

# International Capital Market Association

## European **Repo** Market Survey

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# Executive Summary

In December 2019, the European Repo and Collateral Council (ERCC) of the International Capital Market Association (ICMA) conducted the 38th 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 December 11, 2019. Replies were received from 58 offices of 54 financial groups, mainly banks. Returns were also made directly by the principal automatic repo trading systems (ATS) and tri-party repo agents in Europe, giving the size and composition of almost all electronic repo trading and tri-party repo in Europe.

## Total repo business

The total value of the repo contracts outstanding on the books of the 58 institutions who participated in the latest survey was **EUR 8,310 billion**, compared with the EUR 7,761 billion in June 2019, a rise of 5.9% year-on-year and 7.1% since the June 2019 survey. Adjusting for the change in the number of institutions in the survey, growth rates were 2.1% year-on-year and 3.5% since the June 2019.

## Trading analysis

The most notable change in the latest survey is the increase in the share of voice-brokers, which recovered sharply from an all-time low in June at the relative expense of other execution venues, but some of this increase may be a one-off change due to new entrants to the survey. The share of electronic trading in the latest survey decreased but the absolute size of the business reported directly by the three principal ATS operating in Europe was largely unchanged, suggesting that institutions in the survey are less active users of electronic trading than the market as a whole, which may reflect more focus on customer business, although some of this change may reflect the net effect of new entrants.

## Clearing and settlement analysis

The share of tri-party business as reported by the survey sample improved but its absolute size as reported by the four principal tri-party agents in Europe was little changed. This data supports the suggestion that the survey sample is more focused on customers.

## Cash currency analysis

The biggest change in currency composition was a sharp relapse in the share of the euro, reflecting increased shares for most other currencies but especially for "other currencies" and, to a lesser extent, the US dollar and Japanese yen. Once again, some of this shift probably reflects the change in the composition of the survey sample.

## Collateral analysis

There was a general reduction in the shares of EU government bonds. Exceptions were Spanish and UK government securities. The share of German collateral touched a new record low. These changes were not fully reflected in the data reported directly by the ATS, on which the share of Italian government securities grew. US Treasuries and JGBs also grew. In tri-party repo, the share of government securities increased and there was a jump in the share of other OECD securities. There was also a significant shift towards AAA and AA-rated securities, mainly at the expense of the share of equity, and presumably paralleling the increase in government securities.

## Maturity analysis

The share of short-dated repos fell back in a typically seasonal change, perhaps reflecting demand for high-quality liquid assets to meet regulatory liquidity ratios at year-end. The weighted average term to maturity lengthened significantly again. But the most notable change in the latest survey was a large drop in the share of forward repos, which suggests that end-year pressures which were intensified by regulatory initiatives such as the Leverage Ratio and LCR have worked through the market and firms are now more confident of their ability to manage the complex set of regulatory ratios.

## **Repo rate analysis**

Floating-rate repo dropped sharply in the latest survey, particularly on electronic trading systems. This reflected the decision by the European Repo and Collateral Council to recommend that dealers avoid transacting repos with each other which are linked to overnight indices. This is because of the operational cost of the retrospective adjustment to the repurchase price which is needed as a result of fixings not being published until the morning after the date for which they are fixed, too late for the calculation of the repurchase price, which therefore has to be initially estimated.

## **Concentration analysis**

The concentration of business within the top 10 survey participants increased, reflecting the weight of some of the largest institutions in the growth of the market.



# Chapter 1: The Survey

On December 11, 2019, the European Repo and Collateral Council (ERCC) of the International Capital Market Association (ICMA) conducted the 38th 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, 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, December 11, 2019.

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; the origin of the collateral and some other questions. 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 by the main tri-party repo agents in Europe.

## 1.2 The response to the survey

The latest survey was completed by 58 offices of 54 financial groups. The current total of 58 is four more than in the June 2019 survey. Two institutions dropped out of the survey, three rejoined and three new institutions joined.

Of the current 58, 43 of the participants were headquartered across 15 European countries, including Norway (1) and Switzerland (2). Others were headquartered in Australia (2), Japan (4) and North America (10). 22 respondents were affiliates of foreign parents. Most affiliates (18) were located in the UK. 39 participants were headquartered across 14 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). 33 participants were headquartered 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.

It should be noted that new entrants into the survey are mainly non-European or have a non-European focus to their business. These new entrants, together with the temporary loss of two significant respondents, may have caused a shift in the composition of the survey which would make it more difficult to identify the direction of trends over the last survey period.

## 1.3 The next survey

The next survey is scheduled to take place at close of business on Wednesday, June 10, 2020.

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

Questions about the survey should be sent by e-mail to [reposurvey@icmagroup.org](mailto:reposurvey@icmagroup.org). Institutions who participate in 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 (2015-2019) are set out in Appendix C. The full results of all previous surveys can be found at [www.icmagroup.org](http://www.icmagroup.org).

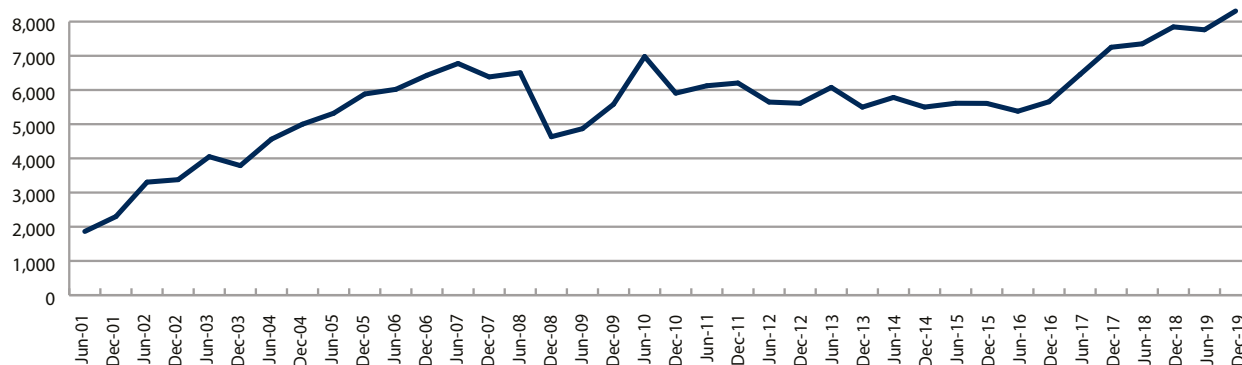
### Total repo business (Q1)

The total value, at close of business on December 11, 2019, of repos and reverse repos outstanding on the books of the 58 institutions which participated in the latest survey was a record **EUR 8,310.3 billion**, compared with the total for June 2019, which was EUR 7,761.4 billion. This means the latest survey showed a rise of 5.9% year-on-year and 7.1% since the June 2019 survey. Average daily turnover over the six months since the previous survey, grossed up to compensate for the partial response to this question, was about EUR 1,775 billion per day.

