

International Capital Market Association

European **Repo** Market Survey

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Executive Summary

In June 2016, the European Repo and Collateral Council (ERCC) of the International Capital Market Association (ICMA) conducted the 31st 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 and breakdown of their repo contracts that were still outstanding at close of business on June 8, 2016. Replies were received from a record 67 offices of 63 financial groups, mainly banks. Returns were also made directly by the principal automatic repo trading systems (ATS) and tri-party repo agents in Europe, as well as by the London-based Wholesale Market Brokers' Association (WMBA). For the first time, participants were asked to break out the shares of (non-Japanese) Asian currencies and collateral, as well as the share of Eurobonds.

Total repo business

The total value of the repo contracts outstanding on the books of the 67 institutions who participated in the latest survey was **EUR 5,379 billion**, compared with the EUR 5,608 billion in December 2015. This represents a fall in the 'headline' number of the survey of 4.1%. However, using a constant sample of banks to eliminate the effect of changes in the survey sample, it is estimated that the market actually grew over the previous six months by 0.5%, although the year-on-year change was -1.6%. The latest decline in activity largely reflected the reduced number of participants. The growth in the constant sample of participants was driven by G-SIFIs with significant investment banking franchises.

Trading analysis

The uptrend in the share of directly-negotiated repo observed since 2012 seems to have resumed. Directly-negotiated repo was the main net absorber of funding, while tri-party repo was the net provider. However, the share of triparty repo fell back to 10.0%. The absolute level of business reported by the principal automatic repo trading systems (ATS) operating in Europe continued to decline.

Geographical analysis

Domestic business has returned to its trend decline, largely due to a continued increase in anonymous (ie CCP-cleared) trading, which now accounts 98.0% of all electronic trading. Cross-border business with markets outside the eurozone was a net source of funding for other segments, particularly for domestic markets.

Clearing and settlement analysis

GC financing continued to contract but increased its importance as a source of net funding to the survey sample.

Post-trade registration of transactions negotiated directly or via voice-brokers maintained its share of the survey.

Cash currency analysis

There was a modest rise in the share of the US dollar in the survey, largely at the expense of the euro and sterling.

For the first time, the survey sought to measure the share of repo business in Europe in Asian currencies other than the Japanese yen. The share of these Asian currencies was 0.5%.

Collateral analysis

The share of all government bonds within the pool of EU-originated fixed-income collateral reported in the survey surged to 85.8% from 78.6%. The increased use of government bonds has been attributed to the forthcoming reform of money market mutual fund regulations in the US in October, which is encouraging some prime funds to transform themselves into government securities funds.

In the latest survey, participants were asked to separately report collateral issued in Asia outside Japan and Eurobonds. The former accounted for 1.2% of the survey. The latter accounted for 2.6%.

Contract analysis

The share of repurchase transactions (classic repo) continued to fall, largely due to a growth in undocumented sell/buy-backs.

Maturity analysis

The share of short-dated transactions rose, in a partly seasonal adjustment, largely at the expense of transactions with one to three months remaining to maturity. Open repos also expanded. Forward repos continue to account for a sizable share of the survey.

Concentration analysis

There was an increase in the concentration of business, perhaps because of the driving role of some G-SIFIs. However, concentration continues to remain low.

Product analysis

The share of securities lending conducted on repo desks fell back sharply.

Chapter 1: The Survey

On June 8, 2016, the European Repo and Collateral Council (ERCC) of the International Capital Market Association (ICMA) conducted the 31st 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 ERCC Steering Committee ("ERCC 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 8, 2016. This was, of course, before the Brexit vote in the UK.

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).

For the first time, the survey sought to measure the size of the interface between European and Asian repo markets, by asking participants to report separately the repo business they conducted in non-Japanese Asian currencies and against collateral issued in Asia outside Japan.

The survey also asked participants to measure for the first time the share of Eurobonds.

1.2 The response to the survey

The latest survey was completed by 67 offices of 63 financial groups. This was five fewer more respondents than in the December 2015 survey. Six institutions dropped out of the survey and a new one joined.

52 of the participants were headquartered across 18 European countries, including Norway and Switzerland, as well as in Australia (1), China (1), Japan (3) and North America (10). 25 respondents were foreign affiliates, most of which were located in the UK. 49 participants were based across 12 of the 28 member states of the EU (there were no institutions in the survey from Finland and Sweden, and only one from a former Accession State). 45 participants were based across 12 of the 19 countries of the eurozone.

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 7, 2016.

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 (2012-2015) are set out in Appendix C. The full results of all previous surveys can be found at www.icmagroup.org.

Total repo business (Q1)

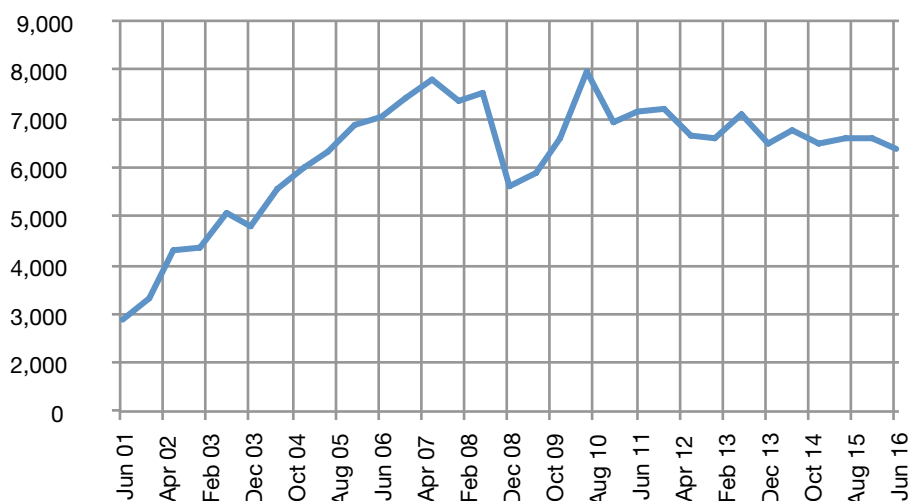
The total value, at close of business on June 8, 2016, of repos and reverse repos outstanding on the books of the 67 institutions which participated in the latest survey was **EUR 5,378.5 billion**, a fall in the headline number of 4.1% since December.

Table 2.1 – Total repo business from 2001 to 2016

survey	total	repo	reverse repo
2016 June	5,379	48.0%	52.0%
2015 December	5,608	47.5%	52.5%
2015 June	5,612	48.0%	52.0%
2014 December	5,500	48.8%	51.2%
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%

As illustrated by Figure 2.1, the latest survey total 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.

Figure 2.1 – Total survey size (EUR billion)



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 some 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 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, which continue to be very substantial.

The 'headline' total of the survey decreased by 4.1% compared to December 2015 and by 4.2% year-on-year. However, in order to gauge the 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 headline numbers. Some of the changes will 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 by a sub-sample of institutions which have participated continuously in several surveys.

Out of the 67 institutions in the present survey, 61 have participated in all of the last three surveys. Overall, the aggregate value of outstanding repos and reverse repos transacted by those 61 institutions grew by 0.5% between the June 2016 and December 2015 surveys but shrank by 1.6% year-on-year. The change between June and December for the 65 institutions which participated in at least the last two surveys was +0.4%. These changes mean that the overall decrease in the headline number was due to the reduction in the number of survey participants.

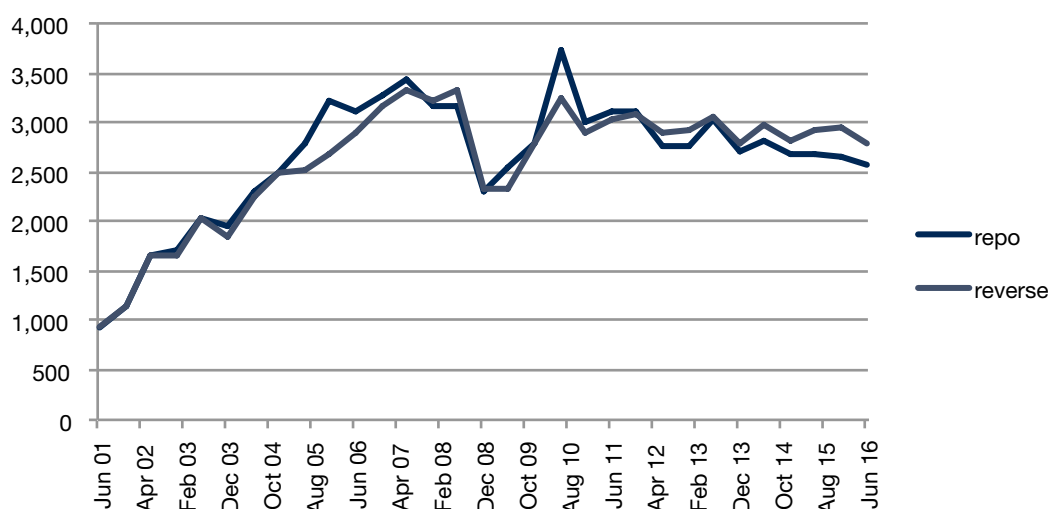
The increase in the business of those institutions who had participated in the last three surveys is reflected in the fact that the repo books of only 30 of the 67 institutions in the latest survey contracted or did not change (compared to 31 out of 72 repo books in the December 2015 survey). The unweighted mean percentage change jumped to +8.1% compared to -1.0% in December, but the median percentage change moderated to +0.2% from +1.7% in December. The distribution of percentages changes therefore switched from a negative to a positive skew. So, while proportionately more banks decreased the size of their repo books, those that increased their repo books did so by larger percentages. In other words, fewer institutions increased their repo books but they did so by more than those who decreased.

Those repo books which increased the most were predominantly those of G-SIFIs, particularly G-SIFIs with significant investment banking franchises. If changes are listed from the largest increase to the largest decrease, the G-SIFIs which expanded their books are clustered tightly at the extreme, whereas the G-SIFIs which contracted their books

are fairly evenly spread along the bottom half of the list. The impact of G-SIFIs on the latest survey is the reverse of the behavior seen in the December survey, when nine of the G-SIFI accounted for reductions totaling EUR 285 billion of the gross decrease in repo books, while the other 15 accounted for EUR 160 billion of the gross increase. In June 2016, eight G-SIFIs including affiliates accounted for EUR 331 billion of the gross increase and 11 accounted for EUR 146 billion of the gross decrease.

