International Capital Market Association

European repo market survey

Number 27 - conducted June 2014

Published September 2014

This Survey has been compiled by Richard Comotto, Senior Visiting Fellow, ICMA Centre at Reading University.

International Capital Market Association
Talacker 29
P.O. Box
CH-8022 Zurich
www.icmagroup.org

CONTENTS

EXECUTIVE SUMMARY

In June 2014, the European Repo Council (ERC) of the International Capital Market Association (ICMA) conducted the 27th 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 11, 2014. Replies were received from 65 offices of 61 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 65 institutions who participated in the latest survey was **EUR 5,782 billion,** compared with the EUR 5,499 billion in December 2013 and EUR 6,076 billion in June 2013. Using a constant sample of banks, it is estimated that the market grew over the last six months by 3.3% but shrank year-on-year by 4.6% because of the year-end contraction in activity in December 2013. The growth in repo activity revealed by the latest survey would seem to confirm that the sharp decline in December was a seasonal aberration and that the market has resumed the steady revival seen since 2012 on the back of improving confidence in the recovery of eurozone.

The expansion of the European repo market would appear to be at odds with reports of several US banks and European banks with large US operations contracting their repo activity during the first half of the year. It is, however, important to distinguish between the two markets in terms of where they are in the cycle of recovery from the global financial crisis and the degree of regulatory pressure on banks to reduce their reliance on short-term money market funding, which itself reflects structural differences in bank funding.

Trading analysis

The share of electronic trading recovered to reach 32.8%, reflecting the general switch back to the market funding. The outstanding value of electronic trading grew by 7.8% to a new record high of EUR 1,143 billion.

The growth in the share of electronic trading was exactly matched by a relapse in the share of voice-brokers, whose market share appears to have resumed its secular decline.

Geographical analysis

The share of anonymous (ie CCP-cleared) electronic trading in

the survey fell back slightly. However, the post-trade reporting of direct and voice-brokered trades to CCPs increased to 8.0%.

Domestic repo business in the survey also contracted, touching 25.1% and continuing its long-term decline, which has largely been to the benefit of anonymous electronic trading, which is now larger than domestic business for the first time.

Clearing and settlement analysis

The share of tri-party repo continued to improve, reaching 10.2%. However, the outstanding value of tri-party repo reported directly by the major tri-party agents in Europe fell back by 1.5% to EUR 1,324 billion from the record level touched in December 2013.

Cash currency analysis

The share of the euro dropped back slightly to 65.7%. The smaller share of the euro in the survey was largely due to growth in the share of the Japanese yen, which expanded to 5.4%. The share of the yen has periodically spiked since the start of the global financial crisis, reflecting the safe haven status of Japanese government bonds, reaction to the monetary policy regime shift in June 2013 and arbitrage opportunities.

Collateral analysis

The share of all government bonds within the pool of EU-originated collateral reported in the survey retreated to 79.3% from 81.4%. This reflected the reduction in the share of most core eurozone government bonds, particularly German government bonds. The reduction in the share of these bonds seems to be connected to a continuation of the scarcity seen in some of these markets that was reported in the last survey and has become more evident with some GC rates once again becoming negative.

In contrast to the contraction of core eurozone bond collateral, there was continued expansion in the use of Italian and Spanish collateral. Portuguese and Greek collateral also increased share.

In electronic trading directly reported by the ATS, Italian collateral has the largest share, reflecting the fact that Italian banks find it easier to access the repo market across a CCP-cleared (ie anonymous) electronic platform.

Maturity analysis

Short-dated repos (one month or less to maturity) increased to 60.3% from 57.7%. This has been attributed to a decision by investors that, with the euro yield curve so flat, the additional return for lending for longer terms is not worth the extra risk.

Open repo continued to lose market share and dropped to the levels seen between the crisis and June 2011. The contraction may reflect less use of structures such as evergreen repos, which are designed to lengthen the duration of borrowing in order to meet regulatory liquidity ratios. Banks may have less need of these structures now. The fall in open repo was largely matched by another jump in the share of floating-rate repo.

Forward-start transactions rebounded to 10.4%, likely reflecting bond futures activity rather than money market expectations.

Concentration analysis

There was a slight increase in market concentration.

CHAPTER 1: THE SURVEY

On June 11, 2014, the European Repo Council (ERC) of the International Capital Markets Association (ICMA) conducted the 27th 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 11, 2014.

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 65 offices of 61 financial groups. This is two less respondents than in December 2013 (for which the number was 67 rather than the 68 reported previously). Four institutions which participated in the previous survey dropped out of the latest but two re-joined.

51 of the latest participants were based across 14 European countries, as well as in Australia (1), North America (8) and Japan (5). 49 participants were based across 13 of the 28 member states of the EU (there were no institutions in the survey from Finland and Sweden, and none from a former Accession State). 48 participants were based in 11 of the 18 countries of 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 the ICMA's 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 10, 2014.

Any financial institution wishing to participate in the next survey will be able to 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 (2010-2014) are set out in Appendix C. The full results of all previous surveys can be found at www.icmagroup.org.

Total repo business (Q1)

The total value, at close of business on June 11, 2014, of repos and reverse repos outstanding on the books of the 65 institutions which participated in the latest survey was **EUR 5,781.5** billion. This is the highest level since 2011. It is much higher than the crisis trough of EUR 4,633 billion in December 2008 but much lower than the pre-crisis peak of EUR 6,775 billion in June 2007.

Of the sample of 65 institutions, 38 were net borrowers, compared to 36 out of 67 in the last survey and the 34 out of 65 in June 2013.

Table 2.1 – Total repo business from 2001 to 2014

survey	total	repo	reverse repo
2014 June	5,782	48.6%	51.4%
2013 December	5,499	49.2%	50.8%
2013 June	6,076	49.8%	50.2%
2012 December	5,611	49.1%	51.9%
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	6,979	53.5%	46.5%
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. However, a recent study (see the report of the December 2012 survey) suggested that the problem of double-counting was not very significant.

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 exceptional liquidity facilities provided by the European Central Bank and Bank of England.

In order to gauge the year-on-year growth of the European repo market (or at least 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.

Out of the 65 institutions in the present survey, 61 have participated in all of the last three surveys. Overall, the gross repo and reverse repo positions of those 61 institutions grew by 3.3% over the six months from the December 2013 survey (smaller than the change in the headline number of 5.1%), compared to a contraction of 8.2% in the first six months of 2013. The year-on-year change for the constant survey sample was -4.6%.

The growth in repo activity revealed by the latest survey would seem to confirm that the sharp decline in the December 2013 survey was a seasonal aberration from a gradual recovery trend in the market which started in 2012. Improving confidence has facilitated the re-entry of many banks to the market, in particular, Italian banks.

The repo books of 28 of the latest sample of 65 institutions contracted. This is much lower than in the last survey, when 39 repo books out of 67 contracted.

The expansion of the European repo market suggested by the latest survey would appear to be at odds with reports of

several US banks and European banks with large US operations contracting their repo activity during the first half of the year. It is, however, important to distinguish between the two markets. US banks have tended to be more reliant on repo funding than their European counterparts, in part reflecting the greater importance of the bond market in the US, and have consequently been under greater regulatory pressure to reduce their reliance on short-term repo. In particular, large banks in the US have been hit by the imposition of the Supplementary Leverage Ratio. This does not risk-weight exposures. On a risk-weighted basis, repo is an attractive asset but on an unweighted basis is a low-margin product that weighs heavily on the balance sheet. Moreover, in the US, the repo market has been functioning more normally than in Europe, where banks have been forced to rely for longer on central bank liquidity. So the recent growth of the European repo market represents a recovery and return to some form of normality, as evidenced by the declining liquidity surplus at the ECB, rather than an increase in market leverage that might concern regulators.