**Table 2.1 – Total repo business from 2001 to December 2019 (EUR billion)**

survey	total	repo	reverse repo
2019 December	8,310	48.5%	51.5%
2019 June	7,761	48.1%	51.9%
2018 December	7,846	48.5%	51.5%
2018 June	7,351	48.7%	51.3%
2017 December	7,250	47.8%	52.2%
2017 June	6,455	48.5%	51.5%
2016 December	5,656	48.1%	51.9%
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%

**Figure 2.1 – Total business (EUR billion)**



It is important to remember that the survey mainly 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.

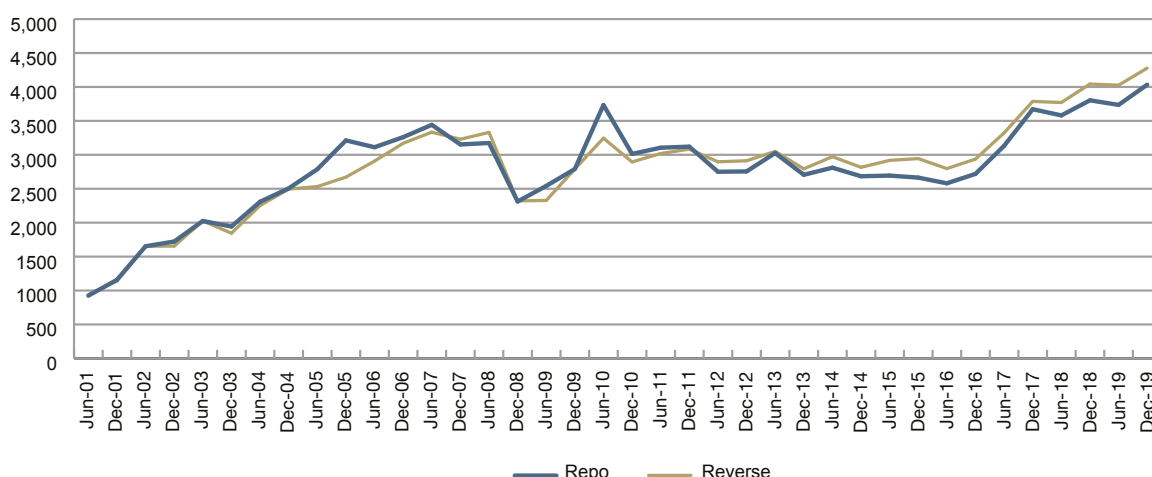
In order to accurately gauge the growth of the European repo market (or at least that segment represented by the institutions who have participated in the survey), it is not valid to simply compare headline numbers. Some of the changes will represent the entry and exit of institutions into and out of the survey, mergers between banks and the reorganization of repo books within banks. In the latest survey, the institutions joining or rejoining the survey are responsible for a significant part of the increase. 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 58 institutions in the latest survey who have currently responded, 51 have participated in all of the last three surveys. Overall, the aggregate value of outstanding repos and reverse repos transacted by that constant sample of these 51 institutions grew by 2.1% year-on-year and 3.5% since the June 2019 survey, reflecting the impact of institutions new to the survey. The change for the 52 institutions which participated in the last two surveys was 7.0%.

The repo books of 28 of the 52 institutions who responded and were also in the previous survey expanded (compared with 32 of 53 in June). The repo books of 24 institutions contracted or did not change (compared with 21 in June). The unweighted mean percentage change in the 52 books fell back to 10.3% from 20.1% in June. The median percentage change rose to +3.5% from +2.5%.



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



## Trading analysis (Q1.1)

**Table 2.2 – Trading analysis**

	December 2019		June 2019		December 2018	
	share	users	share	share	share	users
<b>direct</b>	61.2%	58	61.6%	55	59.9%	58
<b>of which tri-party</b>	8.7%	41	8.0%	38	6.9%	42
<b>voice-brokers</b>	9.9%	43	8.1%	40	10.8%	42
<b>ATS</b>	28.9%	46	30.3%	45	29.3%	44

The most notable change in the latest survey is the increase in the share of voice-brokers, which recovered sharply from an all-time low in June at the relative expense of other execution venues. Some of this increase may be a one-off change due to new entrants to the survey.

The share of electronic trading in the latest survey decreased but the absolute size of the business reported directly by the three principal ATS operating in Europe (BrokerTec, Eurex Repo and MTS Repo) was largely unchanged at EUR1,085 billion, although the absolute size of anonymous electronic trading grew by 3.7%. This suggests that institutions in the survey are less active users of electronic trading than the market as a whole, perhaps because of a stronger focus on customer business (which is not conducted over ATS) and the net effect of new entrants.

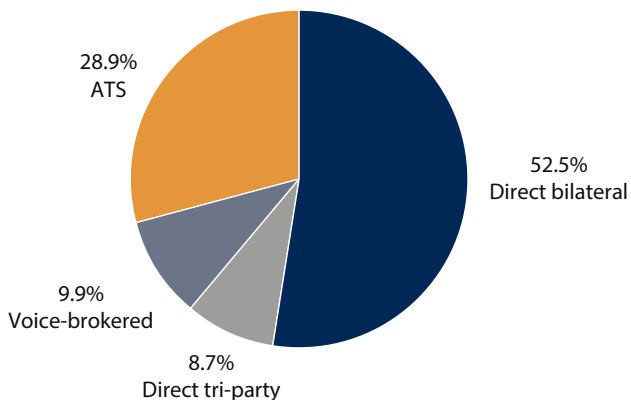
The share of tri-party repo in the survey improved to 8.7% but the absolute size of tri-party business as reported by the survey sample as reported by the four principal tri-party agents in Europe (Bank of New York Mellon, Clearstream, Euroclear and SIS) was little changed at EUR663.0 billion. These numbers would be consistent with a stronger focus on customer business, as much of this is tri-party managed.

Cash borrowing by the survey sample through tri-party repo fell slightly to 69.4% from 70.8% in June. In contrast, there was a significant swing in GC financing (which combines CCP clearing and tri-party collateral management) back to net lending by the survey sample (50.6% compared to 28% in June).

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

	Dec-19	Jun-19	Dec-18	Jun-18	Dec-17	Jun-17
<b>ATS</b>	46	45	44	44	44	48
<b>anonymous ATS</b>	41	40	40	40	40	42
<b>voice-brokers</b>	43	40	42	48	46	45
<b>tri-party repos</b>	41	38	42	43	44	43
<b>total</b>	58	55	58	62	64	64

Figure 2.3 - Trading analysis



## Geographical analysis (Q1.1)

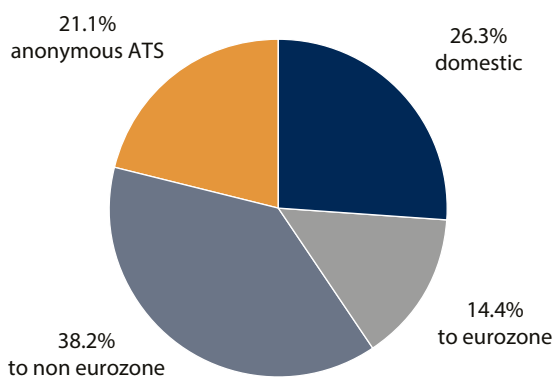
Table 2.4 – Geographical analysis

	December 2019		June 2019		December 2018	
	share	users	share	users	share	users
<b>domestic</b>	26.3%		25.5%		27.1%	
<b>cross-border to (other) eurozone</b>	14.4%		17.0%		15.6%	
<b>cross-border to (other) non-eurozone</b>	38.2%		35.3%		37.3%	
<b>anonymous</b>	21.1%	41	22.3%	40	20.0%	40

