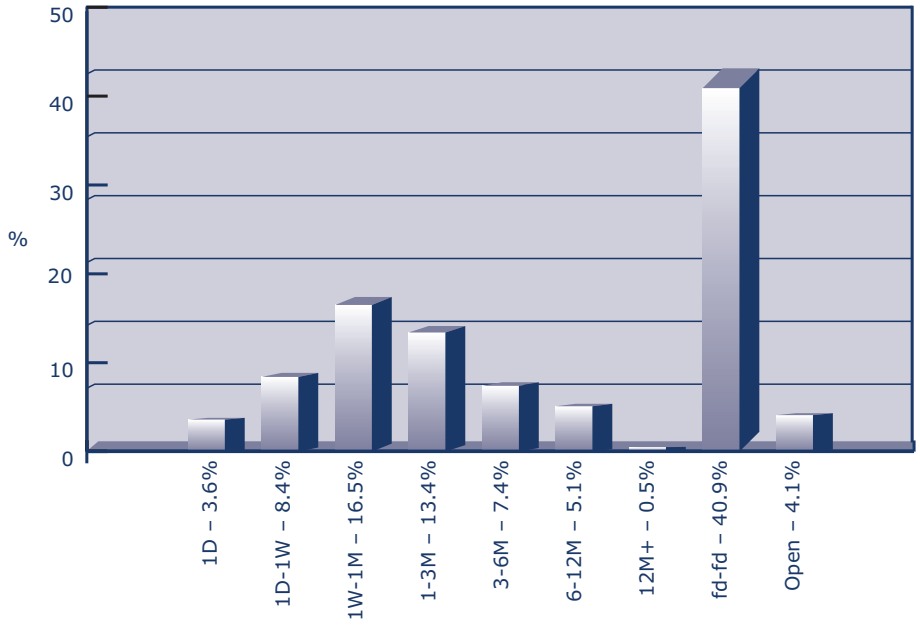


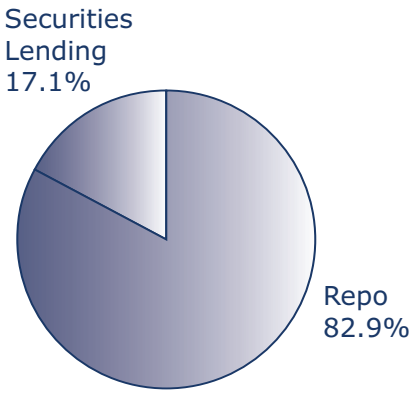
Table 2.13 – Maturity comparison in June 2012

	main survey	ATS	tri-party	WMBA
1 day	17.5%	85.8%	12.3%	3.6%
2 days to 1 week	15.1%	6.9%	6.7%	8.4%
1 week to 1 month	17.3%	2.1%	6.5%	16.5%
>1 month to 3 months	12.8%	2.8%	7.1%	13.4%
>3 months to 6 months	5.2%	0.7%	4.7%	7.4%
>6 months to 12 months	3.4%	1.1%	3.3%	5.1%
>12 months	13.3%	0.0%	1.7%	0.5%
forward-start	8.7%	0.5%		40.9%
open	6.6%		58.6%	4.1%

Product analysis (Q2)

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

Figure 2.14 – Product analysis



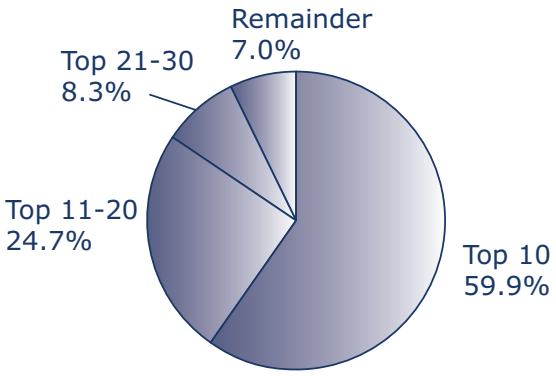
Concentration analysis

The degree of concentration decreased sharply in June 2012.