Trading analysis (Q1.1)

Table 2.2 – Trading analysis

	June 2014		December 2013		June 2013	
	users	**share**	**users**	**share**	**users**	**share**
direct	53.2%	65	53.2%	67	52.3%	65
of which tri-party	*10.2%*	*44*	*9.9%*	*41*	*9.6%*	*37*
voice-brokers	14.0%	55	15.1%	52	14.6%	53
ATS	32.8%	51	31.7%	52	33.1%	53

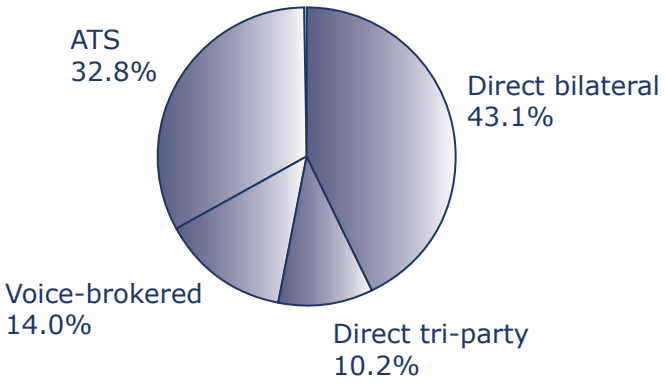
The share of electronic trading recovered to reach 32.8% from 31.7%, reflecting the general switch back to the market after the year-end retreat to the ECB, which offered a fixed-rate full-allotment facility in order to mitigate possible end-of-year liquidity shortages. Data provided directly by the principal automatic repo trading systems (ATS) operating in Europe – BrokerTec, Eurex Repo and MTS – showed that the outstanding value of all electronic trading (ie not just by the institutions in the survey sample) grew by 7.8% to a new record high of EUR 1,143 billion from EUR 936.7 billion, more than reversing the decline in December 2013.

The growth in the share of electronic trading was exactly matched by a relapse in the share of voice-brokers to 14.0% from 15.1%. The market share of voice-brokers appears to have resumed its secular decline. Direct business (ie by telephone and electronic messaging) was stable at 53.2%.

Table 2.3 – Numbers of participants reporting particular types of business

	Jun-14	Dec-13	Jun-13	Dec-12	Jun-12	Dec-11
ATS	51	52	53	52	45	47
anonymous ATS	44	47	45	44	37	39
voice-brokers	55	52	53	58	51	54
tri-party repos	44	41	37	41	34	39
total	65	67	65	71	62	64

Figure 2.1 – Counterparty analysis



Geographical analysis (Q1.1)

Table 2.4 – Geographical analysis

	June 2014		December 2012		June 2013	
	share	users	share	users	share	users
domestic	25.1%		26.1%		30.7%	
cross-border to eurozone	19.1%		18.0%		18.9%	
cross-border to non-eurozone	31.7%		30.9%		29.3%	
anonymous	24.1%	44	25.0%	47	21.1%	45

The share of anonymous (ie CCP-cleared) electronic trading in the survey fell back slightly to 24.1% from 25.0%. This may simply reflect the shortening of tenors. However, the post-trade reporting of direct and voice-brokered trades to CCPs increased to 8.0% from 7.5%, primarily driven by Spanish banks, who tend to trade directly or via voice-brokers and report post trade to CCPs.

Domestic repo business in the survey also contracted, touching 25.1% from 26.1%, continuing its long-term decline (from almost 50% of the survey in 2001) largely to the benefit of anonymous electronic trading, which is now larger than domestic business for the first time.

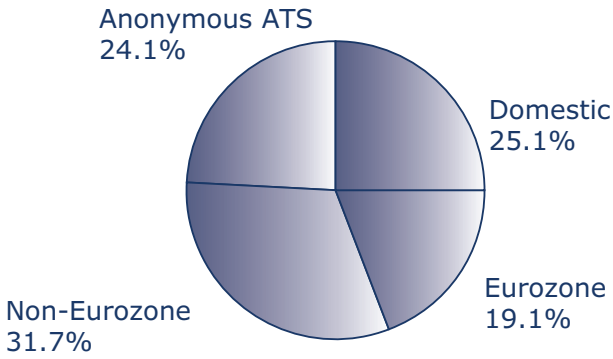
Data provided directly by tri-party repo agents also saw domestic business retreat further, to 38.6% from 42.3%, while the recent expansion in the share of cross-border business between eurozone and non-eurozone counterparties continued, reaching 43.7% from 40.0% (continuing a trend that has seen this segment increase its share from 25.0% in June 2011). However, tri-party continues to have a larger domestic share than ATS or the survey (although the domestic share in the latter may be understated by domestic business that is conducted anonymously).

The share of domestic business also continued to shrink in the directly-reported business on ATSs, to 29.0% from 31.3%.

Table 2.5 – Geographical comparisons in June 2014

	main survey	ATS	tri-party	WMBA
domestic	25.1%	29.0%	38.6%	44.6%
cross-border	50.8%	71.0%	61.4%	55.4%
anonymous	24.1%			

Figure 2.2 – Geographical analysis



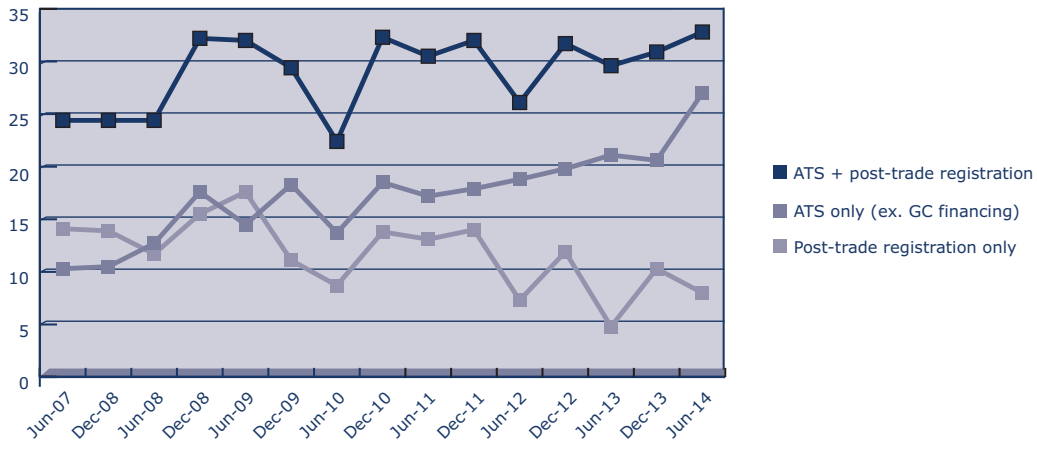
Clearing and settlement analysis (Q1.2 and Q1.8)

The share of tri-party repo continued to improve, reaching 10.2% from 9.9%. However, the outstanding value of tri-party repo reported directly by the major tri-party agents in Europe (ie all tri-party business, not just by the institutions in the survey sample) fell back by 1.5% to EUR 1,324 billion from the record EUR 1,344 billion touched in December 2013.

The sample of institutions in the survey were unsurprisingly net borrowers from the tri-party market segment, which funded 15.3% of their repo and took 5.5% of their reverse repo.

The share of directly-reported tri-party repo accounted for by GC financing (mainly Eurex Repo's Euro GC Pooling facility) recovered to 16.8% (some EUR 222 billion) from 14.3%, confirming a general return to market funding. GC financing accounts for 5.8% of reported outstanding repo business, up from 4.4% in the last survey.

Figure 2.3 – Evolution of business cleared across CCP



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

Table 2.6 – Cash currency analysis

	June 2014	December 2013	June 2013
EUR	65.7%	66.3%	64.8%
GBP	10.5%	10.2%	10.6%
USD	14.5%	14.8%	15.2%
DKK, SEK	2.4%	2.5%	2.5%
JPY	5.4%	4.9%	4.9%
CHF	0.1%	0.1%	0.2%
etc	1.3%	1.3%	1.8%
cross-currency	1.8%	0.9%	3.1%

The share of the euro dropped back slightly to 65.7% from 66.3%. However, it increased its shares of both electronic and tri-party business. In directly-reported ATS business, it now accounts for a record 96.8%.

The smaller share of the euro in the survey was largely due to growth in the share of the Japanese yen, which expanded to 5.4% from 4.9%. The share of the yen has periodically spiked since the start of the global financial crisis. In 2011, it increased to 7.0% by December. This was seen a reflection of the safe haven status of Japanese government bonds. Another surge in the yen in 2013 may have been connected to trading which followed the monetary policy regime shift in June of that year. However, some yen repo appears to have been driven by arbitrage opportunities. Possibly significantly, the share of the yen in the business reported by voice-brokers has increased since 2011 and now stands at 4.9% of their directly-reported activity.

In directly-reported tri-party business, there was a jump in cross-currency business to 29.3% from 17.7%.