Table 2.5 – Geographical comparisons in December 2019 (June 2019)

	main survey	ATS	tri-party
<b>domestic</b>	26.3% (25.5%)	30.6% (46.1%)	29.6% (31.9%)
<b>cross-border</b>	52.6% (52.3%)	67.3% (50.5%)	70.4% (68.1%)
<b>anonymous</b>	21.1% (22.3%)		

Figure 2.4 - Geographical analysis

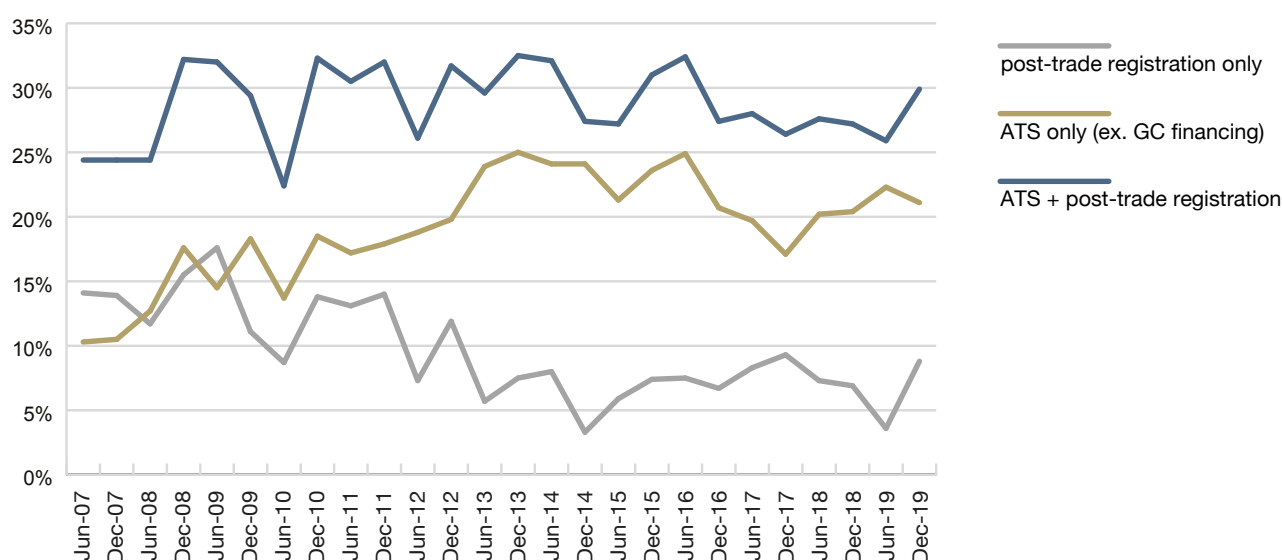


## Clearing and settlement analysis (Q1.2 and Q1.8)

Within tri-party repo business, the share of GC financing (mainly through Eurex Repo's Euro GC Pooling but also LCH's EuroGC Plus) rose to 15.6% from 10.9% of the tri-party business reported by the survey sample and further increased its share of electronic business to 4.3% from 3.8% of the business reported directly by ATS but fell to 10.0% from 10.5% of directly-reported tri-party repo. The absolute size of GC financing reported directly by the tri-party agents was unchanged at EUR 69.4 billion. In other words, resort to GC financing has increased among the survey sample but decreased among other institutions.

The share of transactions negotiated directly or via voice-brokers that were subsequently registered with a CCP increased to 8.8% from 6.9%.

**Figure 2.5 – Evolution of business cleared across CCP**



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

**Table 2.6 – Cash currency analysis**

	December 2019	June 2019	December 2018
<b>EUR</b>	53.6%	62.0%	59.7%
<b>GBP</b>	13.6%	13.3%	13.2%
<b>USD</b>	18.9%	17.0%	19.4%
<b>DKK, SEK</b>	1.9%	1.7%	1.6%
<b>JPY</b>	5.4%	4.5%	4.5%
<b>CHF</b>	0.0%	0.0%	0.0%
<b>other APAC</b>	0.9%	0.4%	0.6%
<b>etc</b>	5.6%	1.0%	1.0%
<b>cross-currency</b>	1.7%	1.5%	2.4%

The biggest change in currency composition since the previous survey was a sharp relapse in the share of the euro, reflecting increased shares for most other currencies but especially for “other currencies” and, to a lesser extent, the US dollar and Japanese yen. Once again, some of this shift may reflect the change in the composition of the survey sample.

The drop in the share of the euro was even sharper in directly-reported tri-party repo, to 36.5% from 51.9%. The share of the pound sterling in directly-reported tri-party repo jumped to 10.9% from 5.5% but the US dollar fell back to 31.7% from 37.6%.

Figure 2.6 - Currency analysis

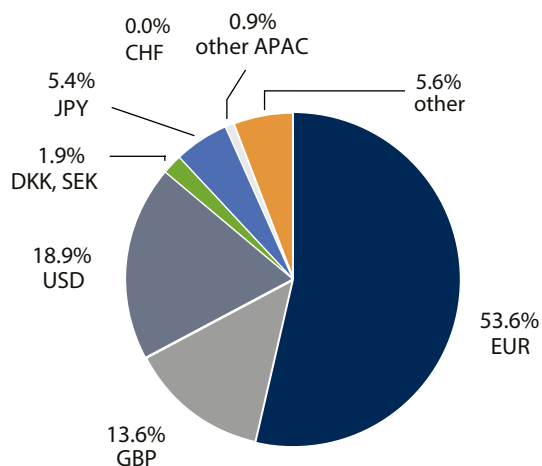


Table 2.7 – Currency comparison in December 2019

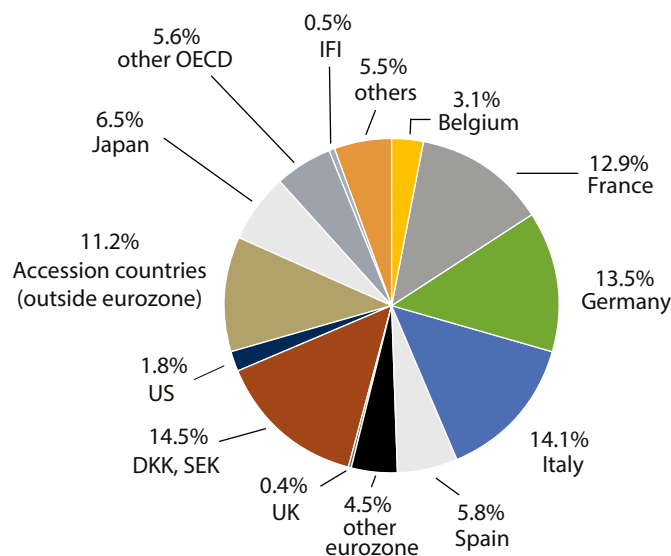
	main survey	ATS	tri-party
EUR	53.6%	92.9%	36.5%
GBP	13.6%	6.6%	10.9%
USD	18.9%	0.4%	45.5%
DKK, SEK	1.9%	0.0%	3.0%
JPY	5.4%	0.0%	2.6%
CHF	0.0%	0.0%	0.9%
other APAC	0.9%		0.4%
etc	5.6%	0.0%	14.0%
cross-currency	1.7%		