Changes in the size of repo books tended to be in the same direction for both repo and reverse repo. For the group of institutions which reduced the size of their repo books, there was a tendency towards reducing reverse repo. Accordingly, the share of repo recovered to 48% from a record low of 47.5% of the headline total. The survey sample has been a net cash lender since June 2012.

Figure 2.2 – Total repo versus reverse repo business (EUR billion)



Trading analysis (Q1.1)

Table 2.2 – Trading analysis

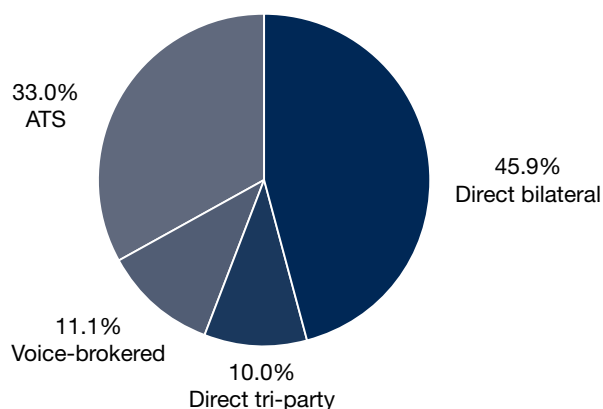
	June 2016		December 2015		June 2015	
	share	users	share	users	share	share
direct	55.9%	67	54.8%	72	57.5%	65
<i>of which tri-party</i>	10.0%	41	11.0%	43	10.0%	40
voice-brokers	11.1%	50	11.8%	56	11.8%	53
ATS	33.0%	51	33.4%	53	30.6%	52

The uptrend in the share of **directly-negotiated** repo observed since 2012, which was interrupted in December 2015 by a jump in the share of electronically-traded business, may have resumed. The absolute level of business reported by the principal automatic repo trading systems (ATS) operating in Europe showed a further decline, touching EUR 970 billion from EUR 1,038 billion. Triparty repo, which fell back to 10.0%, was the source of net funding for other segments of the market, while directly-negotiated repo was the principal destination for net funding.

Table 2.3 – Numbers of participants reporting particular types of business

	Jun-16	Dec-15	Jun-15	Dec-14	Jun-14	Dec-13
ATS	51	53	52	53	51	52
anonymous ATS	47	46	45	49	44	47
voice-brokers	50	56	53	53	55	52
tri-party repos	41	43	40	43	44	41
total	67	72	65	67	65	67

Figure 2.3 - Counterparty analysis



Geographical analysis (Q1.1)

Table 2.4 – Geographical analysis

	June 2016		December 2015		June 2015	
	share	users	share	users	share	users
domestic	23.1%		24.5%		23.4%	
cross-border to (other) eurozone	18.2%		18.7%		21.2%	
cross-border to (other) non-eurozone	33.8%		33.2%		34.1%	
anonymous	24.9%	47	23.6%	46	21.3%	45

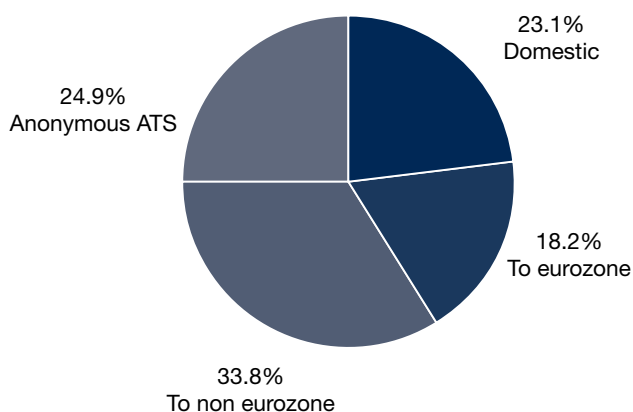
Domestic business appears to have resumed its trend decline, largely due to a continued increase in **anonymous** (ie CCP-cleared) trading. The share of anonymous trading on ATS reached a new historic high of 98.0% of all electronic trading. Cross-border business with markets outside the eurozone was a net source of funding, particularly for domestic markets.

Directly-reported data from ATS showed a switch from cross-border business to the eurozone (to 22.0% from 25.4%) from cross-border business outside the eurozone (to 39.6% from 44.5%). This switch was also seen in directly-reported tri-party business (cross-border business outside the eurozone increased to 23.3% from 16.6%) and directly-reported voice-brokered business (to 34.1% from 28.1%).

Table 2.5 – Geographical comparisons in June 2016 (December 2015)

	main survey	ATS	tri-party	WMBA
domestic	23.1% (24.5%)	32.0% (32.4%)	35.2% (36.9%)	34.4% (35.1%)
cross-border	52.0% (51.9%)	68.0% (67.5%)	64.8% (63.0%)	65.7% (64.8%)
anonymous	24.9% (23.6%)			

Figure 2.4 - Geographical analysis



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

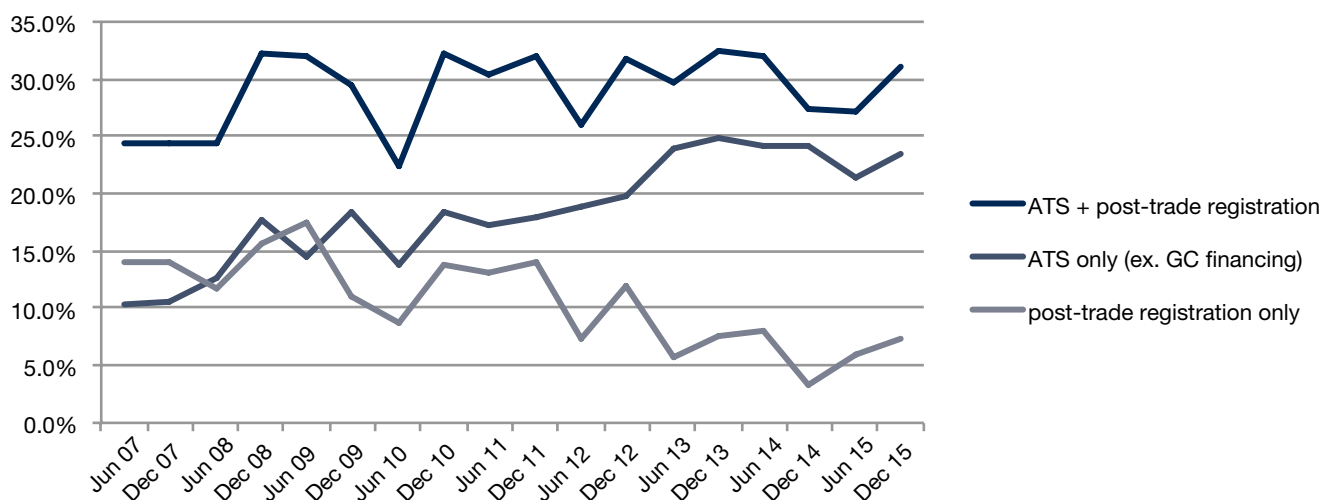
The share of **tri-party repo** fell back to 10.0% from 11.0%.

As in the last survey, one of the tri-party agents reviewed the data it provides directly. It discovered that its data previously included securities lending and central bank operations. These have been removed from the latest data, which means there has been a significant reduction in the reported size of tri-party activity and in its composition. The aggregate size of tri-party repo in Europe is now estimated to be EUR 655.8 billion, compared with EUR 850.6 billion at the last survey.

GC financing (mainly through Eurex Repo's Euro GC Pooling facility but also LCH.Clearnet's EuroGC Plus) fell to 3.5% from 4.0% in the survey, and to 10.0% from 12.3% of directly-reported electronic business. It represents 19.1% of the adjusted figure for directly-reported tri-party repo. GC financing increased its relative importance as a source of net funding to the survey sample, accounting for 4.2% of total gross repo and 2.9% of total gross reverse repo, compared with 3.7% and 4.1% in December 2015. The absolute value of outstanding GC financing reported in the survey was EUR 184.7 billion compared with EUR 218.4 billion, a fall of 15.4%.

The share of transactions negotiated directly or via voice-brokers and registered with a CCP post trade was virtually unchanged at 7.5%.

Figure 2.5 – Evolution of business cleared across CCP



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

Table 2.6 – Cash currency analysis

	June 2016	December 2015	June 2015
EUR	61.3%	63.2%	63.4%
GBP	11.6%	12.4%	11.3%
USD	17.1%	16.0%	16.4%
DKK, SEK	2.6%	2.4%	2.4%
JPY	5.2%	5.0%	5.3%
CHF	0.0%	0.1%	0.1%
other APAC	0.5%		
etc	1.6%	0.9%	1.1%
cross-currency	1.5%	2.6%	2.6%

The share of the **euro** in the survey fell slightly. There was a modest rise in the share of the **US dollar** in the survey, to 17.1% from 16.0%, largely at the expense of the euro and sterling.

The adjusted data for directly-reported tri-party repo show the euro accounting for 44.1% (compared to 74.1% in the previous survey), while the US dollar took 32.6% (compared to 19.1%).

For the first time, the survey sought to measure the share of repo business in Europe in Asian currencies other than the Japanese yen. The share of these Asian currencies was 0.5%, but this figure is likely to increase as more survey participants respond to the new question.