Figure 2.4 – Currency analysis

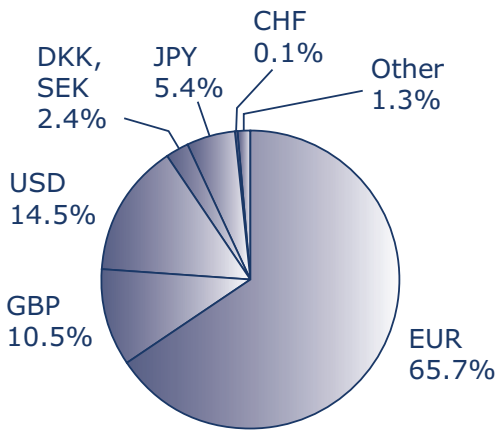


Table 2.7 – Currency comparison in June 2014

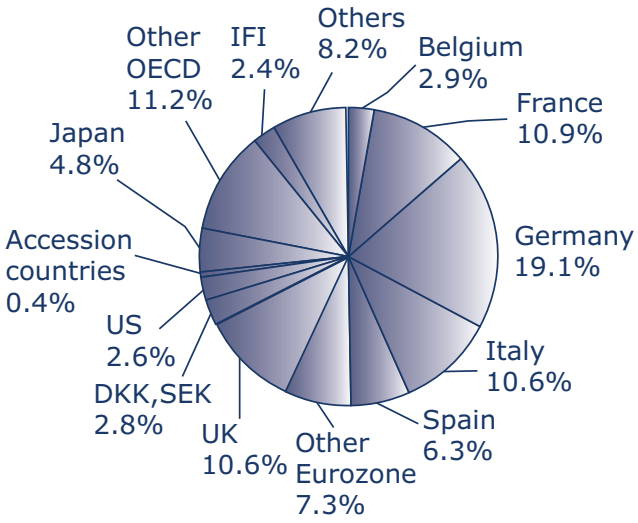
	main survey	ATS	tri-party	WMBA
EUR	65.7%	96.8%	76.7%	51.7%
GBP	10.5%	2.3%	3.4%	30.6%
USD	14.5%	0.5%	17.9%	11.2%
DKK, SEK	2.4%	0.0%	0.6%	0.8%
JPY	5.4%	0.0%	0.6%	4.9%
CHF	0.1%	0.1%	0.3%	0.0%
etc	1.3%	0.3%	0.3%	0.8%
cross-currency	1.8%			

Collateral analysis (Q1.9)

Table 2.8 – Collateral analysis

	June 2014	December 2013	June 2013
Germany	19.1%	21.9%	21.9%
Italy	10.6%	9.2%	8.2%
France	10.9%	11.5%	11.7%
Belgium	2.9%	3.0%	3.4%
Spain	6.3%	5.2%	4.6%
other eurozone	7.3%	7.2%	8.1%
UK	10.6%	11.4%	12.0%
DKK, SEK	2.8%	2.8%	2.9%
international financial institutions	2.4%	2.7%	2.2%
US	2.6%	2.8%	2.6%
Accession countries	0.4%	0.4%	0.3%
Japan	4.8%	4.6%	4.2%
other OECD	11.2%	10.3%	12.1%
other fixed income	8.0%	6.6%	5.6%
equity	0.1%	0.3%	0.3%

Figure 2.5 – Collateral analysis (main survey)



The share of government bonds within the pool of EU-originated collateral reported in the survey retreated to 79.3% from 81.4%. This reflected the reduction in the share of most core eurozone government bonds (26.7% from 30.8% for Austria, France, German and Netherlands), particularly German government bonds (14.2% from 17.3%), and UK gilts (9.1% from 9.8%). The reduction in the share of these bonds seems to be connected to a continuation of the scarcity seen in some of these markets that was reported in the last survey and has become more evident with some GC rates once again becoming negative.

In contrast to the contraction of core eurozone bond collateral, there was continued expansion in the use of Italian collateral, which reached 10.6% from 9.2% (of which, government bonds increased to 9.9% from 8.7%) and Spanish collateral, which accounted for 6.3% from 5.2% (of which, government bonds grew to 5.2% from 4.6%). Portuguese and Greek collateral also increased share.

Japanese collateral, which is most likely to have been mostly government bonds, increased to 4.8%.

In electronic trading directly reported by the ATS, the share of Italian collateral reached 39.7% from 38.7%. Italian collateral now has the largest share of electronic trading (German collateral accounted for 23.9%). The share of Italian collateral in ATS trading reflects the fact that, notwithstanding improved confidence, Italian banks still find it easier to access the repo market across a CCP-cleared (and anonymous) electronic platform.

Spanish collateral accounts for 6.2% of directly-reported electronic trading, up from 5.1%, but this is well below the 10.6% seen in December 2011, when some Spanish banks were dependent on CCP-cleared anonymous electronic

trading to preserve access to market liquidity.

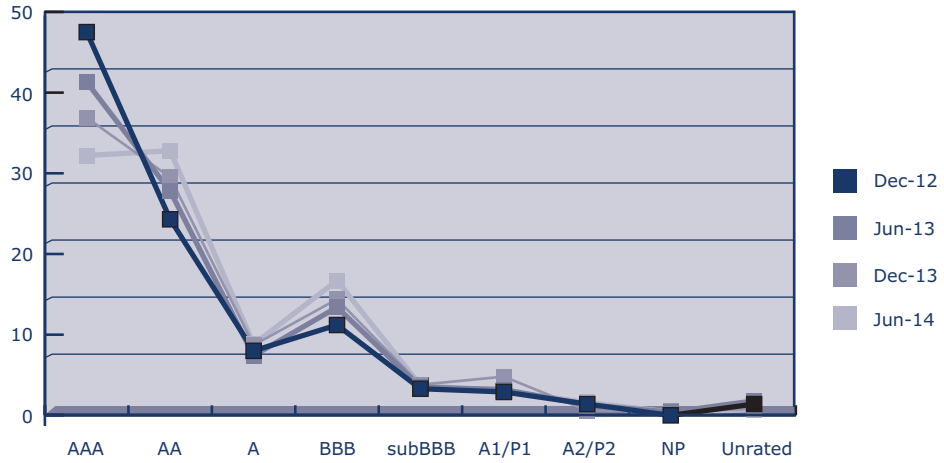
The share of UK gilts in directly-reported electronic business is historically low at 3.0%.

In directly-reported tri-party business, there were continued significant increases in French collateral (to 20.0% from 17.2%). UK government securities expanded to 2.5% from 1.9%) and Spanish collateral to 4.9% from 2.8%. German government securities fell to 6.2% from 9.0% but Italian collateral also contracted, to 6.3% from 6.9%.

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

	June 2014	December 2013	June 2013
AAA	32.3%	36.9%	41.3%
AA	32.8%	29.5%	27.8%
A	8.8%	8.7%	7.4%
BBB	16.7%	14.4%	13.4%
below BBB-	3.7%	3.8%	3.5%
A1/P1	3.0%	4.8%	3.2%
A2/P2	1.6%	0.6%	1.3%
Non-Prime	0.4%	0.5%	0.4%
unrated	0.7%	0.8%	1.8%

Figure 2.6 – Collateral analysis (tri-party agents) by credit rating



According to data reported directly from the tri-party agents, there was yet another sharp fall in AAA-rated collateral, to 32.3% from 36.9%, following further downgrades of banks during the first half of 2014.