## Collateral analysis (Q1.9)

Table 2.8 – Collateral analysis

	December 2019	June 2019	December 2018
Germany	13.5%	16.4%	17.1%
Italy	14.1%	14.8%	12.6%
France	12.9%	14.0%	13.5%
Belgium	3.1%	3.5%	3.7%
Spain	5.8%	5.2%	4.8%
other eurozone	4.5%	5.1%	5.3%
UK	14.5%	13.2%	13.6%
DKK, SEK	1.8%	2.0%	1.8%
international financial institutions	0.5%	0.5%	0.7%
US Treasuries	8.8%	6.4%	8.9%
other US	2.4%	2.1%	2.6%
former Accession	0.4%	0.4%	0.6%
Japan government	5.1%	3.6%	3.5%
other Japan	1.4%	0.2%	1.3%
other OECD ex APAC	4.2%	4.8%	4.2%
other APAC OECD	1.4%	1.8%	0.4%
eurobonds	1.9%	1.6%	1.8%
other fixed income	3.3%	3.8%	3.6%
equity	0.3%	0.4%	0.2%

**Figure 2.7 - Collateral analysis (main survey)**



There was a general reduction in the shares of EU government securities. Italian government securities fell back to 13.7% from 14.8%, as did core eurozone government securities, including German government securities, which touched a new record low of 12.3%. But overall, the share within the pool of EU-originated fixed-income collateral reported in the survey fell back only slightly to 89.6% from 89.9%, reflecting exceptions such as Spanish government securities (5.8% from 5.2%), and UK government securities (13.4% from 11.9%). Italian and UK government securities account for the largest shares of EU government securities used as collateral in the European repo market.

Changes among the survey sample were not fully reflected in the data reported directly by the ATS, on which the share of Italian government securities grew further to 37.8% from 36.4%. In addition, US Treasuries increased share on ATS significantly to 8.8% from 6.4%, while JGBs increased share to 5.1% from 3.6%. Spanish government securities increased to 11.7% from 9.2%.

The share of government securities also increased in tri-party repo to 47.5% from 43.7% (within which, EU government securities increased to 60.4% from 56.4%) but the most significant change was a jump in the share of other OECD securities to 53.3% from 34.1%. The latest data from tri-party agents showed a significant shift in tri-party repo towards AAA and AA-rated securities (to 58.3% from 47.5%), mainly at the expense of the share of equity (a drop to 10% from 17.4%). This presumably parallels the increase in government securities being used as collateral.

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

	December 2019	June 2019	December 2018
<b>AAA</b>	25.7%	22.2%	23.7%
<b>AA</b>	32.6%	25.3%	24.8%
<b>A</b>	14.0%	14.2%	12.3%
<b>BBB</b>	17.4%	14.5%	13.9%
<b>below BBB-</b>	5.8%	6.4%	6.3%
<b>A1/P1</b>	3.1%	2.3%	2.2%
<b>A2/P2</b>	0.2%	0.5%	0.7%
<b>Non-Prime</b>	0.0%	0.0%	0.0%
<b>unrated</b>	1.2%	14.6%	16.0%

Figure 2.8 - Collateral analysis (tri-party agents) by credit rating

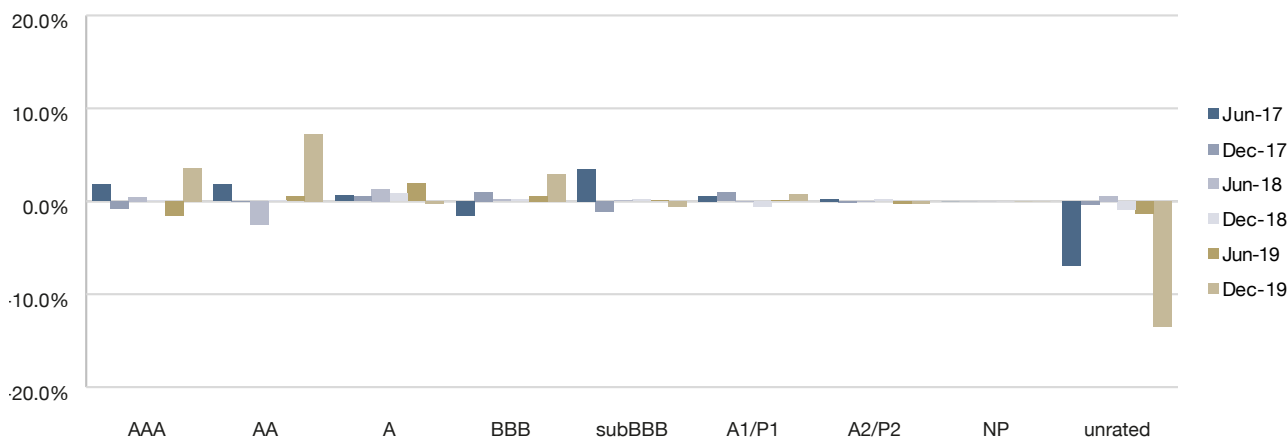


Table 2.10 – Tri-party repo collateral analysed by type of asset

	December 2019	June 2019	December 2018
government securities	47.5%	43.7%	47.2%
public agencies / sub-national governments	6.0%	6.6%	9.4%
supranational agencies	3.7%	2.5%	2.5%
corporate bonds	17.3%	15.6%	16.3%
covered bonds	8.6%	7.8%	7.7%
residential mortgage-backed	1.7%	1.3%	1.6%
commercial mortgage-backed	0.3%	0.3%	0.2%
other asset-backed	1.7%	1.5%	1.2%
CDO, CLN, CLO, etc	1.7%	1.3%	1.2%
convertible bonds	0.3%	1.2%	1.4%
equity	10.0%	17.4%	10.3%
other	1.1%	0.9%	1.2%