Figure 2.6 - Currency analysis

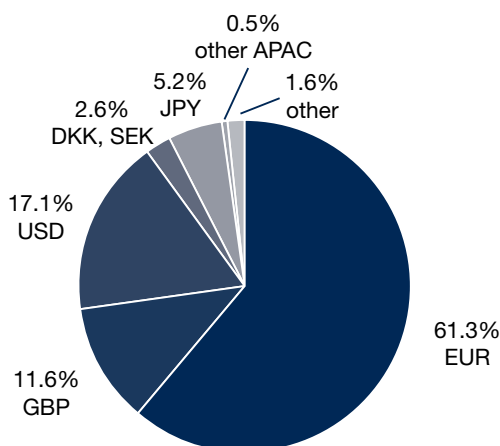


Table 2.7 – Currency comparison in December 2015

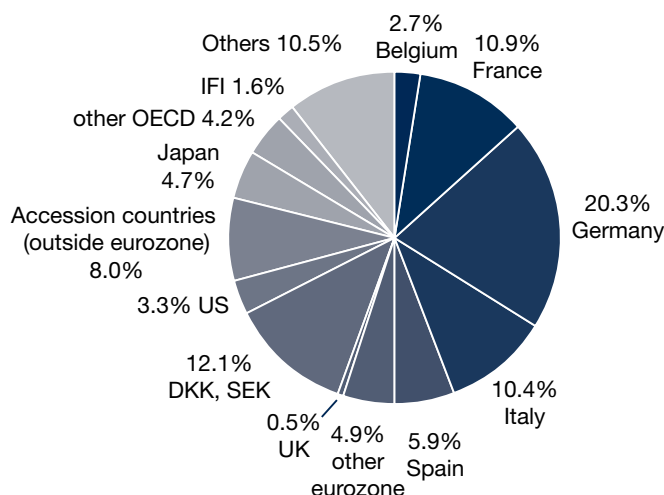
	main survey	ATS	tri-party	WMBA
EUR	61.3%	94.6%	44.1%	65.9%
GBP	11.6%	0.6%	4.6%	18.6%
USD	17.1%	2.4%	32.6%	11.4%
DKK, SEK	2.6%	1.3%	0.4%	0.0%
JPY	5.2%	0.5%	0.8%	3.2%
CHF	0.0%	0.4%	0.2%	0.0%
other APAC	0.5%	0.1%		
etc	1.6%	0.2%	17.2%	0.9%
cross-currency	1.5%		10.7%	

Collateral analysis (Q1.9)

Table 2.8 – Collateral analysis

	June 2016	December 2015	June 2015
Germany	20.3%	20.1%	19.4%
Italy	10.4%	9.6%	9.7%
France	10.9%	10.8%	11.3%
Belgium	2.7%	3.0%	3.2%
Spain	5.9%	6.9%	6.4%
other eurozone	4.9%	6.1%	6.2%
UK	12.1%	12.9%	12.1%
DKK, SEK	3.3%	2.9%	2.9%
international financial institutions	1.6%	1.7%	2.1%
US	8.0%	6.1%	
former Accession countries	0.5%	0.2%	
Japan	4.7%	4.9%	
other OECD ex APAC	3.7%	5.5%	
other APAC	0.5%		
Eurobonds	2.6%		
other fixed income	6.0%	9.0%	
equity	0.1%	0.1%	

Figure 2.7 - Collateral analysis (main survey)



The share of all **government bonds** within the pool of EU-originated fixed-income collateral reported in the survey surged to 85.8% from 78.6% (EU bonds in total accounted for 71.0% of the survey). This change was driven by French, German and Italian government securities (respectively, to 10.1% from 9.3%, 17.8% from 16.5%, 10.0% from 8.4%). There were also increases in the use of US and Japanese government securities (to 6.5% from 5.6% and to 4.2% from 3.2%). The share of government bonds in the adjusted figures for in tri-party repo was 56.1% compared to 46.9% in the previous survey. The increased use of government bonds has been attributed to the forthcoming reform of money market mutual fund regulations in the US in October, which is encouraging many prime funds to transform themselves into government securities funds in order to avoid more onerous operating conditions. Some European banks have relied heavily on US funds for US dollar funding.

In the latest survey, participants were asked to separately report collateral issued in Asia outside Japan and Eurobonds. The former accounted for 1.2% of the survey, including Eurobonds (0.5%), and both OECD and non-OECD Asian countries (0.5% and 0.2%, respectively). Eurobonds in total accounted for 2.6%. As new questions usually take time for all survey participants to assimilate, it is likely that these numbers will increase in future surveys just by virtue of a wider response.

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

	June 2016	December 2015	June 2015
AAA	31.4%	29.8%	22.8%
AA	31.6%	28.8%	22.8%
A	9.7%	9.5%	9.4%
BBB	18.8%	13.3%	9.9%
below BBB-	4.8%	4.5%	3.5%
A1/P1	1.9%	3.2%	2.4%
A2/P2	0.3%	0.6%	0.5%
Non-Prime	0.0%	0.4%	0.4%
unrated	1.6%	10.0%	28.2%

Figure 2.8 - Change in the credit ratings of collateral (tri-party agents)

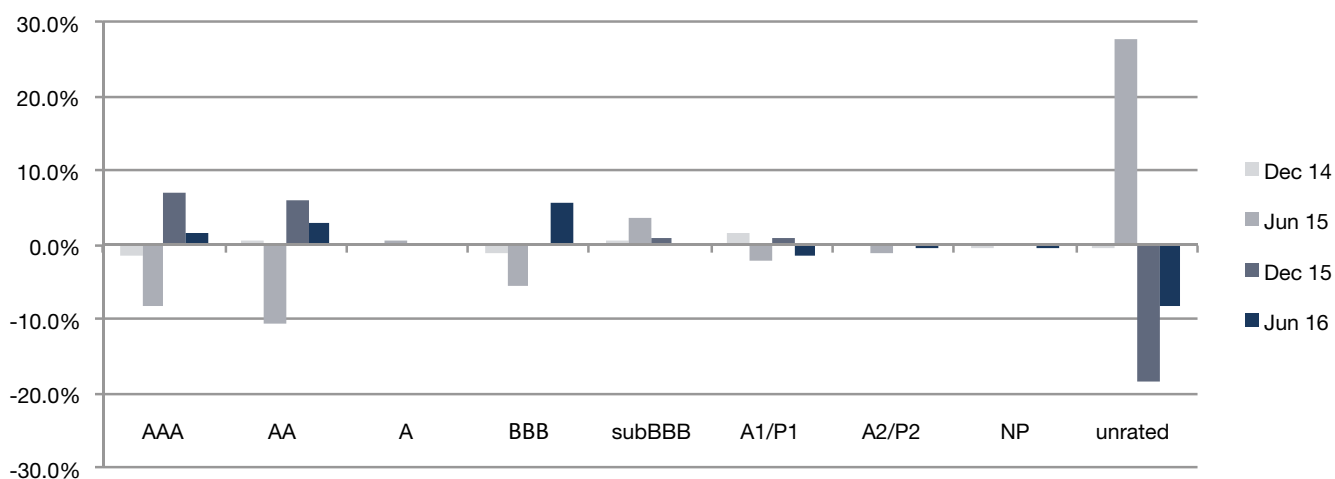


Table 2.10 – Tri-party repo collateral analysed by type of asset

	June 2016	December 2015	June 2015
government securities	47.4%	46.9%	40.3%
public agencies / sub-national governments	12.5%	11.9%	9.2%
supranational agencies	2.6%	2.8%	2.0%
corporate bonds	16.0%	15.0%	12.7%
covered bonds	10.5%	10.0%	7.1%
residential mortgage-backed	1.3%	2.0%	1.5%
commercial mortgage-backed	0.2%	0.2%	0.2%
other asset-backed	0.8%	0.9%	0.6%
CDO, CLN, CLO, etc	0.3%	0.6%	0.3%
convertible bonds	0.8%	0.4%	0.1%
equity	7.3%	7.8%	25.6%
other	0.3%	1.6%	0.5%