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

	June 2014	Dec 2013	June 2013
government securities	39.2%	38.5%	38.2%
public agencies / sub-national governments	8.2%	7.6%	10.4%
supranational agencies	4.9%	4.8%	4.9%
corporate bonds	14.0%	14.9%	13.9%
covered bonds	8.1%	7.3%	7.6%
residential mortgage-backed	1.4%	1.0%	0.9%
commercial mortgage-backed	0.1%	0.2%	0.1%
other asset-backed	0.9%	0.6%	0.4%
CDO, CLN, CLO, etc	0.3%	0.4%	0.4%
convertible bonds	0.1%	0.1%	0.2%
equity	22.2%	23.8%	21.0%
other	0.7%	0.7%	2.1%

Figure 2.7 – Historic collateral analysis (tri-party agents) by credit rating

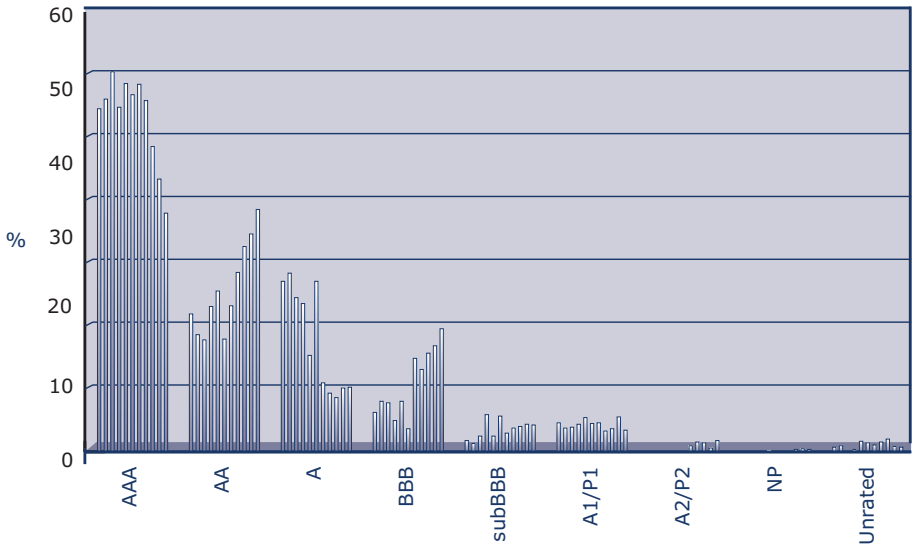


Figure 2.8 – Collateral analysis (tri-party agents) by type of asset

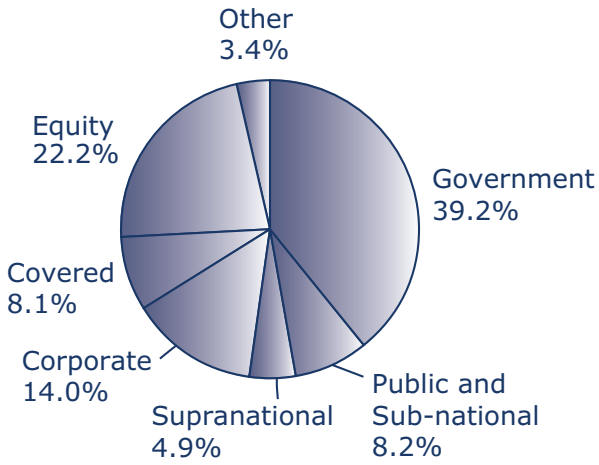
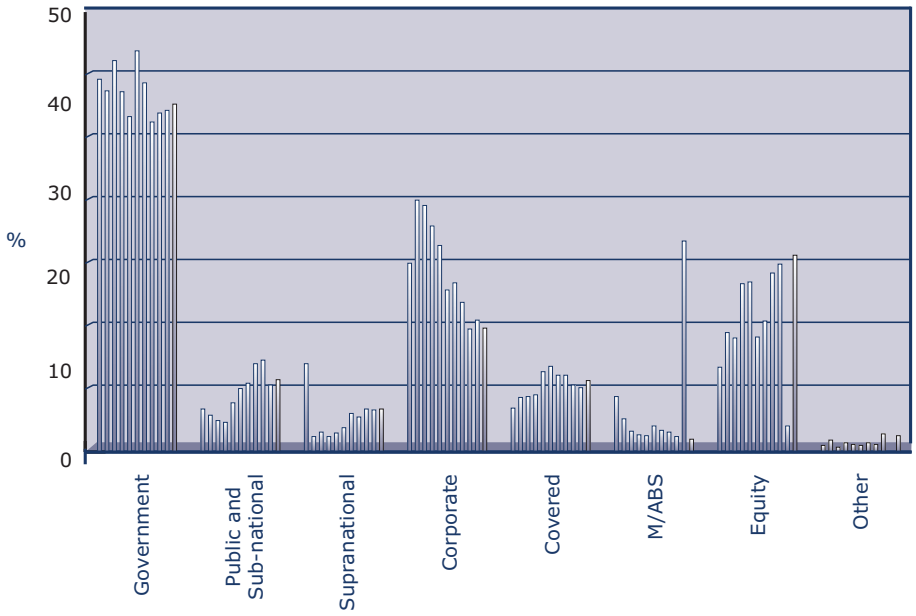


Figure 2.9 – Historic collateral analysis (tri-party agents) by type of asset



Haircuts on collateral in tri-party repo did not change significantly, except for convertible bonds (up again, to 17.0% from 13.1%). However, this is a small pool of collateral and changes in haircuts may reflect changes in the specific issues being offered as collateral within each general collateral category. Most other haircuts narrowed slightly.

Table 2.11 – Tri-party repo collateral haircuts analysed by type of asset

(weighted average haircuts)	June 2014	Dec 2013	June 2013
government securities	2.5%	2.7%	2.6%
public agencies / sub-national governments	2.3%	2.3%	2.2%
supranational agencies	2.5%	2.5%	2.7%
corporate bonds (financial)	5.9%	5.8%	4.8%
corporate bonds (non-financial)		6.3%	6.3%
covered bonds	2.9%	3.1%	2.8%
residential mortgage-backed	10.3%	10.9%	8.6%
commercial mortgage-backed	8.1%	8.2%	9.5%
other asset-backed	7.0%	8.0%	7.4%
CDO, CLN, CLO, etc	6.3%	7.1%	7.6%
convertible bonds	17.0%	13.1%	4.4%
equity	6.4%	6.0%	5.8%
other	6.7%	6.4%	3.3%

Contract analysis (Q1.5)

Figure 2.10 – Contract analysis

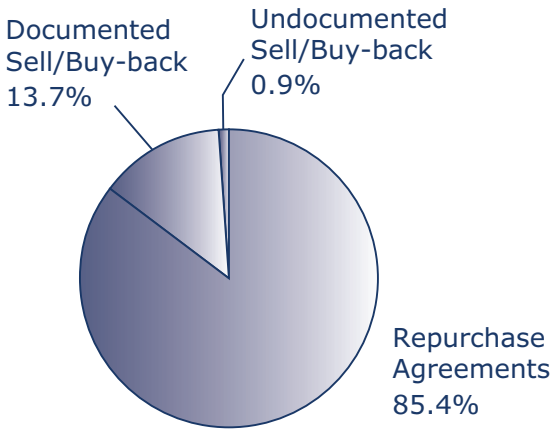


Table 2.12 – Contract comparison in December 2013

	main survey	ATS	tri-party
repurchase agreements	85.4%	63.9%	100.0%
documented sell/buy-backs	13.7%	36.1%	0.0%
undocumented sell/buy-backs	0.9%	0.0%	0.0%

Repo rate analysis (Q1.6)

Open repo continued to lose market share and dropped sharply to 7.2% from 12.6%, closer to the levels seen between the crisis and June 2011. The contraction may reflect less use of structures such as evergreen repos, which are designed to lengthen the duration of borrowing in order to meet regulatory liquidity ratios. Banks may have less need of these structures now. The fall in open repo was largely matched by another jump in the share of floating-rate repo, to 13.2% from 8.6%.

Figure 2.11 – Repo rate analysis

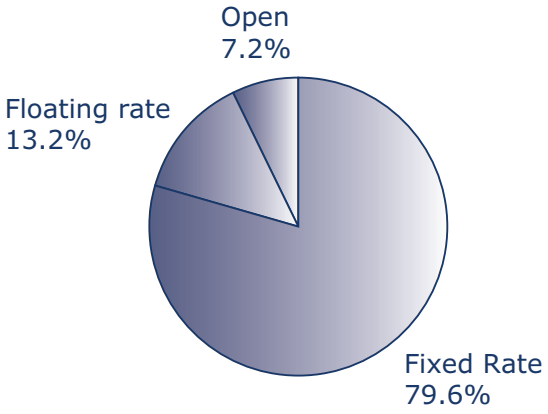


Table 2.13 – Repo rate comparison in June 2014

	main survey	ATS	tri-party
fixed rate	79.6%	86.9%	47.0%
floating rate	13.2%	13.1%	0.1%
open	7.2%	0.0%	52.8%

Maturity analysis (Q1.7)