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

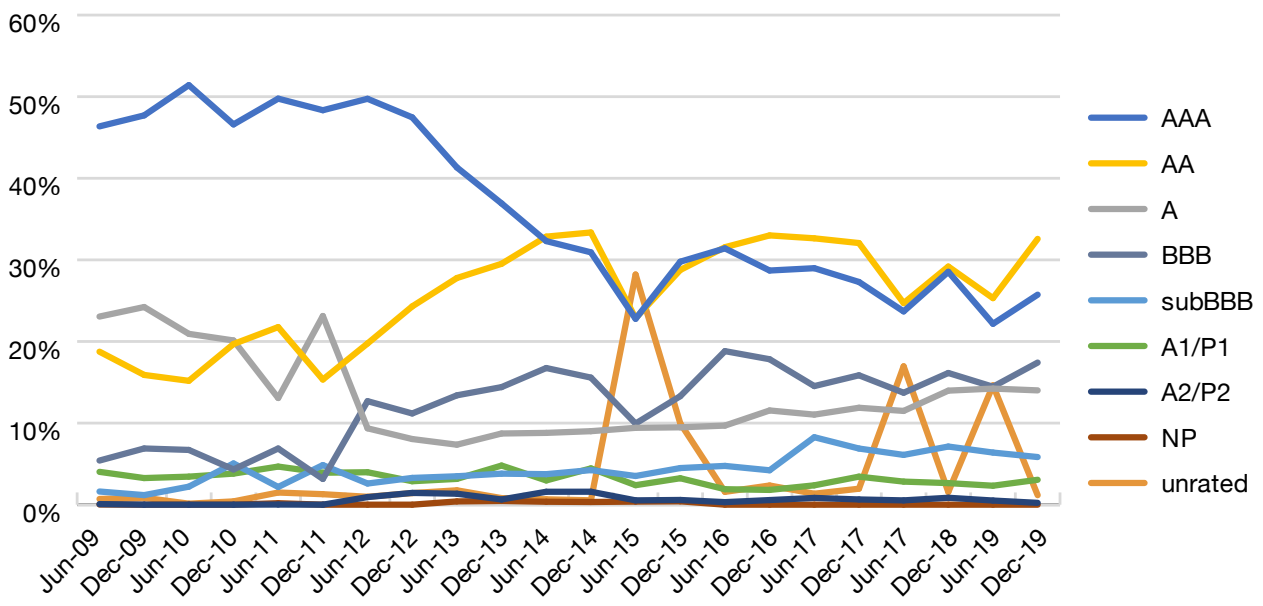


Figure 2.10 - Collateral analysis (tri-party agents) by type of asset

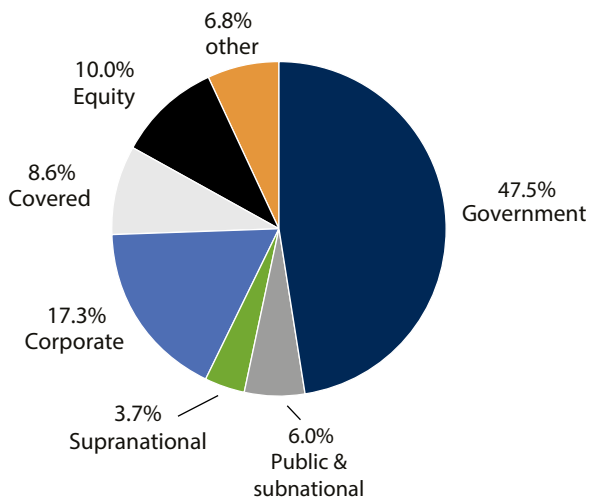
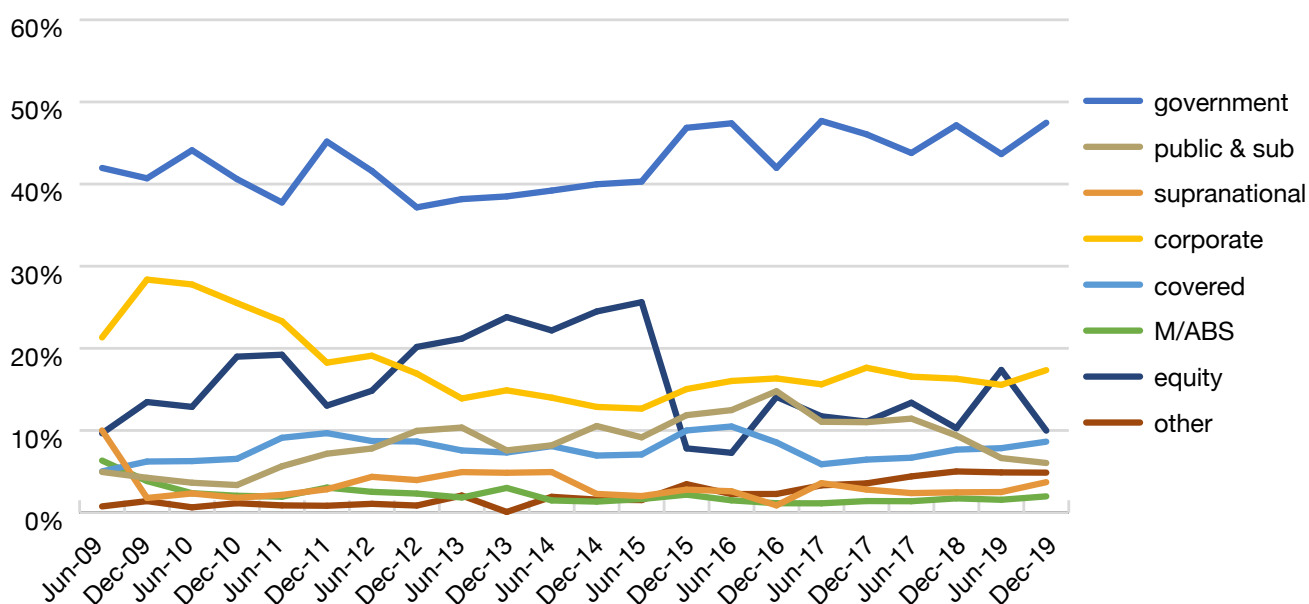


Figure 2.11 – Historic collateral analysis (tri-party agents) by type of asset



Haircut data were not available for the latest survey.

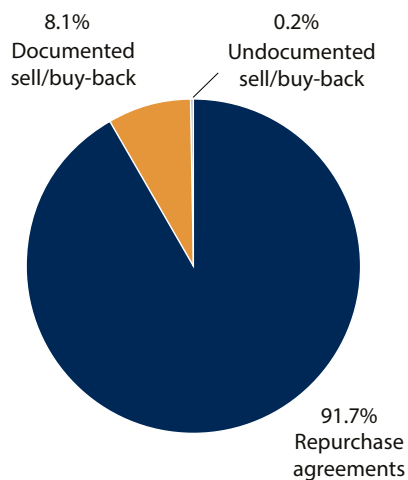
Table 2.11 – Tri-party repo collateral haircuts analysed by type of asset

(weighted average haircuts)	December 2019*	June 2019	December 2018
government securities		2.3%	2.6%
public agencies / sub-national governments		2.8%	2.7%
supranational agencies		1.9%	2.7%
corporate bonds (financial)		5.8%	5.6%
corporate bonds (non-financial)			
covered bonds		2.6%	3.4%
residential mortgage-backed		6.8%	6.5%
commercial mortgage-backed			
other asset-backed		3.1%	4.8%
CDO, CLN, CLO, etc		6.0%	5.1%
convertible bonds		1.8%	5.9%
equity		4.4%	7.0%
other		3.8%	2.6%

\*Figures not published for December 2019 as insufficient data was received in the survey

## Contract analysis (Q1.5)

Figure 2.12 - Contract analysis



In the latest survey, respondents were again asked to report the total number of repo master agreements which they had in place and the number of these agreements which were the ICMA's Global Master Repurchase Agreement (GMRA). Among the banks that responded, some 71% were GMRAs.