Figure 2.9 – Historic collateral analysis (tri-party agents) by credit rating

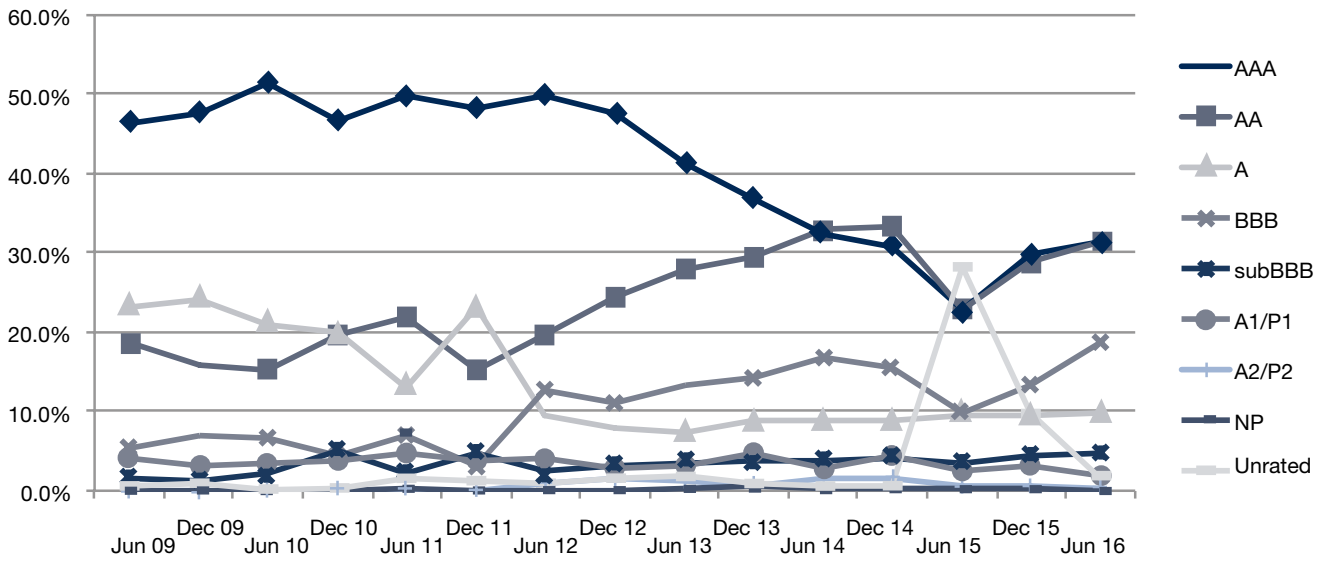


Figure 2.10 - Collateral analysis (tri-party agents) by type of asset

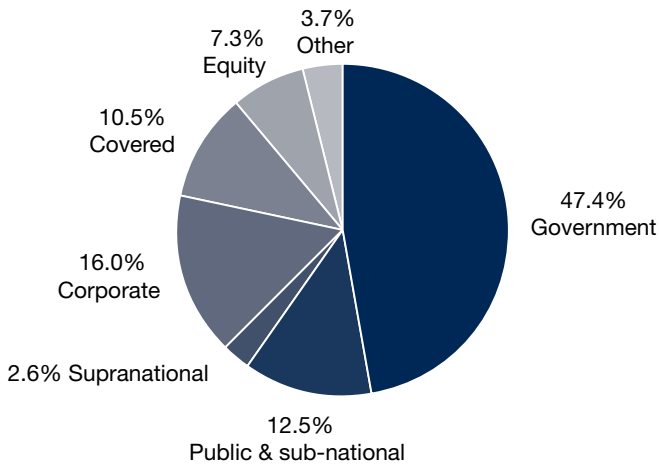


Figure 2.11 – Historic collateral analysis (tri-party agents) by type of asset

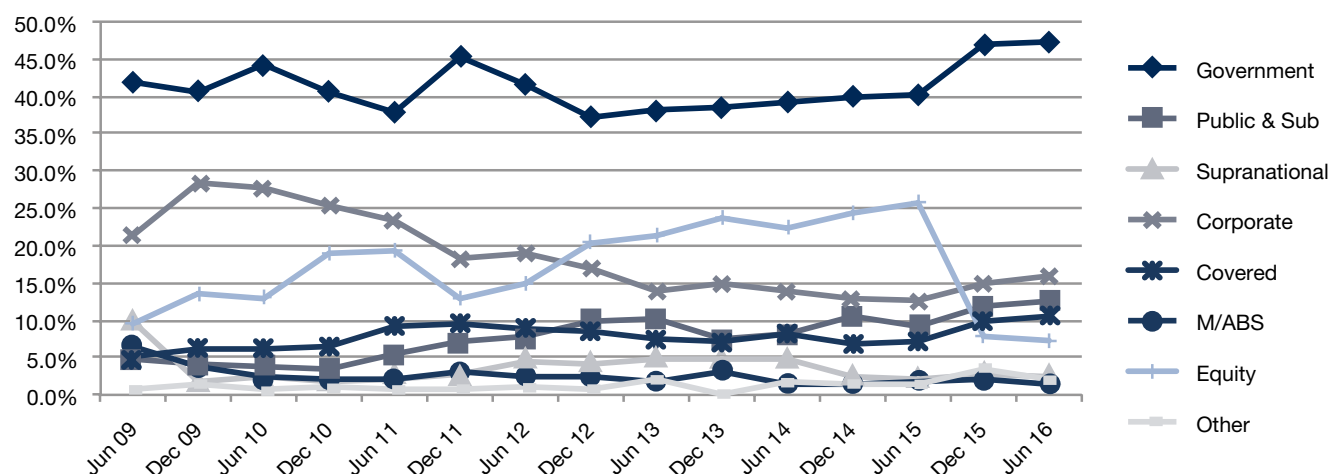


Table 2.11 – Tri-party repo collateral haircuts analysed by type of asset

(weighted average haircuts)	June 2016	December 2015	June 2015
government securities	2.6%	2.6%	2.5%
public agencies / sub-national governments	2.7%	2.7%	2.3%
supranational agencies	2.3%	4.4%	4.2%
corporate bonds (financial)			6.6%
corporate bonds (non-financial)	6.1%	6.6%	6.3%
covered bonds	3.7%	4.9%	4.3%
residential mortgage-backed			11.2%
commercial mortgage-backed	5.6%	10.1%	8.1%
other asset-backed	4.8%	5.7%	5.9%
CDO, CLN, CLO, etc	4.9%	5.6%	7.0%
convertible bonds	11.0%	8.9%	11.7%
equity	7.1%	6.9%	6.0%
other	5.0%	7.5%	8.4%

Haircut data remain difficult to interpret given the heterogeneity of securities within each category.

Contract analysis (Q1.5)

Figure 2.12 - Contract analysis

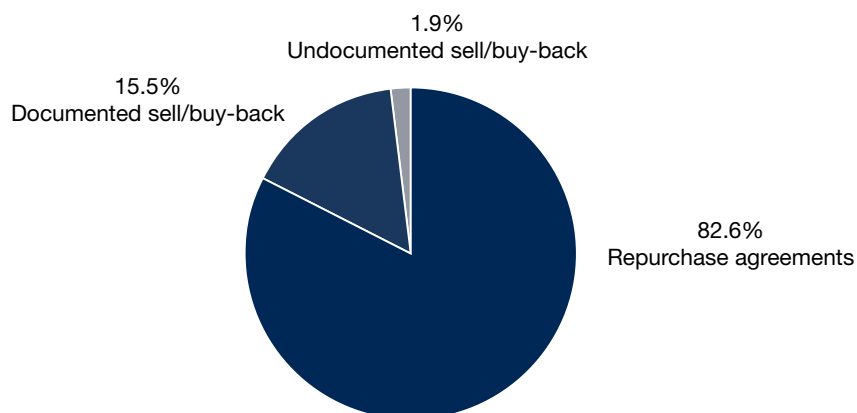


Table 2.12 – Contract comparison in June 2016 (December 2015)

	main survey	ATS	tri-party
repurchase agreements	82.6% (83.9%)	57.9% (56.3%)	100.0% (100.0%)'
documented sell/ buy-backs	15.5% (15.6%)	42.1% (43.7%)	
undocumented sell/ buy-backs	1.9% (0.6%)		

Repo rate analysis (Q1.6)

Figure 2.13 - Repo rate analysis

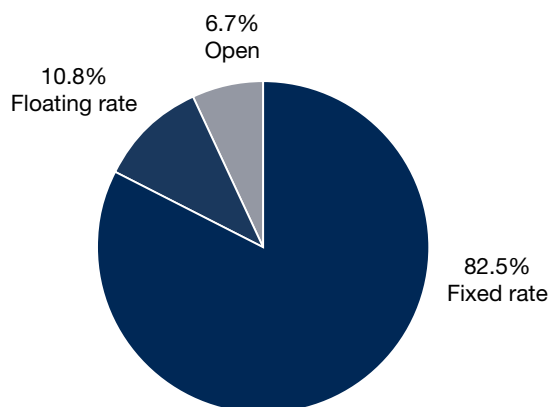


Table 2.13 – Repo rate comparison in June 2016 (December 2015)

	main survey	ATS	tri-party
fixed rate	82.5% (83.8%)	87.1% (85.5%)	23.6% (18.3%)
floating rate	10.8% (10.6%)	12.9% (14.5%)	0.2% (0.2%)
open	6.7% (5.6%)		76.2% (81.5%)

Maturity analysis (Q1.7)

Table 2.14 – Maturity analysis

	June 2016	December 2015	June 2015
open	7.3%	5.7%	6.5%
1 day	21.6%	23.5%	20.2%
2 days to 1 week	22.4%	18.9%	20.1%
1 week to 1 month	17.2%	14.3%	19.9%
>1 month to 3 months	13.1%	18.9%	13.0%
>3 months to 6 months	4.5%	4.7%	5.3%
>6 months to 12 months	2.7%	2.8%	3.6%
>12 months	1.4%	1.7%	1.4%
forward-start	9.8%	9.6%	10.0%

Figure 2.14 – Maturity analysis (main survey)

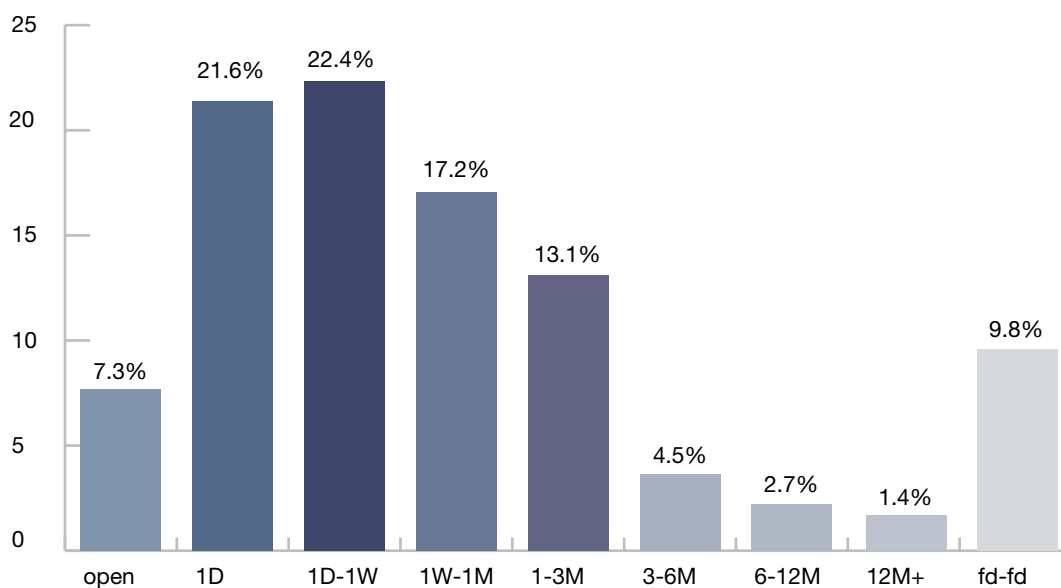


Figure 2.15 – Maturity analysis: short dates, longer terms & forwards (main survey)

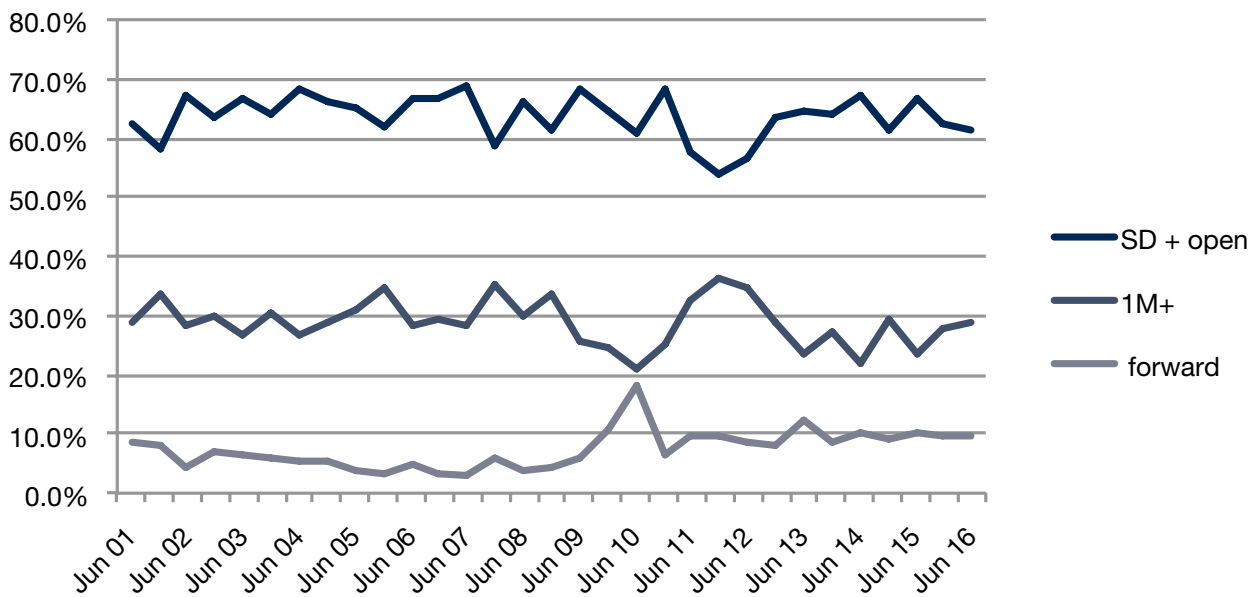


Figure 2.16 – Maturity analysis: non-forward terms (main survey)