Table 2.14 – Concentration analysis

	June 2012	December 2011	June 2011
top 10	59.9%	64.0%	65.5%
top 20	84.6%	84.1%	85.5%
top 30	93.0%	94.8%	94.9%
other	7.0%	5.2%	5.1%

Figure 2.15 – Concentration analysis



Although the apparent degree of concentration of repo 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.*

In terms of this index, market concentration rose significantly after June 2009, although from a low base. The peak appears to be in June 2010, with the Index at twice its historic average, but this may be an anomaly, due to the exceptional transactions recorded in that survey. A lower peak (about 50% of the historic average) was reached in June 2011.

The increasing concentration would appear to reflect the market power of those institutions that came through the crisis with relatively unimpaired balance sheets, while their competitors were forced to deleverage or disappeared through mergers or collapse. However, some of the change in the Index may reflect the contraction of the survey sample size, which has largely been due to the loss of smaller banks.

*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.

Table 2.15 – Herfindahl Index

	index	numbers in survey
December 2003	0.045	76
June 2004	0.040	81
December 2004	0.047	76
June 2005	0.043	81
December 2005	0.043	80
June 2006	0.042	79
December 2006	0.050	74
June 2007	0.041	76
December 2007	0.040	68
June 2008	0.044	61
December 2008	0.049	61
June 2009	0.051	61
December 2009	0.065	58
June 2010	0.105	57
December 2010	0.064	57
June 2011	0.074	58
December 2011	0.065	64
June 2012	0.062	62

CHAPTER 3: CONCLUSION

The sharp contraction in the survey total to EUR 5,647 billion from EUR 6,204 billion in December 2011 (-9.9% when adjusted for survey sample changes) reflects a number of factors: the difficult financial and economic situation in Europe in general and the Eurozone in particular; reduced risk appetite among banks due to persistent concern over the credit risk of counterparties and the constraints of weak balance sheets; and the impact of the two massive LTRO by the ECB in December 2011 and February 2012 (both after the last survey). These refinancings have helped to calm the markets but, at the same time, have reduced the need of many banks to use the markets to manage their liquidity. And, together with other exceptional monetary policy measures, the LTRO have flattened the yield curve and suppressed trading opportunities for the foreseeable future.

The impact of the LTRO may be reflected in the continued contraction in the market share of the euro (down to 57%). In contrast, the pound sterling and the US dollar continue to grow. However, the recent popularity of the yen appeared to have faded and its market share dropped back to more modest historic norms. UK collateral apparently continued to benefit from safe haven status.

Overall, the survey suggests continued risk aversion. One indication may be the growth in electronic repo transactions to a record market share of 33.1%. Most electronic trading is cleared across CCPs.

Paradoxically, the overall share of CCP-cleared repos (including those transacted directly with a counterparty or via a voice-broker, and then registered with a CCP post trade) retreated to 26.1% from 32.0% in December 2011. However, this figure understates the importance of clearing, as not all survey participants report the value of their cleared transactions. Of those firms that do, the average share of CCP-cleared repos was 33.6%, compared with 37.4%. The reduction in the share of CCP-cleared repos was unexpected but may reflect the growth of longer-term repos, which are likely to be more difficult to clear as they tend to be structured transactions.

The growth of electronic trading has come at the expense of voice-broking. It may be that we are seeing a return to the zero-sum trend that was evident before the crisis (which revived the fortunes of voice-brokers, who were able to help banks search out liquidity in difficult markets).

Greater risk aversion was also apparent in shifts in the mix of collateral. Although the share of government bonds in the pool of EU collateral fell back slightly (to 78.7%), this is no longer a straightforward indicator of risk aversion. The share of the most desirable Eurozone government

bond, bunds, contracted due to continued hoarding as a safe-haven asset, while the shares of Italian and Spanish government bonds contracted for exactly the opposite reason. The declines in the shares of Italian and Spanish collateral were especially marked in tri-party repo, which has proved a very sensitive indicator of risk appetite since 2007. These declines were compensated by greater use of German and French bonds, and of securities issued by official international financial institutions, but especially of pfandbrief, the share of which jumped from 11.4% to 17.4% of tri-party collateral.

Tougher financing conditions for Spanish banks, even across CCP-cleared electronic trading systems, seem to have boosted the overall share of short dates as the maturities offered to these banks have shortened. This has countered the decline in short dates that has been seen recently, as banks have anticipated stricter regulatory liquidity requirements. However, the share of long-term repos (one year or longer) continues to advance.