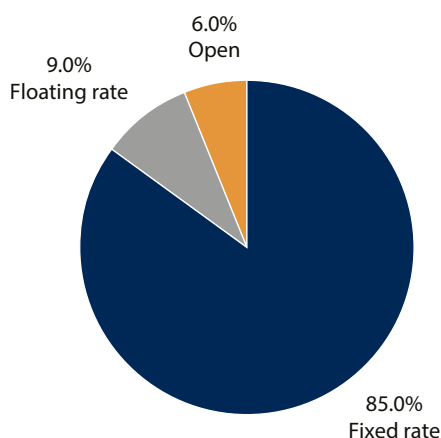
The increase in the share of buy/sell-backs in the latest survey probably reflects the impact of the new entrants.

Table 2.12 – Contract comparison in December 2018 (June 2018)

	main survey	ATS	tri-party
repurchase agreements	91.7% (92.4%)	88.4% (90.9%)	100.0% (100.0%)
documented sell/buy-backs	8.1% (7.3%)	11.6% (9.1%)	
undocumented sell/buy-backs	0.2% (0.2%)		

## Repo rate analysis (Q1.6)

Figure 2.13 - Repo rate analysis



Floating-rate repo dropped sharply in the latest survey. The general fall in the share of floating-rate repo reflected the decision by the European Repo and Collateral Council to recommend that the inter-dealer repo market should avoid transacting repos linked to overnight indices such as ESTR, EONIA and SONIA, which are not published until the morning after the date for which they are fixed. This means the repurchase price for such floating-rate repos has to

be calculated and settlement instructed before the publication of the final fixing of the overnight index. Typically, parties re-use the previous day's index fixing in order to estimate the repurchase price. But, if the actual fixing turns out to be materially different to the repeated fixing, one party needs to retrospectively compensate the other for the discrepancy. The operational cost of retrospective compensation makes such repos uneconomic for inter-dealer trading, as this business tends to be high frequency. However, dealers continue to transact repos linked to overnight indices with customers. It is significant that, compared to the survey sample, the drop in the share of floating-rate repo was even sharper in directly-reported electronic repo but that there was little change in the share of floating-rate transactions in tri-party repo. These differences are likely to reflect the inter-dealer nature of electronic repo and the largely customer-driven nature of tri-party repo.

**Table 2.13 – Repo rate comparison in December 2019 (June 2019)**

	main survey	ATS	tri-party
fixed rate	85.0% (79.0%)	97.1% (78.7%)	14.0% (17.1%)
floating rate	9.0% (14.1%)	2.9% (21.3%)	7.3% (7.4%)
open	6.0% (6.9%)		78.7% (75.5%)

## Maturity analysis (Q1.7)

**Table 2.14 – Maturity analysis**

	December 2019	June 2019	December 2018
open	9.6%	6.6%	5.8%
1 day	16.9%	17.1%	18.5%
2 days to 1 week	17.3%	18.4%	17.2%
1 week to 1 month	16.8%	18.0%	14.5%
>1 month to 3 months	13.3%	11.1%	16.0%
>3 months to 6 months	4.7%	4.6%	3.8%
>6 months to 12 months	5.1%	3.2%	3.3%
>12 months	3.4%	2.5%	1.4%
forward-start	12.9%	18.5%	19.5%

**Figure 2.14 – Maturity analysis (main survey)**

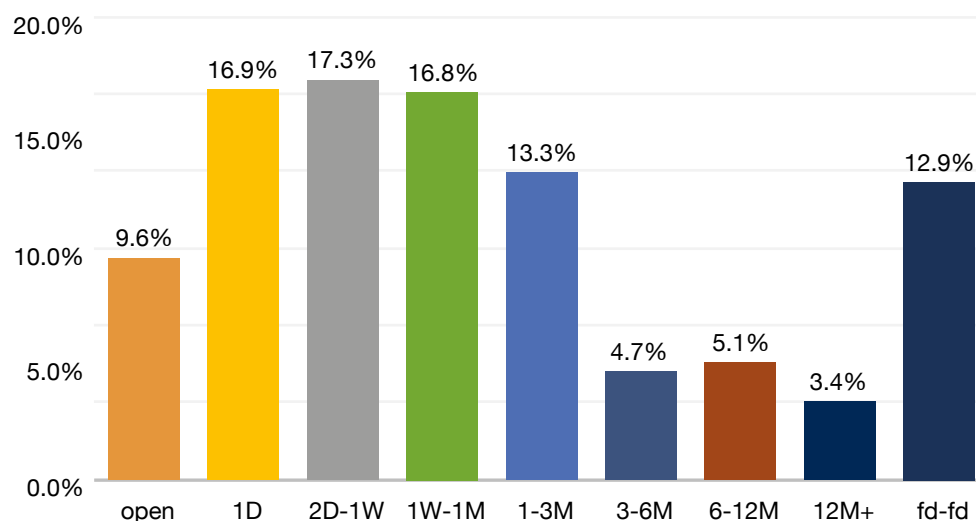


Figure 2.15 – Maturity analysis: short dates, longer terms & forwards (main survey)