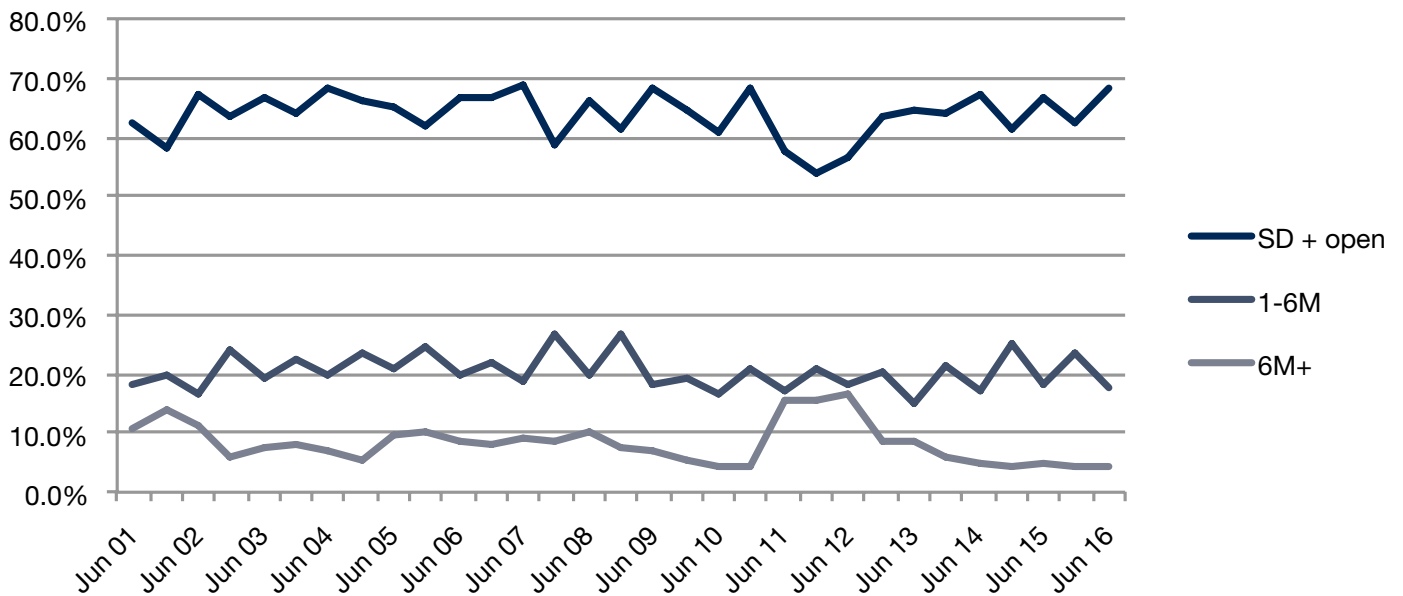
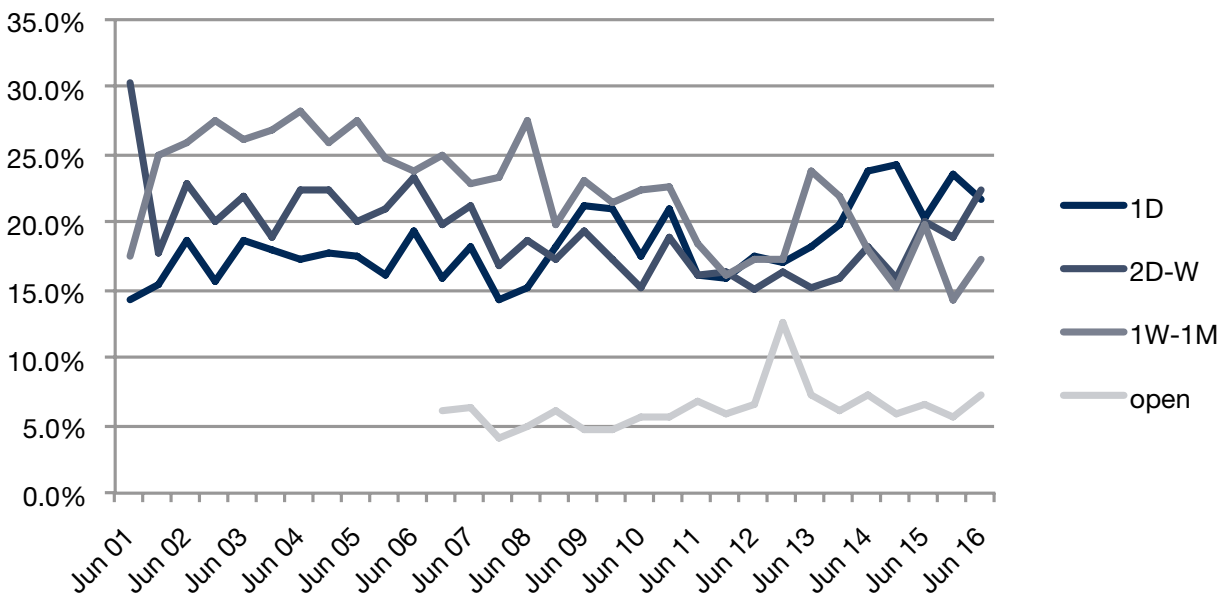


Figure 2.17 – Maturity analysis: breakdown of short dates plus open (main survey)



The share of short-dated transactions rose, in a partly seasonal adjustment, to 68.5% from 62.4%, largely at the expense of transactions with one to three months remaining to maturity, which fell back to 21.7% from 28.0%. Open repos also expanded. The increase in short dates disguised a contraction in transactions with only one day remaining to maturity. The weighted average term to maturity shortened to the range 22-53 days from 25-60 days (the lower end of the range assumes that all transactions have the minimum term in each maturity band: the upper end assumes the maximum term). Forward repos accounted for 9.8%, little changed since December. They account for the bulk of the directly-reported business of voice-brokers.

Figure 2.18 – Maturity analysis (ATS)

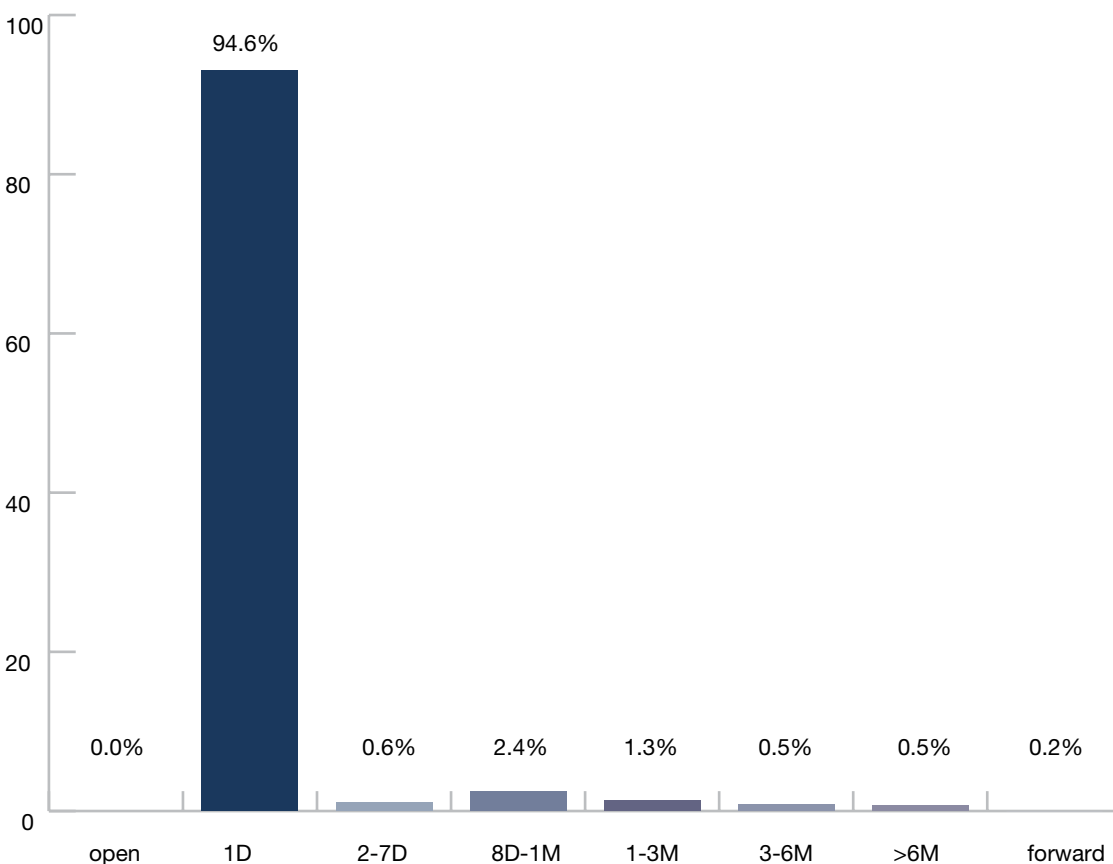


Figure 2.19 – Maturity analysis (tri-party agents)