Table 2.14 – Maturity analysis

	June 2014	Dec 2013	June 2013
1 day	20.9%	19.9%	18.2%
2 days to 1 week	16.8%	15.8%	15.2%
1 week to 1 month	22.6%	22.0%	23.8%
>1 month to 3 months	11.7%	16.6%	10.7%
>3 months to 6 months	4.1%	4.6%	4.1%
>6 months to 12 months	3.6%	3.1%	4.5%
>12 months	2.8%	3.1%	4.1%
forward-start	10.4%	8.8%	12.1%
open	7.2%	6.2%	7.3%

Figure 2.12 – Maturity analysis: short dates, longer terms & forwards (main survey)

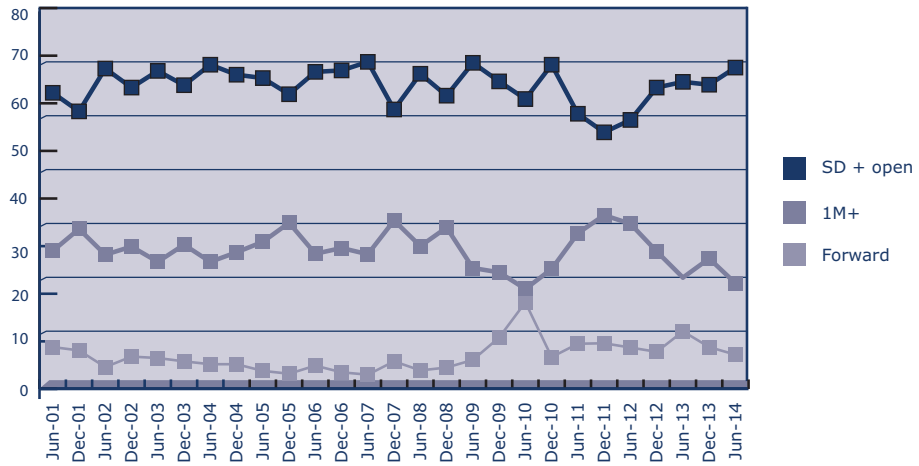


Figure 2.13 – Maturity analysis: non-forward terms (main survey)

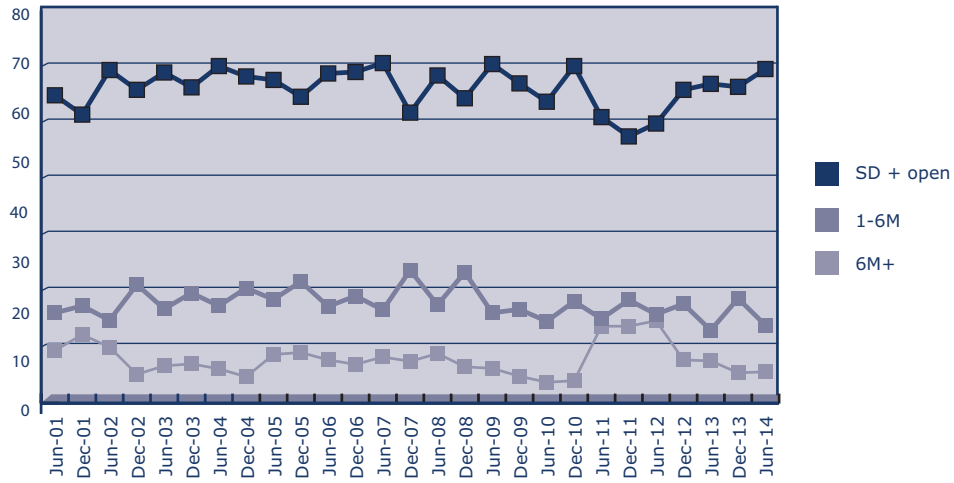
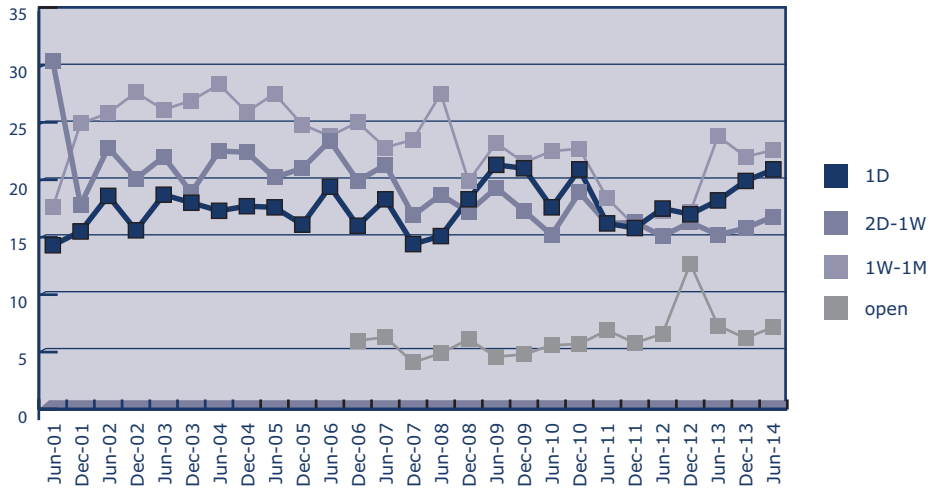


Figure 2.14 – Maturity analysis: breakdown of short dates plus open (main survey)



Short-dated repos (one month or less to maturity) increased to 60.3% from 57.7%. Contracts with 1 to 3 months remaining to maturity fell back sharply to 11.7% from 16.6%, having rebounded vigorously from 10.7% in December, in part, due to longer-term borrowing to cover the end of the year. There was a similar pattern in electronic and tri-party repo business too. The shortening of the average term to maturity in the repo market is attributed to a decision by investors that, with the euro yield curve so flat, the additional return to

lending for longer terms is not worth the extra risk.

Forward-start transactions rebounded to 10.4% from 8.8% but remain below the three-year high of 12.1% reached in June 2013. This is likely to have reflected activity in bond futures rather than money market expectations.

Figure 2.15 – Maturity analysis (ATS)

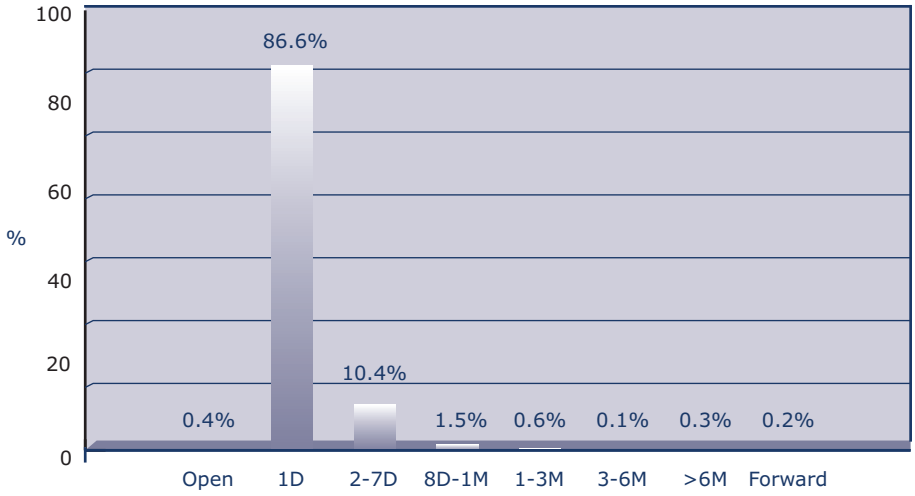


Figure 2.16 – Maturity analysis (tri-party agents)

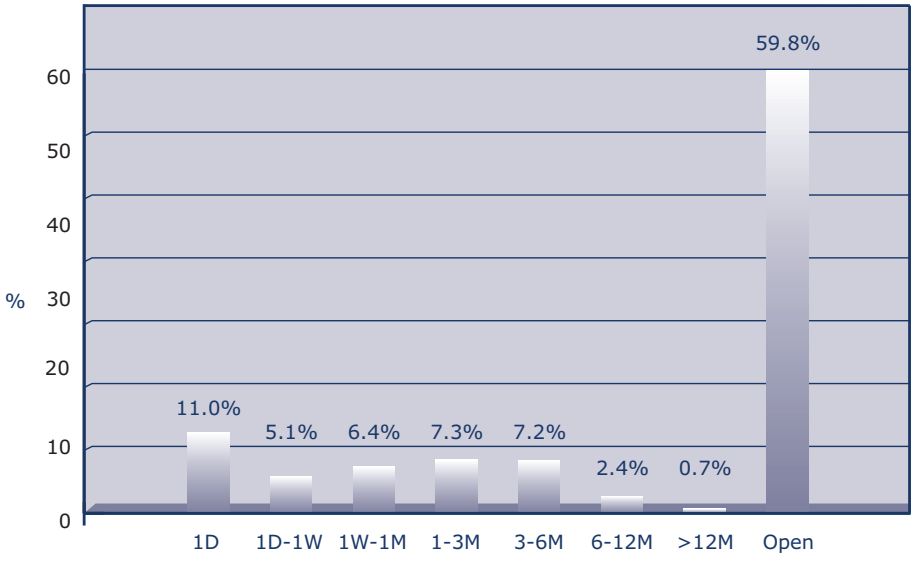


Figure 2.17 – Maturity analysis (voice-brokers)