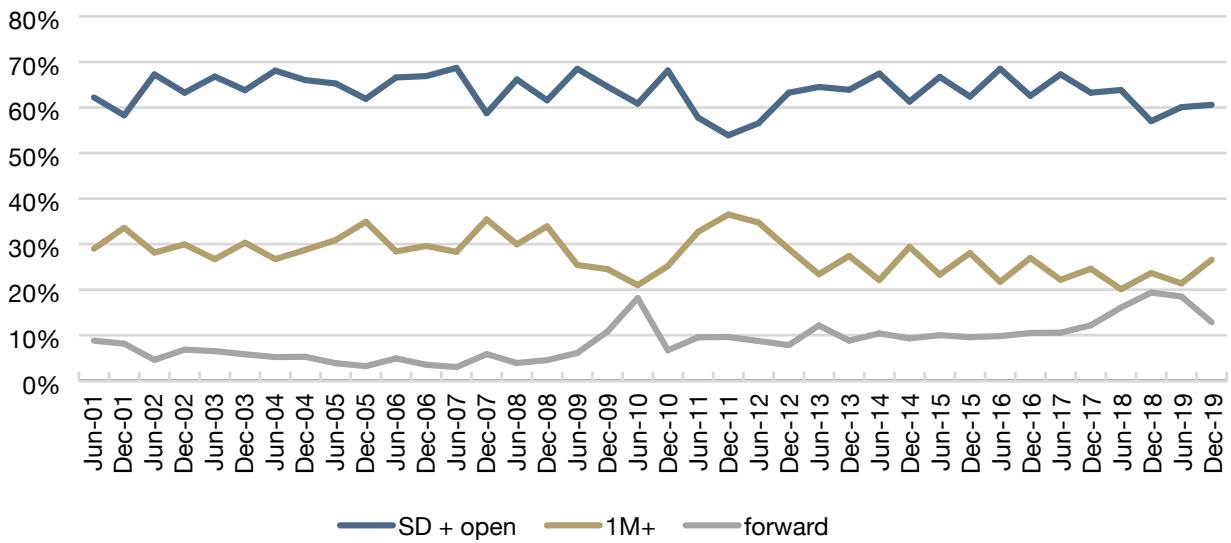
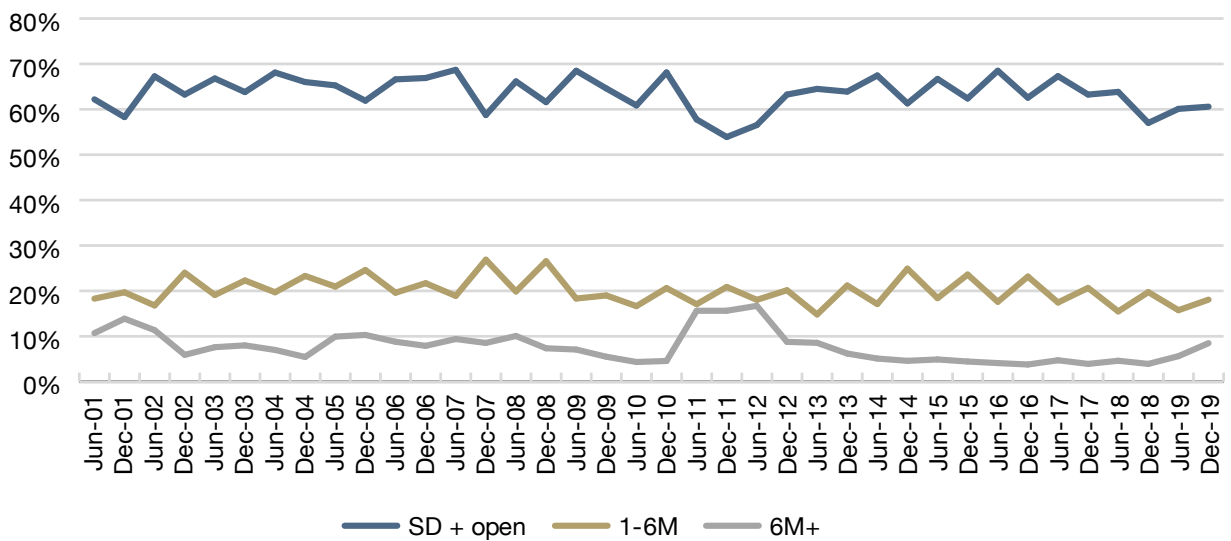
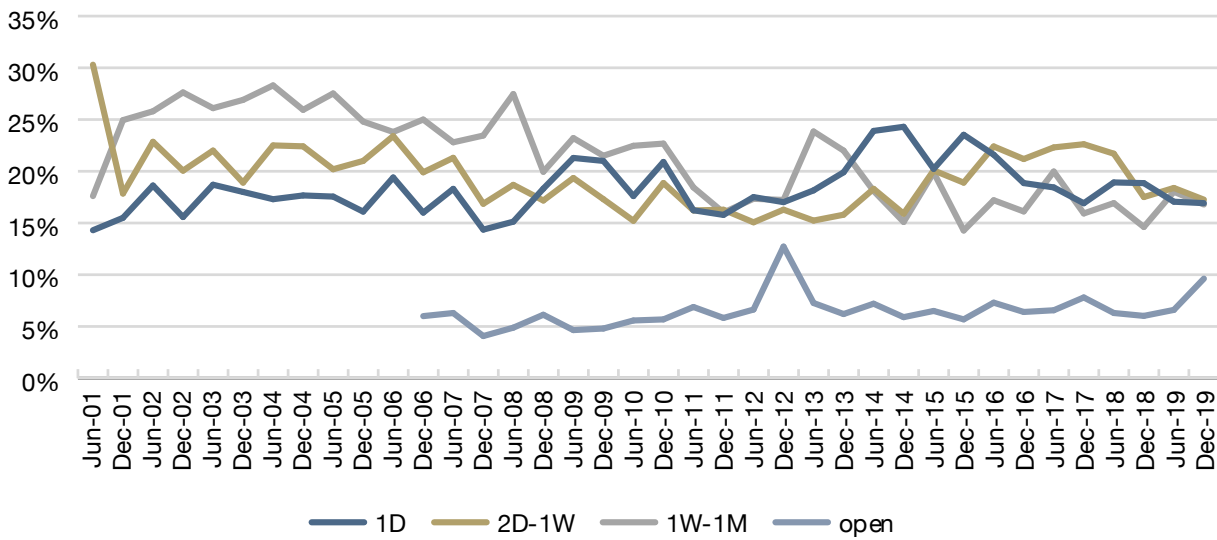


Figure 2.16 – Maturity analysis: non-forward terms (main survey)