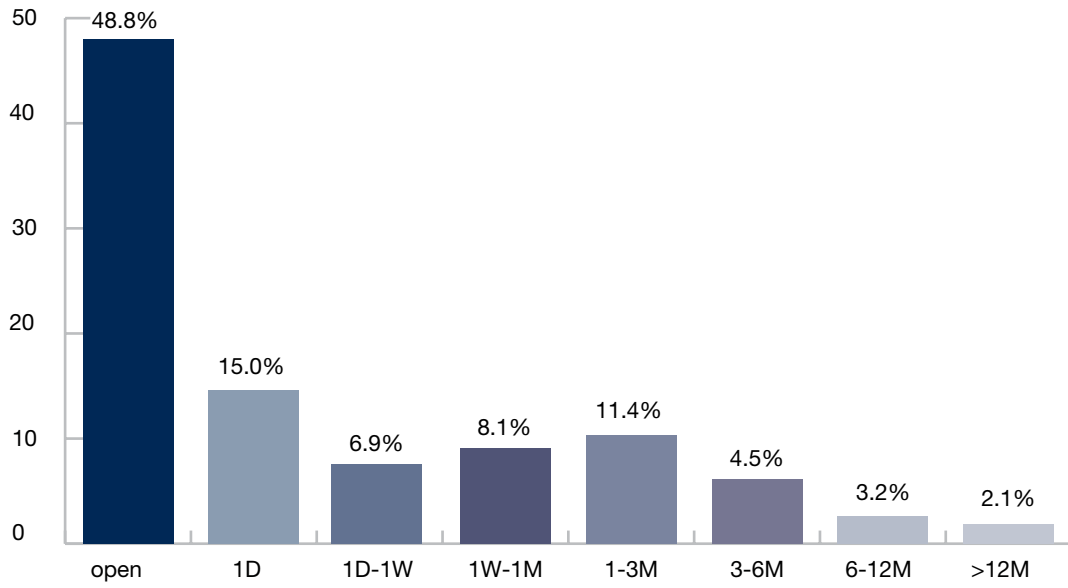


Figure 2.20 – Maturity analysis (voice-brokers)

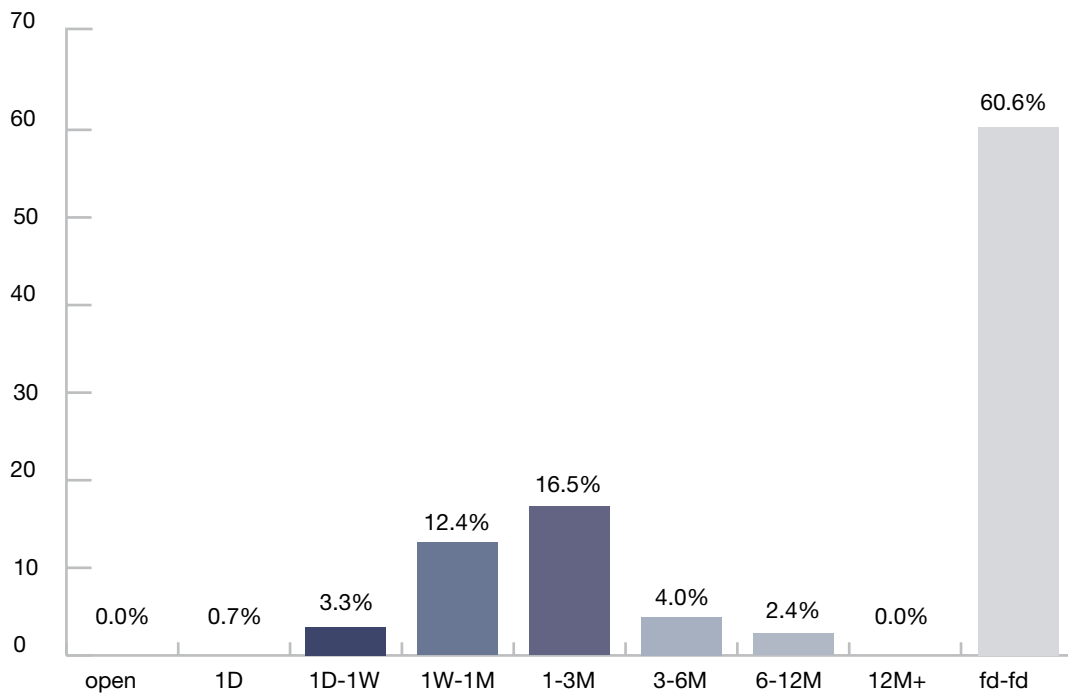


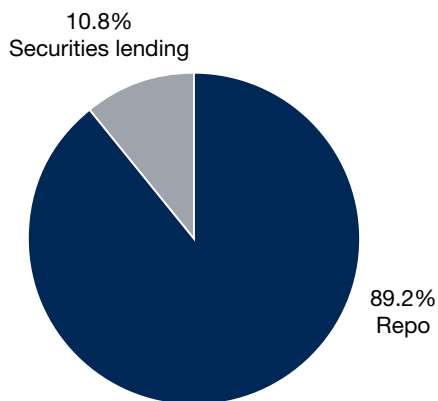
Table 2.15 – Maturity comparison in June 2016 (December 2015)

	main survey	ATS	tri-party	WMBA
open	7.3% (5.7%)		48.8% (43.2%)	0.0% (1.8%)
1 day	21.6% (23.5%)	94.6% (85.7%)	15.0% (17.2%)	0.7% (1.8%)
2 days to 1 week	22.4% (18.9%)	0.6% (9.7%)	6.9% (8.0%)	3.3% (3.2%)
1 week to 1 month	17.2% (14.3%)	2.4% (2.4%)	8.1% (9.1%)	12.4% (12.9%)
>1 month to 3 months	13.1% (18.9%)	1.3% (1.3%)	11.4% (11.8%)	16.5% (17.0%)
>3 months to 6 months	4.5% (4.7%)	0.5% (0.3%)	4.3% (6.1%)	4.0% (7.2%)
>6 months to 12 months	2.7% (2.8%)	0.4% (0.2%)	3.2% (2.6%)	2.4% (2.5%)
>12 months	1.4% (1.7%)	0.1% (0.0%)	2.1% (1.9%)	0.0% (1.1%)
forward-start	9.8% (9.6%)	0.2% (0.3%)		60.6% (51.6%)

Product analysis (Q2)

The share of securities lending conducted on repo desks fell back to 10.8% from its recent high of 13.3%.

Figure 2.21 - Product analysis

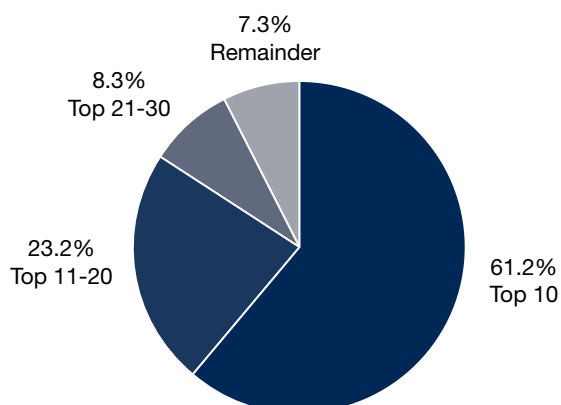


Concentration analysis

Table 2.16 – Concentration analysis

	June 2016	December 2015	June 2015
top 10	61.2%	54.5%	57.0%
top 20	84.4%	78.5%	79.8%
top 30	92.7%	89.2%	90.9%
other	7.3%	10.8%	9.1%

Figure 2.22 - Concentration analysis



The concentration of the survey sample increased sharply, reflecting the impact of increased business by some G-SIFIs. This was also reflected in the first increase in the Herfindahl Index since 2011¹.

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
December 2014	0.043	67
June 2015	0.044	65
December 2015	0.041	72
June 2016	0.050	67

¹ The Herfindahl Index is the sum of the squares of market shares divided by the square of the sum of market shares. The higher the index, the lower the degree of competition. If the index is higher, the more a single institution has a dominant market share and/or the more insignificant the market shares of all the other survey participants. A market in which several institutions have very large market shares can therefore have a relatively low index.

Chapter 3: Conclusion

Although the fall in the headline number of the survey was largely due to a reduction in the sample and, in terms of a constant sample, there was actually a small increase, it still seems to be the case that activity in the European repo market is still trending slowly downwards, subject to largely seasonal fluctuations about that trend.

However, among those banks which increased their repo books between December 2015 and June 2016, the most aggressive were G-SIFIs with strong investment banking franchises. Against a background of tightening leverage and liquidity regulation, this may seem puzzling. But most major institutions already conform to the new regulations. It may be therefore that these banks are taking advantage of the time remaining before full implementation of the regulations to make what might be either opportunistic or strategic moves in the market. To this extent, the full impact of new regulation on the repo market may be yet to come.

The most dramatic change in the latest survey is the jump in the share of collateral represented by government securities. The most likely cause is the forthcoming reform of money market mutual fund regulations in the US in October, which is encouraging many prime funds to transform themselves into government securities funds in order to avoid more onerous operating conditions. Some European banks have been reliant on US funds for a significant share of their US dollar funding. But money market mutual fund regulation may not be the only factor. Demand for government securities is also buoyant because of the need for high quality liquid assets (HQLA) to meet liquidity requirements. This may be the reason why the share of German collateral has revived in recent surveys, despite concerns over the impact of quantitative easing by the ECB.

A number of trends observed over previous surveys continue to persist. Thus, directly-negotiated transactions continue to gain share, largely at the expense of voice-brokered transactions (with directly-negotiated business being the channel for net lending by the market as a whole). And although the share of electronic trading may have plateaued, anonymous trading continues to expand and non-anonymous trading between dealers appears headed for extinction. In addition, domestic transactions continue to lose ground to cross-border business to/from non-eurozone counterparties, with the latter being the source of net funding for the former, highlighting the post-crisis importance of the cross-border repo market for the regional distribution of liquidity.

Despite regulatory pressure on dealers to lengthen the duration of their funding, the survey shows no clear overall sign of longer-term repo. This may reflect a lack of supply of longer-term funding, something which is being exacerbated by the reform of money market mutual funds, who are under regulatory pressure to shorten the duration of their investments. But it may also be that dealers have yet to react fully to the forthcoming imposition of the Net Stable Funding Ratio and have no incentive to do so in advance, given that flat yield curves mean that term transactions offer little return for increased maturity risk.

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 build 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 in '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 8, 2016.

The data required by this survey are: the total value of the repos and reverse repos booked by your repo desk that are still outstanding at close of business on Wednesday, June 8, 2016, 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.