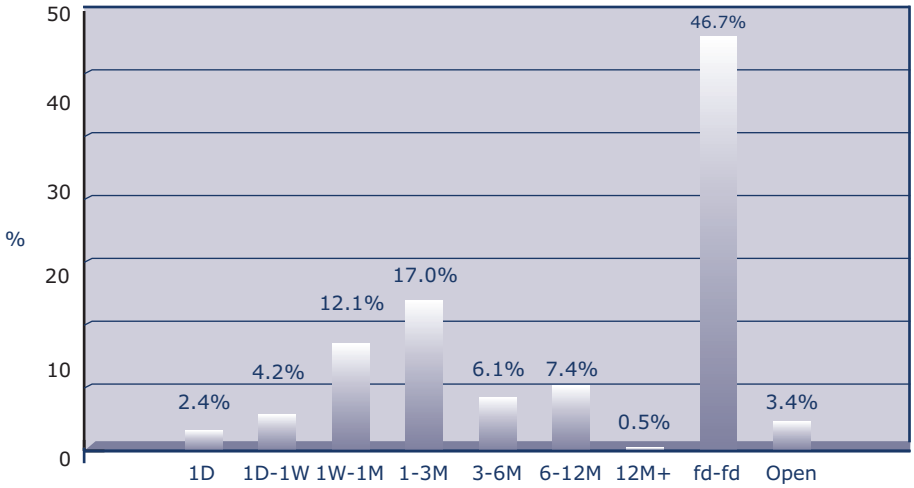


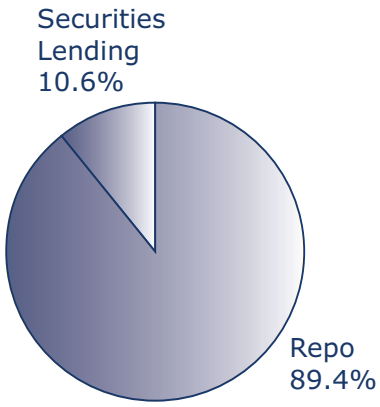
Table 12.15 – Maturity comparison in June 2014

	main survey	ATS	tri-party	WMBA
1 day	20.9%	86.6%	11.0%	2.4%
2 days to 1 week	16.8%	10.4%	5.1%	4.2%
1 week to 1 month	22.6%	1.5%	6.4%	12.1%
>1 month to 3 months	11.7%	0.6%	7.3%	17.0%
>3 months to 6 months	4.1%	0.1%	7.2%	6.1%
>6 months to 12 months	3.6%	0.3%	2.4%	7.4%
>12 months	2.8%	0.2%	0.7%	0.5%
forward-start	10.4%	0.4%		46.7%
open	7.2%		59.8%	3.4%

Product analysis (Q2)

The share of securities lending conducted on repo desks recovered to 10.6% from a record low of 9.9% in December 2013.

Figure 2.18 – Product analysis



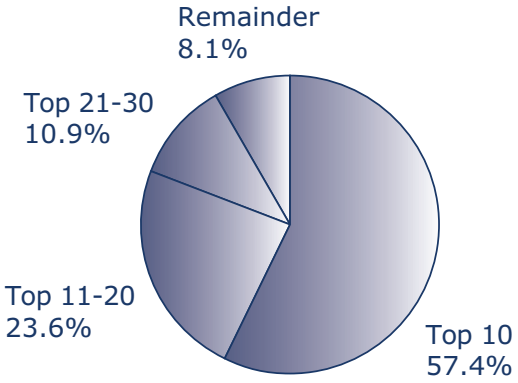
Concentration analysis

The degree of concentration increased slightly

Table 2.16 – Concentration analysis

	June 2014	December 2013	June 2013
top 10	57.4%	56.0%	55.4%
top 20	81.0%	80.9%	79.7%
top 30	91.9%	91.2%	91.5%
other	8.1%	8.8%	8.5%

Figure 2.19 – 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.* This index shows market concentration unchanged since 2013.

Table 2.17 – 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
December 2012	0.054	71
June 2013	0.046	65
December 2013	0.046	67
June 2014	0.046	65

*The Herfindahl Index is the sum of the squares of market shares divided by the square of the sum of market shares. The higher the index, the lower the degree of competition. If the index is higher, the more a single institution has a dominant market share and/or the more insignificant the market shares of all the other survey participants. A market in which several institutions have very large market shares can therefore have a relatively low index.

CHAPTER 3: CONCLUSION

The survey suggests that the European repo market has recovered from the largely seasonal contraction at the end of last year. On a like-for-like basis, the repo activity measured by the survey grew by 3.3% over the six months from the December 2013 survey (smaller than the change in the headline number of 5.1%), compared to a contraction of 8.2% in the first six months of 2013. The year-on-year change for the constant survey sample was –4.6%.

This growth would seem to confirm that the European repo market has resumed the steady recovery trend seen since 2012 on the back of improving confidence in the recovery of eurozone, which has facilitated the continued re-entry of many banks to the market, in particular, Italian banks. This was reflected in the continued expansion in the use of Italian and Spanish collateral, as well as growth in Portuguese and Greek collateral. Italian collateral has the largest share of electronic trading, reflecting the fact that Italian banks find it easier to access the repo market across a CCP-cleared (and anonymous) electronic platform.

Increased use of collateral issued in the eurozone periphery was offset by reductions in the shares of most core eurozone government bonds, particularly German government bonds. This seems to be connected to continuing scarcity of high quality assets, which has been more evident in some GC rates once again becoming negative.

The expansion of the European repo market would appear to be at odds with reports of several US banks and European banks with large US operations contracting their repo activity during the first half of the year. It is, however, important to distinguish between the two markets in terms of where they are in the cycle of recovery from the global financial crisis and the degree of regulatory pressure to reduce banks' reliance on short-term money market funding, which itself reflects structural differences in bank funding. The recent growth of the European repo market represents a recovery and return to some form of normality, as evidenced by the declining liquidity surplus at the ECB, rather than an increase in market leverage that might concern regulators.

Normally, recovery in the European repo market is associated with a rise in the share of the euro. However, the share of the euro declined slightly in the latest survey. This was largely due to growth in the share of the Japanese yen, albeit from a relatively low base. The share of the yen has periodically spiked since the start of the global financial crisis. Reasons offered have included the safe haven status of Japanese government bonds, trading activity

which followed the monetary policy regime shift in June of 2013 and arbitrage opportunities.

The share of electronic trading recovered, reflecting the general switch back to the market after the year-end retreat to the ECB. Data provided directly by the principal automatic repo trading systems (ATS) operating in Europe showed that the outstanding value of all electronic trading grew by 7.8% to a new record high of EUR 1,143 billion. The growth in the share of electronic trading was exactly matched by a relapse in the share of voice-brokers, whose market appears to have resumed its secular decline.

Tri-party repo may also have benefited from the return to market funding. Its share increased to 10.2% from 9.9%. However, the outstanding value of tri-party repo reported directly by the major tri-party agents in Europe fell back to EUR 1,324 billion from the record EUR 1,344 billion touched in December 2013.

Open repo continued to lose market share. Its contraction may reflect less use of structures such as evergreen repos, which are designed to lengthen the duration of borrowing in order to meet regulatory liquidity ratios. Banks may have less need of these structures now. The fall in open repo was largely matched by another jump in the share of floating-rate repo.

Short-dated repos (one month or less to maturity) increased to 60.3% from 57.7%. Contracts with 1 to 3 months remaining to maturity fell back sharply, having grown vigorously in December, in part, due to longer-term borrowing to cover the end of the year. The shortening of the average term to maturity in the repo market is attributed to a decision by investors that, with the euro yield curve so flat, the additional return to lending for longer terms is not worth the extra risk.