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/ASIFMA, 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, international financial institutions, 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 trading systems on the bond and repo markets. Following the financial crisis, he has been advising the ICMA's European Repo Council on regulatory initiatives and has produced a series of papers: in July 2010, 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'; in September 2011, 'Interconnectivity of central and commercial bank money in the clearing and settlement of the European repo market'; in February 2012, 'Haircuts and Initial Margins in the Repo Market'; and, in March 2012, 'Shadow Banking and Repo'.

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 Wednesday, June 13, 2012.

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 13, 2012, 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, June 13, 2012.* 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, June 14, 2012. You should include all *open repos and reverse repos* that have been rolled over from Wednesday, June 13, 2012, to a later date and all *forward-forward repos and reverse repos* that are still outstanding at close on Wednesday, June 13, 2012.

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, June 13, 2012, 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 "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, June 13, 2012, with a repurchase date on Thursday, June 14, 2012;
- overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, June 13, 2012.

(1.7.1.2) 2–7 days – this means:

- all contracts transacted prior to Wednesday, June 13, 2012, with a repurchase date on Friday, June 15, 2012, or any day thereafter up to and including Wednesday, June 20, 2012;
- contracts transacted on Wednesday, June 13, 2012, with an original repurchase date on Friday, June 15, 2012, or any day thereafter up to and including Wednesday, June 20, 2012 (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, June 13, 2012, with a repurchase date on Thursday, June 21, 2012, or any day thereafter up to and including Friday, July 13, 2012;
- contracts transacted on Wednesday, June 13, 2012, with an original repurchase date on Thursday, June 21, 2012, or any day thereafter up to and including Friday, July 13, 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, June 13, 2012, with a repurchase date on Monday, July 16, 2012, or any day thereafter up to and including Thursday, September 13, 2012;
- contracts transacted on Wednesday, June 13, 2012, with an original repurchase date on Monday, July 16, 2012, or any day thereafter up to and including Thursday, September 13, 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, June 13, 2012, with a repurchase date on Friday, September 14, 2012, or any day thereafter up to and including Thursday, December 13, 2012;
- contracts transacted on Wednesday, June 13, 2012, with an original repurchase date on Friday, September 14, 2012, or any day thereafter up to and including Thursday, December 13, 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, June 13, 2012, with a repurchase date on Friday, December 14, 2012, or any day thereafter up to and including Thursday, June 13, 2013;
- contracts transacted on Wednesday, June 13, 2012, with an original repurchase date on Friday, December 14, 2012, or any day thereafter up to and including Thursday, June 13, 2013 (irrespective of the purchase date, which will vary).

(1.7.1.7) More than 12 months – this means;

- all contracts transacted prior to Wednesday, June 13, 2012, with a repurchase date on Friday, June 14, 2013, or any day thereafter;
- contracts transacted on Wednesday, June 13, 2012, with an original repurchase date on or after Friday, June 14, 2013 (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, June 18, 2012, 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 Investment Bank (EIB)
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)

(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 (1.9.31). US collateral settled across Euroclear and Clearstream Luxembourg should be recorded in (1.9.29).

(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 or contact one of the following members of the ERC Steering Committee:

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

APPENDIX B: SURVEY PARTICIPANTS

The participants in previous repo surveys are listed below. Company names provided here are as supplied by those involved in producing the survey. Names of ICMA member firms may not, therefore, precisely reflect the manner in which they are published in ICMA's Members' Register.

List of respondents	Dec -02	Jun -03	Dec -03	Jun -04	Dec -04	Jun -05	Dec -05	Jun -06	Dec -06	Jun -07	Dec -07	Jun -08	Dec -08	Jun -09	Dec -09	Jun -10	Dec -10	Jun -11	Dec -11	Jun -12
ABN Amro Bank	x	x	x	x	x	x	x	x	x	x	x	x	x	x					x	x
Algemeine Hypothekenbank Rheinboden	x																			
Allied Irish Banks	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x
Alpha Bank	x	x																		
Arab Banking Corporation (Italy)		x																		
AXA Bank Europe	x	x	x	x	x	x	x	x	x	x	x			x		x	x		x	x
Banc Sabadell																				x
Banca Cassa di Risparmio di Asti		x																		
Banca d'Intermediazione Mobiliare (IMI)	x	x	x																	
Banca Monte dei Paschi di Siena	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banco Nazional del Lavoro	x	x	x	x	x	x	x	x												
Banco Pastor																				
Banco Popular Espanol	x		x	x																
Banco Santander	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banco Urquijo			x	x	x															
Bank Austria	x	x	x	x			x	x	x	x	x		x		x					
Bank fuer Arbeit und Wirtschaft und Oesterreichische Postsparkasse (Bawag)			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bank of America (merged to become Bank of America Merrill Lynch)								x	x	x										
"Bank of Cyprus, Greece"		x																		