Guidance Notes

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 varieties of repos, ie repurchase transactions (classic repos and pensions livrées) and sell/buy-backs (e.g. simultaneas and PCT). There is a separate question (see question 2) on securities lending and borrowing transactions (including securities lending and borrowing against cash collateral).
- f) Exclude repo transactions undertaken with central banks as part of their official money market operations. Other repo transactions with central banks, e.g. as part of their reserve management operations, should be included.
- g) Give the value of the cash which is due to be repaid on all repo and reverse repo contracts (not the market value or nominal value of the collateral) that are still outstanding at close of business on Wednesday, June 8, 2016. 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 9, 2016. You should include all open repos and reverse repos that have been rolled over from Wednesday, June 8, 2016, to a later date and all forward-forward repos and reverse repos that are still outstanding at close on Wednesday, June 8, 2016.
- 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 8, 2016, even if their purchase dates are later. An unavoidable consequence of using the transaction date is that tom/next and spot/next transactions that are rolled over will be counted more than once, eg a tom/next repo transacted on the day before the survey date and rolled over on the survey date will feature twice.
- 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 used by voice-brokers) or automated systems such as Bloomberg. 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, LCH-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 transactions" (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 transactions are characterised by the immediate payment by the buyer to the seller of a compensatory or manufactured payment upon receipt by the buyer of a coupon or other income on the collateral held by the buyer. If a coupon or other income is paid on collateral during the term of a sell/buy-back, the buyer does not make an immediate compensatory or manufactured payment to the seller, but reinvests the income until the repurchase date of the sell/buy-back and deducts the resulting amount (including reinvestment income) from the repurchase price that would otherwise be 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, 2000 or 2011), periodic adjustments to the relative amounts of collateral or cash - which, for a repurchase transaction, would be performed by margin maintenance transfers or payments - are made by adjustment or re-pricing. All open repos are likely to be repurchase transactions.
- 1.6 "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 (1.8.3). Open repos could be regarded as floating-rate, given that rates may be updated, but this tends to be irregular, so open repos are being treated separately from floating-rate repo (1.6.2).
- 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 8, 2016, with a repurchase date on Thursday, June 9, 2016;
 - overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, June 8, 2016.
- (1.7.1.2) 2–7 days – this means:
- all contracts transacted prior to Wednesday, June 8, 2016, with a repurchase date on Friday, June 10, 2016, or any day thereafter up to and including Wednesday, June 15, 2016;
 - contracts transacted on Wednesday, June 8, 2016, with an original repurchase date on Friday, June 10, 2016, or any day thereafter up to and including Wednesday, June 15, 2016 (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 8, 2016, with a repurchase date on Thursday, June 16, 2016, or any day thereafter up to and including Friday, July 8, 2016;
 - contracts transacted on Wednesday, June 8, 2016, with an original repurchase date on Thursday, June 16, 2016, or any day thereafter up to and including Friday, July 8, 2016 (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 8, 2016, with a repurchase date on Monday, July 11, 2016, or any day thereafter up to and including Thursday, September 8, 2016;
 - contracts transacted on Wednesday, June 8, 2016, with an original repurchase date on Monday, July 11, 2016, or any day thereafter up to and including Thursday, September 8, 2016 (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 8, 2016, with a repurchase date on Friday, September 9, 2016, or any day thereafter up to and including Thursday, December 8, 2016;
- contracts transacted on Wednesday, June 8, 2016, with an original repurchase date on Friday, September 9, 2016, or any day thereafter up to and including Thursday, December 8, 2016 (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 8, 2016, with a repurchase date on Friday, December 9, 2016, or any day thereafter up to and including Thursday, June 8, 2017;
- contracts transacted on Wednesday, June 8, 2016, with an original repurchase date on Friday, December 9, 2016, or any day thereafter up to and including Thursday, June 8, 2017 (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 8, 2016, with a repurchase date on Friday, June 9, 2017, or any day thereafter;
- contracts transacted on Wednesday, June 8, 2016, with an original repurchase date on or after Friday, June 9, 2017 (irrespective of the purchase date, which will vary).

(1.7.2) For repos against collateral that includes a transferable security regulated under the EU MiFID and that have been executed on a MiFIR-regulated trading venue, forward-forward repos are defined for the purposes of this survey as contracts with a purchase date of Monday, June 13, 2016, 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. It does not matter than many repos may actually be traded for T+1 (ie a purchase date of Thursday, June 9, 2016). For repos transacted in the OTC market or against collateral not regulated under MiFID, the definition of forward-forward may be different.

(1.7.3) Open repos in this field should equal open repos in item (1.6.3).

1.8 Please confirm whether the transactions recorded in the various questions in (1.6 and 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” (also known as “international bonds”) are defined as securities held outside national central securities depositories (CSD), usually in an ICSD such as Clearstream or Euroclear, or a custodian bank; typically with the ISIN prefix XS; often issued in a currency foreign to the place of issuance; and sold cross-border to investors outside the domestic market of the place of issuance. Eurobonds should be recorded in (1.9.30-33), except for those issues by “official international financial institutions”, which should be recorded in (1.9.20). Eurobond does not mean a bond denominated in euros.

(1.9.20) “Official international financial institutions, including multilateral development banks” include:

African Development Bank (AfDB)

Asian Development Bank (AsDB)

Bank for International Settlements (BIS)

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)

(1.9.21) "US Treasury" includes bills, notes and bonds, including floating-rate notes, issued by the US central government but not securities guaranteed by that government, such as Agency securities.

(1.9.23) "Japanese government" includes bills, notes and bonds issued by the Japanese central government but not securities guaranteed by that government.

(1.9.25) "Other OECD countries" are Australia, Canada, Chile, Iceland, Israel, Korea, Mexico, New Zealand, Norway, Switzerland and Turkey.

(1.9.26) "Other non-OECD European, Middle Eastern & African countries" should exclude any EU countries.

(1.9.34) "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 ERCC 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 and Collateral Council (ERCC).

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-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	Dec-14	Jun-15	Dec-15	Jun-16
ABN Amro Bank	x	x	x	x	x	x					x	x	x	x	x	x	x	x	x	
Algemeine Hypothekenbank Rheinboden																				
Allied Irish Banks	x	x	x	x	x	x	x	x				x	x	x	x	x	x	x	x	x
Alpha Bank																				
Arab Banking Corporation (Italy)																				
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	x	x	x	x
Banca Cassa di Risparmio di Asti																				
Banca d'Intermediazione Mobiliare (IMI)															x	x	x	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 BPI															x	x	x	x	x	x
Banco Nazional del Lavoro																				
Banco Pastor																				
Banco Popular Espanol																				
Banco Santander	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banco Urquijo																				
Bank Austria (also known as UniCredit Bank Austria)	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	x
Bank od Aland																				
Bank of America (merged to become Bank of America Merrill Lynch)	x	x																		
Bank of Cyprus, Greece																				
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							
Landesbank Berlin	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
BHF-Bank	x	x	x	x	x	x	x	x	x			x	x	x	x					

List of respondents	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	Dec-14	Jun-15	Dec-15	Jun-16
BHF-Bank International		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	x	x
BW-Bank																				
Caixa Bank											x	x	x	x	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	
Caixa Geral de Depositos																				
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	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																				
NATIXIS Zweigniederlassung Deutschland		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	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
Credito Valtellinese																				
Croatian National Bank																				
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	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	
Dekabank Deutsche Girozentrale														x	x	x	x	x	x	x
Delta Lloyd Securities																				
Den Norkse Bank																			x	x
DePfa ACS	x	x	x																	
DePfa Bank																				
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																	
Dexia Kommunal Bank Deutschland	x	x	x	x	x	x	x	x		x		x	x							
Dresdner Bank	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																				
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																			

List of respondents	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	Dec-14	Jun-15	Dec-15	Jun-16
Hypothekebank Frankfurt International (formerly Eurohypo Europäische Hypothekebank)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
European Investment Bank																				
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																				
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																				
HSBC			x		x	x	x													
HSBC Athens								x	x	x	x	x	x	x	x	x	x	x	x	x
HSBC France	x	x	x	x	x	x	x													
HSH Nordbank																				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
ICBC Standard Bank																				x
IIB Bank																				
ING Bank	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x
ING Belgium	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	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
Jyske Bank																	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	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	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																		
Landesbank Sachsen Girozentrale	x	x																		
Lehman Brothers	x	x	x	x																
Macquarie Bank										x	x	x	x	x	x	x	x	x	x	x
Maple Bank																				
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
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																				
National Australia Bank																				x
National Bank of Greece	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

List of respondents	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	Dec-14	Jun-15	Dec-15	Jun-16
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
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		x		x	x
Omega Bank																				
Piraeus Bank																			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	x	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							
Sal. Oppenheim Jr.		x																		
Sampo Bank	x																			
SEB																				
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		x	x	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																			
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)																				
Vereins und Westbank																				
Westdeutsche Immobilien Bank																				
Westdeutsche Landesbank Girozentrale	x	x	x	x		x				x										
Zagrabacka Banka		x																		
entry	3	8	3	1	6	7	2	5	3	5	10	5	9	8	4	2	4	0	7	1
exit	8	6	11	8	6	7	5	6	3	4	4	7	0	2	2	4	2	2	0	6
	74	76	68	61	61	61	58	57	57	58	64	62	71	65	67	65	67	65	72	67