Forward-start transactions rebounded. But this is likely to have reflected activity in bond futures rather than yield curve expectations.

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. This includes advising technical assistance missions by the IMF and World Bank to rebuild repo markets in emerging economies.

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'; in March 2012, 'Shadow Banking and Repo'; and 'Collateral damage: the impact of the Financial Transaction Tax on the European repo market' in April 2013. He writes on repo market topics on the ICMA Centre blog at icmacentre.wordpress.com/ and is author of the ICMA's 'Repo FAQs' and the ICMA/ERC 'Guide to Best Practice in the European Repo Market'.

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 11, 2014

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 11, 2014, 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 11, 2014*. 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 12, 2014. You should include all *open repos and reverse repos* that have been rolled over from Wednesday, June 11, 2014, to a later date and all *forward-forward repos and reverse repos* that are still outstanding at close on Wednesday, June 11, 2014.

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 11, 2014, 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) and (1.1.3.5). GC financing systems in (1.1.3.4) are those ATS that are connected to a CCP and a tri-party repo service. Examples include Eurex Euro GC Pooling and LCH-Clearnet's €GC Plus basket traded on Brokertec and MTS. They do not include GC basket trading on ATS. This activity may be cleared across a CCP but does not involve a tri-party service, and should be recorded in (1.1.3.5).

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.

1.5 "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 11, 2014, with a repurchase date on Thursday, June 12, 2014;
- overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, June 11, 2014.

(1.7.1.2) 2–7 days – this means:

- all contracts transacted prior to Wednesday, June 11, 2014, with a repurchase date on Friday, June 13, 2014, or any day thereafter up to and including Wednesday, June 18, 2014;
- contracts transacted on Wednesday, June 11, 2014, with an original repurchase date on Friday, June 13, 2014, or any day thereafter up to and including Wednesday, June 18, 2014 (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 11, 2014, with a repurchase date on Thursday, June 19, 2014, or any day thereafter up to and including Friday, July 11, 2014;
- contracts transacted on Wednesday, June 11, 2014, with an original repurchase date on Thursday, June 19, 2014, or any day thereafter up to and including Friday, July 11, 2014 (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 11, 2014, with a repurchase date on Monday, July 14, 2014, or any day thereafter up to and including Thursday, September 11, 2014;

- contracts transacted on Wednesday, June 11, 2014, with an original repurchase date on Monday, July 14, 2014, or any day thereafter up to and including Thursday, September 11, 2014 (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 11, 2014, with a repurchase date on Friday, September 12, 2014, or any day thereafter up to and including Thursday, December 11, 2014;
- contracts transacted on Wednesday, June 11, 2014, with an original repurchase date on Friday, September 12, 2014, or any day thereafter up to and including Thursday, December 11, 2014 (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 11, 2014, with a repurchase date on Friday, December 12, 2014, or any day thereafter up to and including Thursday, June 11, 2015;
- contracts transacted on Wednesday, June 11, 2014, with an original repurchase date on Friday, December 12, 2014, or any day thereafter up to and including Thursday, June 11, 2015 (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 11, 2014, with a repurchase date on Friday, June 12, 2015, or any day thereafter;
- contracts transacted on Wednesday, June 11, 2014, with an original repurchase date on or after Friday, June 12, 2015 (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 16, 2014, or later. There is therefore an overlap with corporate/next 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). Open repos should, in theory, be floating-rate, but in practice are often re-fixed irregularly, so are being treated separately from floating-rate repo (1.6.2).

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 (1.9.35).

(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, Israel, 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-originated collateral settled across Euroclear and Clearstream Luxembourg should be recorded in (1.9.29).

(1.9.32) "Other non-OECD European, Middle Eastern & African countries" should exclude any EU countries, specifically, Bulgaria (1.9.16), Cyprus (1.9.17), Latvia (1.9.21), Lithuania (1.9.22), Malta (1.9.23) and Romania (1.9.25).

(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:

German speaker
Eduard Cia, HVB,
eduard.cia@unicreditgroup.de
+49 89 378 14172

Italian speaker
Stefano Bellani, JP Morgan,
stefano.bellani@jpmorgan.com,
+44 20 7779 2399

English speaker
Edward Mcaleer, Morgan Stanley,
edward.mcaleer@morganstanley.com,
+44 20 7677 9595

French speaker
Godfried de Vidts, ICAP,
godfried.devidts@icap.com,
+44 20 7000 5803

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 -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	Dec -12	Jun -13	Dec -13	Jun -14
ABN Amro Bank	x	x	x	x	x	x	x	x	x	x					x	x	x	x	x	x
Allied Irish Banks	x	x	x	x	x	x	x	x	x	x	x	x				x	x	x	x	x
AXA Bank Europe	x	x	x	x	x	x	x			x		x	x		x	x	x	x	x	x
Banc Sabadell																x	x	x	x	x
Banca d'Intermediazione Mobiliare (IMI)																			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 BPI																			x	x
Banco Nazional del Lavoro	x	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																			
Bank Austria			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	x
Bank of America (merged to become Bank of America Merrill Lynch)				x	x	x														
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			
Landesbank Berlin	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
BHF-Bank	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	

List of respondents	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	Dec -12	Jun -13	Dec -13	Jun -14
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	x	x	x	x
Caixa d'Estalvis de Catalunya		x				x	x	x	x	x	x		x	x	x	x	x	x	x	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	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																
NATIXIS Zweigniederlassung Deutschland	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	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
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	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	x	x	x
DePfa ACS	x	x	x	x	x	x	x													
DePfa Bank	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													
Dexia Kommunal Bank Deutschland		x	x	x	x	x	x	x	x	x	x	x		x		x	x			

List of respondents	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	Dec -12	Jun -13	Dec -13	Jun -14
Dresdner Bank	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	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	x
Eurohypo	x	x	x	x	x															
Hypothekenbank Frankfurt International (formerly Eurohypo Europäische Hypothekenbank)					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
European Investment Bank	x																			
Fortis Bank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	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																
HSBC							x		x	x	x									
HSBC Athens												x	x	x	x	x	x	x	x	x
HSBC France	x	x	x	x	x	x	x	x	x	x	x									
HSH Nordbank	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
ING Bank	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
ING Belgium			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		x	x	x	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	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	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	x
Landesbank Rheinland Pfalz	x	x	x	x	x	x														

List of respondents	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	Dec -12	Jun -13	Dec -13	Jun -14
Landesbank Sachsen Girozentrale	x	x	x	x	x	x														
Lehman Brothers	x	x	x	x	x	x	x	x												
Macquarie Bank														x	x	x	x	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
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
National Bank of Greece	x	x	x	x	x	x			x	x										
Newedge															x		x	x		
Nomura International	x	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
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	x	x
Nova Ljubljanska Banka d.d.						x	x			x	x		x	x	x	x	x	x	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		x			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			
Sal. Oppenheim Jr.	x					x														
Sampo Bank		x	x		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															
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
Westdeutsche Landesbank Girozentrale			x	x	x	x	x	x		x				x						
Zagrabacka Banka	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)**	6,885	6,124	5,647	6,076	5,499	5,782
Of the amounts given in response to question (1) above:						
	Jun-10	**Jun-11**	**Jun-12**	**Jun-13**	**Dec-13**	**Jun-14**
1.1 How much was transacted:						
direct with counterparties						
• in the same country as you	14.4%	17.1%	14.5%	16.8%	15.5%	14.4%
• cross-border in (other) **eurozone countries**	12.4%	10.6%	11.6%	12.1%	12.5%	12.4%
• cross-border in **non-eurozone countries**	30.4%	24.5%	22.5%	23.4%	25.2%	26.5%
through **voice-brokers**						
• in the same country as you	10.9%	11.3%	10.3%	7.4%	7.5%	6.9%
• cross-border in (other) **eurozone countries**	4.7%	3.9%	3.6%	4.1%	3.5%	3.5%
• cross-border in **non-eurozone countries**	4.7%	4.3%	4.4%	3.1%	4.1%	3.6%
on **ATSs** with counterparties						
• in the same country as you	4.5%	4.7%	6.7%	6.5%	3.1%	3.9%
• cross-border in (other) **eurozone countries**	2.2%	3.5%	3.9%	2.6%	2.0%	3.3%
• cross border-border in **non-eurozone countries**	2.1%	2.7%	3.6%	2.8%	1.6%	1.6%
• anonymously across a GC financing system					4.2%	5.8%
• anonymously across a central clering counterparty byt not GC financing	13.7%	17.4%	18.8%	21.1%	20.6%	18.3%
• total through a central clearing counterparty	22.4%	30.5%	35.0%	25.9%	30.9%	32.1%
1.2 How much of the cash is denominated in:						
• EUR	56.6%	63.5%	57.0%	64.8%	66.3%	65.7%
• GBP	9.3%	10.3%	15.8%	10.6%	10.2%	10.5%
• USD	28.3%	16.2%	19.4%	15.2%	14.8%	14.5%
• SEK, DKK	2.0%	2.0%	2.8%	2.5%	2.5%	2.4%
• JPY	3.0%	6.4%	3.6%	4.9%	4.9%	5.4%