List of respondents	Dec -02	Jun -03	Dec -03	Jun -04	Dec -04	Jun -05	Dec -05	Jun -06	Dec -06	Jun -07	Dec -07	Jun -08	Dec -08	Jun -09	Dec -09	Jun -10	Dec -10	Jun -11	Dec -11	Jun -12
Bank of Ireland	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		
Bank Przemyslowo-Handlowy SA		x	x	x	x	x		x	x	x	x		x			x		x	x	x
Landesbank Berlin	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banque de Luxembourg	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banque et Caisse d'Epargne de l'Etat	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Barclays Capital	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Bayerische Landesbank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BBVA	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
BHF-Bank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x
BHF-Bank International				x			x	x		x	x	x	x	x	x	x	x	x	x	x
BNP Paribas	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x
Bundesrepublik Deutschland Finanzagentur	x	x	x	x		x		x	x	x	x	x	x		x	x	x	x	x	x
Caixa Bank																			x	x
Caixa d'Estalvis de Catalunya		x				x				x	x	x	x	x	x		x	x	x	x
Caixa Geral de Depositos	x																			
Bankia SA (formerly Caja de Ahorros y Monte de Piedad de Madrid (Caja Madrid))	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
CA-CIB (formerly Calyon)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Capitalia				x	x	x	x	x												
NATIXIS Zweigniederlassung Deutschland	x	x	x	x	x	x		x		x	x	x	x							
Citigroup Global Markets Ltd	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Commerzbank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Canadian Imperial Bank of Commerce and Credit (CIBC)																x	x		x	x
Confederación Española de Cajas de Ahorros (CECA)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

List of respondents	Dec -02	Jun -03	Dec -03	Jun -04	Dec -04	Jun -05	Dec -05	Jun -06	Dec -06	Jun -07	Dec -07	Jun -08	Dec -08	Jun -09	Dec -09	Jun -10	Dec -10	Jun -11	Dec -11	Jun -12
Credito Valtellinese		x																		
Croatian National Bank		x																		
Credit Suisse Securities (Europe) Ltd	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Danske Bank						x	x			x	x	x	x	x	x	x	x	x	x	x
Daiwa Securities SMBC Europe	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Dekabank Deutsche Girozentrale	x					x	x													
Delta Lloyd Securities		x																		
DePfa ACS	x	x	x	x	x	x	x	x	x	x	x									
DePfa Bank	x	x	x	x	x	x														
Deutsche Bank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Deutsche Postbank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Belfius Bank (formerly Dexia)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Dexia BIL			x				x	x	x		x									
Dexia Kommunal Bank Deutschland						x	x	x	x	x	x	x	x	x	x	x		x		x
Dresdner Bank	x	x	x	x	x	x	x	x	x	x	x	x	x							
DZ Bank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
EFG Eurobank Ergasias	x			x		x	x	x	x	x	x	x	x	x	x		x	x	x	x
Egnatia Bank		x		x																
Erste Bank der Oesterreichischen Sparkassen	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Euroclear Bank	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Eurohypo			x		x	x	x	x	x											
Eurohypo Europäische Hypothekenbank									x	x	x	x	x	x	x	x	x	x	x	x
European Investment Bank				x	x															
Fortis Bank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
General Bank of Greece	x																			
Goldman Sachs	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Halifax Bank of Scotland	x	x	x	x	x	x	x	x												
HSBC											x		x	x	x	x	x	x	x	x