Appendix C: Summary Of Survey Results

	Jun-12	Jun-13	Jun-14	Jun-15	Dec-15	Jun-16
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)	5,647	6,076	5,782	5,612	5,608	5,379
Of the amounts given in response to question (1) above:						
1.1 How much was transacted:						
direct with counterparties						
• in the same country as you	14.5%	16.8%	14.4%	14.2%	14.2%	13.9%
• cross-border in (other) eurozone countries	11.6%	12.1%	12.4%	13.8%	12.3%	11.9%
• cross-border in non-eurozone countries	22.5%	23.4%	26.5%	29.6%	28.4%	30.1%
through voice-brokers						
• in the same country as you	10.3%	7.4%	6.9%	5.1%	5.3%	5.2%
• cross-border in (other) eurozone countries	3.6%	4.1%	3.5%	3.2%	3.0%	3.1%
• cross-border in non-eurozone countries	4.4%	3.1%	3.6%	3.5%	3.4%	2.8%
on ATs with counterparties						
• in the same country as you	6.7%	6.5%	3.9%	4.1%	5.0%	4.0%
• cross-border in (other) eurozone countries	3.9%	2.6%	3.3%	4.2%	3.3%	3.2%
• cross border-border in non-eurozone countries	3.6%	2.8%	1.6%	1.0%	1.4%	0.9%
• anonymously across a GC financing system			5.8%	4.1%	4.0%	3.5%
• anonymously across a central clearing counterparty but not GC financing	18.8%	21.1%	18.3%	17.2%	19.6%	21.4%
• total through a central clearing counterparty	35.0%	25.9%	32.1%	27.2%	31.0%	32.4%
1.2 How much of the cash is denominated in:						
• EUR	57.0%	64.8%	65.7%	63.4%	63.2%	61.3%
• GBP	15.8%	10.6%	10.5%	11.3%	12.4%	11.6%
• USD	19.4%	15.2%	14.5%	16.4%	16.0%	17.1%
• SEK, DKK	2.8%	2.5%	2.4%	2.4%	2.4%	2.6%
• JPY	3.6%	4.9%	5.4%	5.3%	5.0%	5.2%
• CHF	0.3%	0.2%	0.1%	0.1%	0.1%	0.0%

	Jun-12	Jun-13	Jun-14	Jun-15	Dec-15	Jun-16
• other Asian and Pacific currencies						0.5%
• other currencies	1.2%	1.8%	1.3%	1.1%	0.9%	1.6%
1.3 How much is cross-currency?	1.5%	3.1%	1.8%	2.6%	2.6%	1.5%
1.4 How much is:						
• classic repo	84.0%	87.6%	85.4%	84.0%	83.9%	82.6%
• documented sell/buy-backs	13.3%	10.7%	13.7%	15.0%	15.6%	15.5%
• undocumented sell/buy-backs	2.7%	1.8%	0.9%	1.0%	0.6%	1.9%
1.5 How much is:						
• fixed rate	79.9%	77.4%	79.6%	81.9%	83.8%	82.5%
• floating rate	10.1%	6.6%	13.2%	11.5%	10.6%	10.8%
• open	10.0%	13.5%	7.2%	6.5%	5.6%	6.7%
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	17.5%	18.2%	20.9%	20.2%	23.5%	21.6%
• 2 - 7days	15.1%	15.2%	16.8%	20.1%	18.9%	22.4%
• more than 7 days but no more than 1 month	17.3%	23.8%	22.6%	19.9%	14.3%	17.2%
• more than 1 month but no more than 3 months	12.8%	10.7%	11.7%	13.0%	18.9%	13.1%
• more than 3 months but no more than 6 months	5.2%	4.1%	4.1%	5.3%	4.7%	4.5%
• more than 6 months	3.4%	4.5%	3.6%	3.6%	2.8%	2.7%
• more than 12 months	13.3%	4.1%	2.8%	1.4%	1.7%	1.4%
• forward-forward repos	8.7%	12.1%	10.4%	10.0%	9.6%	9.8%
• open	6.6%	7.3%	7.2%	6.5%	5.7%	7.3%
1.7 How much is tri-party repo:	11.5%	9.6%	10.2%	9.3%	11.0%	9.2%
• for fixed terms to maturity	91.6%	94.8%	93.4%	99.2%	94.2%	91.1%
• on an open basis	6.3%	5.2%	6.6%	8.2%	5.8%	10.0%
1.8 How much is against collateral issued in:						
Austria						
• by the central government	1.1%	1.0%	0.9%	0.9%	0.8%	0.7%
• by other issuers	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%

	Jun-12	Jun-13	Jun-14	Jun-15	Dec-15	Jun-16
Belgium						
• by the central government	3.1%	2.7%	2.2%	2.2%	2.0%	2.0%
• by other issuers	0.7%	0.7%	0.7%	1.1%	0.9%	0.7%
Denmark						
• by the central government	0.6%	0.5%	0.5%	0.5%	0.4%	0.3%
• by other issuers	0.7%	0.8%	0.8%	0.9%	1.0%	0.9%
Finland						
• by the central government	0.5%	0.5%	0.6%	0.5%	0.4%	0.5%
• by other issuers	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
France						
• by the central government	7.3%	10.3%	9.5%	9.4%	9.3%	10.1%
• by other issuers	1.3%	1.4%	1.3%	1.9%	1.6%	0.8%
Germany						
• by the central government	14.2%	16.6%	14.2%	14.8%	16.5%	17.8%
• pfandbrief	1.0%	0.7%	0.5%	0.6%	0.7%	0.2%
• by other issuers	5.5%	4.6%	4.4%	3.9%	2.9%	2.3%
Greece						
• by the central government	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%
• by other issuers	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
Ireland						
• by the central government	0.1%	0.4%	0.4%	0.4%	0.3%	0.3%
• by other issuers	0.1%	0.7%	0.2%	0.5%	0.9%	0.3%
Italy						
• by the central government	7.8%	7.8%	9.9%	8.6%	8.4%	10.0%
• by other issuers	0.5%	0.4%	0.7%	1.1%	1.3%	0.4%
Luxembourg						
• by the central government	0.3%	0.1%	0.1%	0.1%	0.0%	0.0%
• by other issuers	0.8%	1.3%	1.5%	0.4%	0.3%	0.3%
Netherlands						
• by the central government	2.6%	2.7%	2.1%	1.7%	1.8%	1.8%
• by other issuers	0.9%	0.9%	0.7%	0.8%	0.6%	0.5%
Portugal						
• by the central government	0.1%	0.2%	0.4%	0.5%	0.5%	0.5%
• by other issuers	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%
Spain						
• by the central government	4.3%	4.0%	5.2%	4.7%	4.9%	5.0%
• by other issuers	0.7%	0.6%	1.1%	1.7%	2.0%	0.8%

	Jun-12	Jun-13	Jun-14	Jun-15	Dec-15	Jun-16
Sweden						
• by the central government	0.9%	0.8%	0.7%	0.8%	0.9%	1.1%
• by other issuers	0.7%	0.7%	0.8%	0.7%	0.7%	1.0%
UK						
• by the central government	12.8%	10.5%	9.1%	9.7%	10.6%	10.5%
• by other issuers	2.2%	1.5%	1.5%	2.4%	2.3%	1.6%
US Treasury					5.1%	6.6%
US other issuers					1.0%	1.5%
US but settled across EOC/CS	3.3%	2.6%	2.6%	4.6%		
other countries						
Bulgaria						
by the central government	0.4%	0.0%	0.0%	0.1%		
by other issuers	0.0%	0.0%	0.0%	0.0%		
Cyprus						
by the central government	0.0%	0.0%	0.0%	0.0%		
by other issuers	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%		
by other issuers	0.0%	0.0%	0.0%	0.0%		
Hungary						
by the central government	0.0%	0.1%	0.1%	0.0%	0.0%	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%		
by other issuers	0.0%	0.0%	0.0%	0.0%		
Lithuania						
by the central government	0.0%	0.0%	0.0%	0.0%		
by other issuers	0.0%	0.0%	0.0%	0.0%		
Malta						
by the central government	0.0%	0.0%	0.0%	0.0%		
by other issuers	0.0%	0.0%	0.0%	0.0%		
Poland						
by the central government	0.2%	0.2%	0.2%	0.1%	0.1%	0.1%
by other issuers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

	Jun-12	Jun-13	Jun-14	Jun-15	Dec-15	Jun-16
Romania						
by the central government	0.0%	0.0%	0.0%	0.0%		
by other issuers	0.0%	0.0%	0.0%	0.0%		
Slovak Republic						
by the central government	0.0%	0.0%	0.0%	0.0%		
by other issuers	0.0%	0.0%	0.0%	0.0%		
Slovenia						
by the central government	0.0%	0.0%	0.0%	0.0%		
by other issuers	0.0%	0.0%	0.0%	0.0%		
Other EU members by central government					0.2%	0.2%
Other EU members by other issuers					0.1%	0.1%
by official international financial institutions	0.8%	2.2%	2.4%	2.1%	2.1%	1.6%
Japan	2.7%	4.2%	4.8%	4.8%		
Japanese government					3.2%	4.2%
Other Japanese issuers					1.6%	0.5%
Other Asian & Pacific OECD countries in the form of fixed income securities, except Eurobonds						0.5%
Other OECD countries in the form of fixed income securities, except Eurobonds						3.7%
other OECD	11.1%	12.1%	11.2%	8.4%	5.5%	
non-OECD EMEA	0.9%	0.6%	0.5%	0.6%	0.6%	0.5%
non-OECD Asian & Pacific	0.9%	0.3%	0.5%	0.7%	0.6%	0.5%
non-OECD Latin America	0.4%	0.5%	0.5%	0.6%	0.7%	0.6%
Eurobonds issued by European entities						1.2%
Eurobonds issued by US entities						0.8%
Eurobonds issued by Asian & Pacific entities						0.2%
Eurobonds issued by other entities						0.4%
equity	0.2%	0.3%	0.1%	0.7%	0.1%	0.1%
collateral of unknown origin or type	7.8%	4.3%	2.7%	2.5%	2.4%	2.4%
collateral in tri-party which cannot be attributed to a country or issuer			4.0%	3.5%	4.8%	3.6%

	Jun-12	Jun-13	Jun-14	Jun-15	Dec-15	Jun-16
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	42.8%	37.3%	41.6%	30.2%	35.7%	28.2%
• in equity	1.5%	2.8%	0.5%	2.3%	0.4%	0.3%
• cross-border in (other) eurozone countries						
• in fixed income	19.9%	20.9%	20.8%	32.5%	35.0%	36.0%
• in equity	0.3%	0.9%	1.3%	2.3%	1.2%	2.6%
• cross-border in non-eurozone countries						
• in fixed income	35.1%	36.8%	35.2%	27.1%	26.9%	32.4%
• in equity	0.4%	1.3%	0.5%	5.5%	0.7%	0.5%
for which the term to maturity is						
fixed	67.5%	50.7%	60.5%	65.8%	66.7%	56.1%
open	32.5%	49.3%	39.5%	34.2%	33.3%	43.9%

Appendix D: The ICMA European Repo And Collateral Council

The ICMA European Repo and Collateral Council (ERCC) (formerly the ICMA European Repo Council) 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 ERCC underpins the strong sense of community and common interest that characterises the professional repo market in Europe.

The ERCC 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 ERCC 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 ERCC 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.



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