	Jun-10	Jun-11	Jun-12	Jun-13	Dec-13	Jun-14
• CHF	0.3%	0.2%	0.3%	0.2%	0.1%	0.1%
• other currencies	0.6%	1.4%	1.2%	1.8%	1.3%	1.3%
1.3 How much is cross-currency?	3.2%	5.4%	1.5%	3.1%	0.9%	1.8%
1.4 How much is:						
• classic repo	87.4%	85.1%	84.0%	87.6%	86.0%	85.4%
• documented sell/buy-backs	10.0%	13.0%	13.3%	10.7%	12.4%	13.7%
• undocumented sell/buy-backs	2.6%	1.9%	2.7%	1.8%	1.6%	0.9%
1.5 How much is:						
• fixed rate	83.8%	84.0%	79.9%	77.4%	78.8%	79.6%
• floating rate	10.1%	8.9%	10.1%	6.6%	8.6%	13.2%
• open	6.1%	7.1%	10.0%	13.5%	12.6%	7.2%
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**	17.6%	16.2%	17.5%	18.2%	19.9%	20.9%
• **2-7 days**	15.2%	16.2%	15.1%	15.2%	15.8%	16.8%
• more than **7 days** but no more than **1 month**	22.5%	18.4%	17.3%	23.8%	22.0%	22.6%
• more than **1 month** but no more than **3 months**	11.3%	12.7%	12.8%	10.7%	16.6%	11.7%
• more than **3 months** but no more than **6 months**	5.4%	4.4%	5.2%	4.1%	4.6%	4.1%
• more than **6 months**	3.5%	6.9%	3.4%	4.5%	3.1%	3.6%
• More than **12 months**	0.9%	8.7%	13.3%	4.1%	3.1%	2.8%
• **forward-forward repos**	18.2%	9.5%	8.7%	12.1%	8.8%	10.4%
• **open**	5.6%	6.9%	6.6%	7.3%	6.2%	7.2%
1.7 How much is tri-party repo:	7.8%	12.2%	11.5%	9.6%	9.9%	10.2%
• for **fixed terms to maturity**	92.2%	87.8%	91.6%	94.8%	95.1%	93.4%
• on an **open** basis	7.9%	11.2%	6.3%	5.2%	4.7%	6.6%
1.8 How much is against collateral issued in:						
Austria						
• by the central government	0.8%	0.8%	1.1%	1.0%	1.0%	0.9%
• by other issuers	0.2%	0.2%	0.1%	0.1%	0.1%	0.1%
Belgium						
• by the central government	1.7%	2.1%	3.1%	2.7%	2.2%	2.2%
• by other issuers	0.2%	0.2%	0.7%	0.7%	0.7%	0.7%
Denmark						
• by the central government	0.4%	0.4%	0.6%	0.5%	0.5%	0.5%
• by other issuers	0.7%	0.6%	0.7%	0.8%	0.7%	0.8%
Finland						
• by the central government	0.2%	0.4%	0.5%	0.5%	0.5%	0.6%
• by other issuers	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
France						
by the central government	6.7%	7.2%	7.3%	10.3%	10.0%	9.5%

	Jun-10	Jun-11	Jun-12	Jun-13	Dec-13	Jun-14
• by other issuers	2.0%	2.6%	1.3%	1.4%	1.4%	1.3%
Germany						
• by the central government	17.0%	16.6%	14.2%	16.6%	17.3%	14.2%
• pfandbrief	1.7%	1.2%	1.0%	0.7%	0.4%	0.5%
• by other issuers	2.6%	4.6%	5.5%	4.6%	4.2%	4.4%
Greece						
• by the central government	0.4%	0.3%	0.1%	0.0%	0.0%	0.1%
• by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Ireland						
• by the central government	0.7%	0.1%	0.1%	0.4%	0.5%	0.4%
• by other issuers	0.4%	0.2%	0.1%	0.7%	0.2%	0.2%
Italy						
• by the central government	9.0%	9.2%	7.8%	7.8%	8.7%	9.9%
• by other issuers	0.6%	0.8%	0.5%	0.4%	0.5%	0.7%
Luxembourg						
• by the central government	0.1%	0.0%	0.3%	0.1%	0.1%	0.1%
• by other issuers	0.3%	0.4%	0.8%	1.3%	1.2%	1.5%
Netherlands						
• by the central government	1.4%	1.5%	2.6%	2.7%	2.5%	2.1%
• by other issuers	0.4%	0.7%	0.9%	0.9%	0.7%	0.7%
Portugal						
• by the central government	0.8%	0.4%	0.1%	0.2%	0.2%	0.4%
• by other issuers	0.1%	1.3%	0.0%	0.0%	0.0%	0.1%
• by the central government	3.1%	5.4%	4.3%	4.0%	4.6%	5.2%
• by other issuers	0.9%	1.7%	0.7%	0.6%	0.6%	1.1%
Sweden						
• by the central government	0.7%	0.9%	0.9%	0.8%	0.9%	0.7%
• by other issuers	0.5%	0.5%	0.7%	0.7%	0.8%	0.8%
UK						
• by the central government	6.3%	7.2%	12.8%	10.5%	9.8%	9.1%
• by other issuers	3.6%	3.8%	2.2%	1.5%	1.6%	1.5%
US but settled across EOC/CS	3.1%	2.4%	3.3%	2.6%	2.8%	2.6%
other countries						
Bulgaria						
• by the central government	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%
• 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%
Estonia						
• 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-10	Jun-11	Jun-12	Jun-13	Dec-13	Jun-14
Hungary						
• by the central government	0.1%	0.3%	0.0%	0.1%	0.1%	0.1%
• 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%	0.2%	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%	0.1%	0.0%
• by official international financial institutions			0.8%	2.2%	2.7%	2.4%
Japan	2.0%	4.2%	2.7%	4.2%	4.6%	4.8%
• other OECD	22.8%	11.9%	11.1%	12.1%	10.3%	11.2%
• non-OECD EMEA	0.5%	0.5%	0.9%	0.6%	0.6%	0.5%
• non-OECD Asian & Pacific	0.2%	0.3%	0.9%	0.3%	0.4%	0.5%
• on-OECD Latin America	0.2%	0.4%	0.4%	0.5%	0.5%	0.5%
equity	1.0%	0.9%	0.2%	0.3%	0.3%	0.1%
collateral of unknown origin or type	6.5%	6.8%	7.8%	4.3%	2.5%	2.7%
collateral in tri-party which cannot be attributed to a country or issuer					2.6%	4.0%
Q2 What is the total value of securities loaned and borrowed by *your repo desk:* to/from counterparties						
• in the **same country** as you	42.2%	41.3%	42.8%	37.3%	38.8%	41.6%
	2.1%	1.1%	1.5%	2.8%	1.1%	0.5%
• cross-border in (other) **eurozone** countries	17.0%	19.6%	19.9%	20.9%	23.8%	20.8%
	3.0%	1.6%	0.3%	0.9%	2.3%	1.3%

	Jun-10	Jun-11	Jun-12	Jun-13	Dec-13	Jun-14
• cross-border in **non-eurozone** countries	33.5%	34.5%	35.1%	36.8%	32.3%	35.2%
	2.3%	1.9%	0.4%	1.3%	1.8%	0.5%
for which the term to maturity is						
• **fixed**	66.2%	71.3%	67.5%	50.7%	54.7%	60.5%
• **open**	33.8%	28.7%	32.5%	49.3%	45.3%	39.5%

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 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.