List of respondents	Dec -02	Jun -03	Dec -03	Jun -04	Dec -04	Jun -05	Dec -05	Jun -06	Dec -06	Jun -07	Dec -07	Jun -08	Dec -08	Jun -09	Dec -09	Jun -10	Dec -10	Jun -11	Dec -11	Jun -12
HSBC France	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
HSH Nordbank	x	x	x	x	x	x														
Bayerische Hypo-und-Vereinsbank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
IIB Bank		x																		
ING Bank		x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x
ING Belgium	x	x	x				x	x	x											
Intesa SanPaolo	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x
Jefferies International Ltd																			x	
JP Morgan	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
KBC	x	x	x	x	x	x	x	x	x	x	x	x		x		x	x			x
KfW				x	x	x		x	x	x	x	x						x	x	
Kingdom of Belgium Federal Public Service Debt Agency		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Landesbank Baden-Württemberg, Stuttgart	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Landesbank Hessen-Thüringen - Girozentrale (Helaba)		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x
Landesbank Rheinland Pfalz	x	x	x	x	x	x	x	x	x	x										
Landesbank Sachsen Girozentrale	x	x	x	x	x	x	x	x	x	x										
Lehman Brothers	x	x		x	x	x	x	x	x	x	x	x								
Macquarie Bank																		x	x	x
Bank of America Merrill Lynch	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x
Mitsubishi Securities International	x	x	x	x	x	x	x						x	x	x	x	x	x	x	x
Mizuho International	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Morgan Stanley	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Natexis Banques Populaires	x		x																	
National Bank of Greece	x	x	x	x	x	x	x	x	x	x			x	x						
Newedge																			x	
Nomura International	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Norddeutsche Landesbank Girozentrale	x	x	x	x	x	x	x	x	x	x	x	x	x							
Nordea Markets	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Norinchukin Bank			x	x	x	x	x	x	x	x				x	x	x	x	x	x	x

List of respondents	Dec -02	Jun -03	Dec -03	Jun -04	Dec -04	Jun -05	Dec -05	Jun -06	Dec -06	Jun -07	Dec -07	Jun -08	Dec -08	Jun -09	Dec -09	Jun -10	Dec -10	Jun -11	Dec -11	Jun -12
Nova Ljubljanska Banka d.d.				x						x	x			x	x		x	x	x	x
Omega Bank	x																			
Rabobank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Royal Bank of Canada																			x	
Royal Bank of Scotland	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x
RBI		x		x	x	x	x	x	x	x			x	x	x	x			x	
Sal. Oppenheim Jr.			x	x	x					x										
Sampo Bank	x					x	x		x											
SEB	x																			
Société Générale	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Toronto Dominion Bank		x	x																	
UBS	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Ulster Bank	x			x	x	x	x		x											
Unicredit/Bayerische Hypo-un-Vereinsbank Milano Branch	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Unicredito Italiano Bank (Ireland)		x																		
Vereins und Westbank	x	x	x	x																
Westdeutsche Landesbank Girozentrale			x	x			x	x	x	x	x	x		x				x		
Zagrabacka Banka	x				x		x	x		x										

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)	6,504	4,868	6,885	6,124	6,204	5,647
Of the amounts given in response to question (1) above:						
	Jun-08	**Jun-09**	**Jun-10**	**Jun-11**	**Dec-11**	**Jun-12**
1.1 How much was transacted:						
direct with counterparties						
• in **the same country** as you	17.3%	19.2%	14.4%	17.1%	16.3%	14.5%
• cross-border in (other) **eurozone countries**	14.0%	13.1%	12.4%	10.6%	10.6%	11.6%
• cross-border in non-eurozone countries	20.4%	19.8%	30.4%	24.5%	22.8%	22.5%
through voice-brokers						
• in the **same country** as you	9.9%	10.3%	10.9%	11.3%	11.9%	10.3%
• cross-border in (other) **eurozone countries**	7.5%	5.6%	4.7%	3.9%	4.0%	3.6%
• cross-border in **non-eurozone** countries	5.7%	3.5%	4.7%	4.3%	4.4%	4.4%
on **ATSs** with counterparties						
• in the same country as you	5.0%	4.6%	4.5%	4.7%	5.7%	6.7%
• cross-border in (other) **eurozone** countries	5.3%	6.6%	2.2%	3.5%	3.2%	3.9%
• cross border-border in **non-eurozone** countries	2.2%	2.8%	2.1%	2.7%	3.2%	3.6%
• anonymously through a central clearing counterparty	12.7%	14.5%	13.7%	17.4%	17.9%	18.8%
• total through a central clearing counterparty	24.4%	32.0%	22.4%	30.5%	32.0%	26.1%
1.2 How much of the cash is denominated in:						
• EUR	66.6%	64.2%	56.6%	63.5%	59.8%	57.0%
• GBP	14.5%	15.3%	9.3%	10.3%	11.5%	15.8%
• USD	12.7%	14.2%	28.3%	16.2%	17.1%	19.4%
• SEK, DKK"	2.2%	1.8%	2.0%	2.0%	2.0%	2.8%
• JPY	2.8%	3.1%	3.0%	6.4%	7.0%	3.6%
• CHF	0.2%	0.6%	0.3%	0.2%	1.5%	0.3%
• other currencies	0.9%	0.9%	0.6%	1.4%	1.0%	1.2%

	Jun-08	Jun-09	Jun-10	Jun-11	Dec-11	Jun-12
1.3 How much is cross-currency?	1.0%	1.3%	3.2%	5.4%	3.0%	1.5%
1.4 How much is:						
• classic repo	83.6%	84.9%	87.4%	85.1%	87.0%	84.0%
• documented sell/buy-backs	12.2%	11.2%	10.0%	13.0%	9.7%	13.3%
• undocumented sell/buy-backs	4.2%	3.9%	2.6%	1.9%	3.3%	2.7%
1.5 How much is:						
• fixed rate	84.8%	86.5%	83.8%	84.0%	84.2%	79.9%
• floating rate	10.4%	8.5%	10.1%	8.9%	9.7%	10.1%
• open	4.8%	5.0%	6.1%	7.1%	6.0%	10.0%
1.6 How much fixed and floating rate repo is (1.6.1) for value before (survey date) and has a remaining term to maturity of:						
• **1 day**	15.1%	21.3%	17.6%	16.2%	15.8%	17.5%
• **2-7days**	18.7%	19.3%	15.2%	16.2%	16.3%	15.1%
• more than **7 days** but no more than **1 month**	27.5%	23.2%	22.5%	18.4%	16.0%	17.3%
• more than **1 month** but no more than **3 months**	13.0%	13.4%	11.3%	12.7%	16.5%	12.8%
• more than **3 months** but no more than **6 months**	6.9%	4.9%	5.4%	4.4%	4.3%	5.2%
• more than **6 months**	8.4%	4.8%	3.5%	6.9%	2.9%	3.4%
• More than **12 months**	1.6%	2.3%	0.9%	8.7%	12.7%	13.3%
• **forward-forward repos**	3.9%	6.1%	18.2%	9.5%	9.6%	8.7%
• **open**	4.9%	4.6%	5.6%	6.9%	5.8%	6.6%
1.7 How much is tri-party repo:	10.1%	13.2%	7.8%	12.2%	11.4%	10.9%
• for **fixed terms to maturity**	92.1%	87.6%	92.2%	87.8%	87.7%	93.5%
• on an **open** basis	7.8%	11.1%	7.9%	11.2%	12.3%	6.5%
1.8 How much is against collateral issued in:						
Austria						
• by the central government	1.3%	1.0%	0.8%	0.8%	1.4%	1.1%
• by other issuers	0.3%	0.2%	0.2%	0.2%	0.1%	0.1%
Belgium						
• by the central government	3.3%	2.1%	1.7%	2.1%	3.2%	3.1%
• by other issuers	0.2%	0.0%	0.2%	0.2%	0.9%	0.7%
Denmark						
• by the central government	0.1%	0.1%	0.4%	0.4%	0.5%	0.6%
• by other issuers	0.2%	0.4%	0.7%	0.6%	0.4%	0.7%
Finland						
• by the central government	0.4%	0.2%	0.2%	0.4%	0.6%	0.5%
• by other issuers	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%

	Jun-08	Jun-09	Jun-10	Jun-11	Dec-11	Jun-12
France						
• by the central government	9.4%	7.7%	6.7%	7.2%	8.1%	7.3%
• by other issuers	1.5%	1.9%	2.0%	2.6%	1.6%	1.3%
Germany						
• by the central government	19.9%	19.3%	17.0%	16.6%	15.4%	14.2%
• pfandbrief	1.4%	1.5%	1.7%	1.2%	1.0%	1.0%
• by other issuers	4.2%	3.9%	2.6%	4.6%	4.4%	5.5%
Greece						
• by the central government	2.5%	2.3%	0.4%	0.3%	0.2%	0.1%
• by other issuers	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Ireland						
• by the central government	0.2%	0.4%	0.7%	0.1%	0.2%	0.1%
• by other issuers	0.5%	0.3%	0.4%	0.2%	0.1%	0.1%
Italy						
• by the central government	11.8%	10.8%	9.0%	9.2%	6.4%	7.8%
• by other issuers	0.7%	0.4%	0.6%	0.8%	0.6%	0.5%
Luxembourg						
• by the central government	0.0%	0.2%	0.1%	0.0%	0.1%	0.3%
• by other issuers	0.7%	0.4%	0.3%	0.4%	0.6%	0.8%
Netherlands						
• by the central government	2.0%	1.8%	1.4%	1.5%	2.9%	2.6%
• by other issuers	0.6%	0.4%	0.4%	0.7%	0.9%	0.9%
Portugal						
• by the central government	1.0%	0.8%	0.8%	0.4%	0.3%	0.1%
• by other issuers	0.1%	0.1%	0.1%	1.3%	0.0%	0.0%
Spain						
• by the central government	3.4%	3.4%	3.1%	5.4%	5.3%	4.3%
• by other issuers	1.6%	1.2%	0.9%	1.7%	1.4%	0.7%
Sweden						
• by the central government	0.6%	0.4%	0.7%	0.9%	0.7%	0.9%
• by other issuers	0.3%	0.4%	0.5%	0.5%	0.7%	0.7%
UK						
• by the central government	11.4%	12.8%	6.3%	7.2%	10.6%	12.8%
• by other issuers	3.5%	3.3%	3.6%	3.8%	1.9%	2.2%
US but settled across EOC/CS	0.0%	2.6%	3.1%	2.4%	3.1%	3.3%
other countries						
Bulgaria						
• by the central government	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cyprus						
• 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%
Czech Republic						
• 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%

	Jun-08	Jun-09	Jun-10	Jun-11	Dec-11	Jun-12
Estonia						
• by the central government	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
• by other issuers	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary						
• by the central government	0.0%	0.0%	0.1%	0.3%	0.2%	0.0%
• 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	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland						
• by the central government	0.0%	0.2%	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	0.0%	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%
Slovenia						
• 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%
• by official international financial institutions					0.8%	0.8%
Japan	2.0%	2.1%	2.0%	4.2%	5.2%	2.7%
other OECD	7.3%	9.5%	22.8%	11.9%	10.4%	11.1%
non-OECD EMEA	0.6%	0.5%	0.5%	0.5%	0.8%	0.9%
non-OECD Asian & Pacific	0.4%	0.2%	0.2%	0.3%	0.6%	0.9%
non-OECD Latin America	0.5%	0.4%	0.2%	0.4%	0.7%	0.4%
equity	1.1%	0.7%	1.0%	0.9%	0.0%	0.2%
collateral of unknown origin or type	1.3%	5.8%	6.5%	6.8%	7.0%	7.8%
Q2 What is the total value of securities loaned and borrowed *by your repo desk*:to/from counterparties						
• in the **same country** as you						
• in fixed income	46.7%	48.3%	42.2%	41.3%	39.8%	42.8%
• in equity	3.2%	2.0%	2.1%	1.1%	1.8%	1.5%
cross-border in (other) **eurozone** countries						
• in fixed income	20.0%	20.7%	17.0%	19.6%	20.2%	19.9%
• in equity	3.8%	2.7%	3.0%	1.6%	0.3%	0.3%

	Jun-08	Jun-09	Jun-10	Jun-11	Dec-11	Jun-12
cross-border in **non-eurozone** countries						
• in fixed income	22.5%	25.8%	33.5%	34.5%	35.8%	35.1%
• in equity	3.8%	0.6%	2.3%	1.9%	2.1%	0.4%
for which the term to maturity is						
• fixed	70.3%	80.8%	66.2%	71.3%	70.1%	67.5%
• open	29.7%	19.2%	33.8%	28.7%	29.9%	32.5%

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 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.