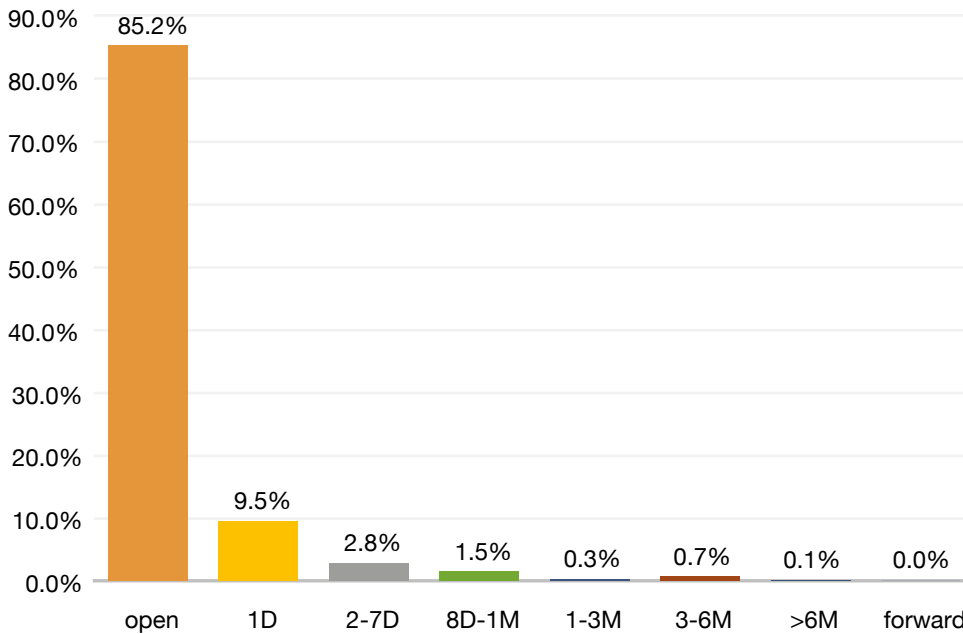


**Figure 2.17 – Maturity analysis: breakdown of short dates plus open (main survey)**



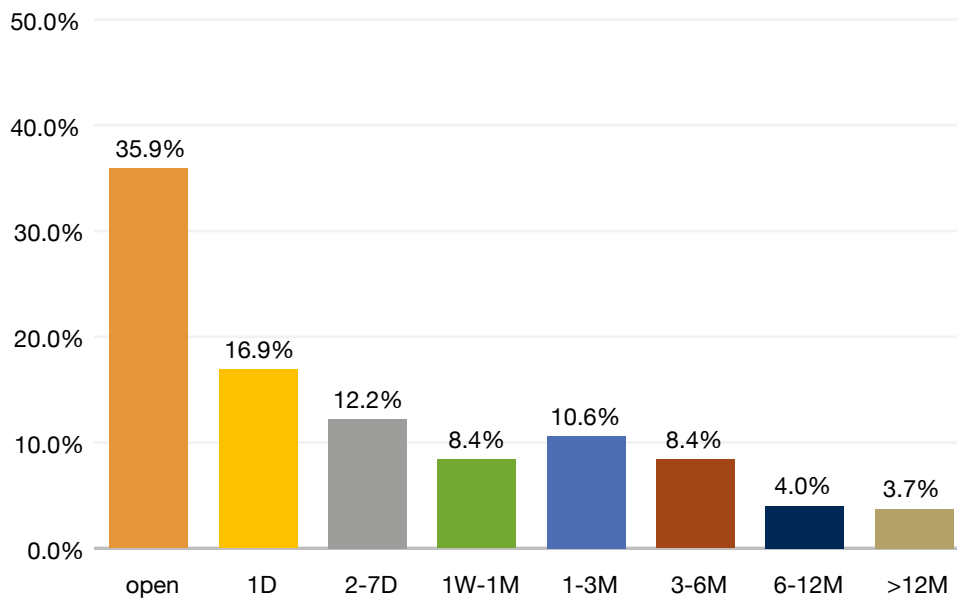
The share of short-dated repos (one month or less remaining to maturity) fell back to 51.0% from 53.5% in a typically seasonal change. Maturities beyond one month increased share, perhaps reflecting demand for high-quality liquid assets to meet regulatory liquidity ratios at year-end. The survey sample as a whole was a net-taker of collateral beyond one month. The weighted average term to maturity lengthened significantly again, reaching 37-83 days from 30-69 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). But the most significant change in the latest survey was a large drop in the share of forward repos to 12.9% from 18.5% (the lowest since 2017). However, this drop is inconsistent with the increase in the share of voice-brokers, for whom forward repos are a key part of their business.

**Figure 2.18 – Maturity analysis (ATS)**





**Figure 2.19 – Maturity analysis (tri-party agents)**



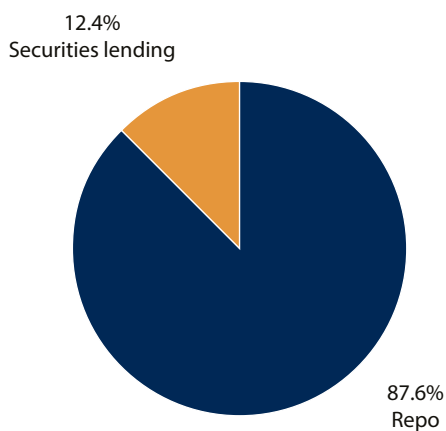
**Table 12.15 – Maturity comparison in December 2019 (June 2019)**

	main survey	ATS	tri-party
<b>open</b>	9.6% (6.6%)		35.9% (49.4%)
<b>1 day</b>	16.9% (17.1%)	85.2% (-)	16.9% (13.1%)
<b>2 days to 1 week</b>	17.3% (18.4%)	9.5% (89.8%)	12.2% (6.2%)
<b>1 week to 1 month</b>	16.8% (18.0%)	2.8% (1.1%)	8.4% (10.2%)
<b>&gt;1 month to 3 months</b>	13.3% (11.1%)	1.5% (4.8%)	10.6% (8.4%)
<b>&gt;3 months to 6 months</b>	4.7% (4.6%)	0.3% (2.5%)	8.4% (7.5%)
<b>&gt;6 months to 12 months</b>	5.1% (3.2%)	0.7% (0.7%)	4.0% (2.3%)
<b>&gt;12 months</b>	3.4% (2.5%)	0.1% (0.5%)	3.7% (3.0%)
<b>forward-start</b>	12.9 (18.5%)	0.0% (0.5%)	

## Product analysis (Q2)

The share of securities lending conducted on repo desks was largely unchanged at 12.4%.

**Figure 2.20 - Product analysis**

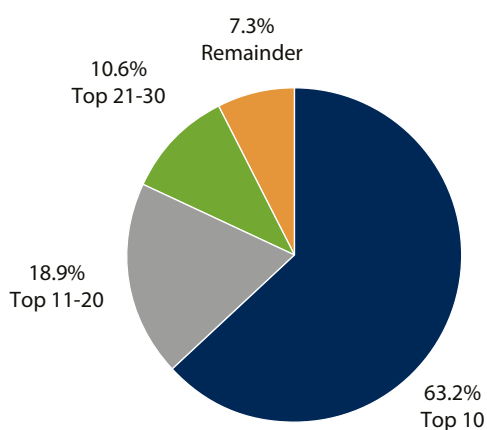


## Concentration analysis

**Table 2.16 – Concentration analysis**

	December 2019	June 2019	December 2018
top 10	63.2%	61.4%	67.7%
top 20	82.1%	83.1%	86.3%
top 30	92.7%	93.3%	95.0%
other	7.3%	6.7%	5.0%

**Figure 2.21 - Concentration analysis**



The concentration of business within the top 10 survey participants increased, reflecting the role of some of the largest institutions in the growth of the market.

**Table 2.17 – Herfindahl Index<sup>1</sup>**

	<b>index</b>	<b>numbers in survey</b>
<b>December 2003</b>	0.045	76
<b>June 2004</b>	0.040	81
<b>December 2004</b>	0.047	76
<b>June 2005</b>	0.043	81
<b>December 2005</b>	0.043	80
<b>June 2006</b>	0.042	79
<b>December 2006</b>	0.050	74
<b>June 2007</b>	0.041	76
<b>December 2007</b>	0.040	68
<b>June 2008</b>	0.044	61
<b>December 2008</b>	0.049	61
<b>June 2009</b>	0.051	61
<b>December 2009</b>	0.065	58
<b>June 2010</b>	0.105	57
<b>December 2010</b>	0.064	57
<b>June 2011</b>	0.074	58
<b>December 2011</b>	0.065	64
<b>June 2012</b>	0.062	62
<b>December 2012</b>	0.054	71
<b>June 2013</b>	0.046	65
<b>December 2013</b>	0.046	67
<b>June 2014</b>	0.046	65
<b>December 2014</b>	0.043	67
<b>June 2015</b>	0.044	65
<b>December 2015</b>	0.041	72
<b>June 2016</b>	0.050	67
<b>December 2016</b>	0.056	65
<b>June 2017</b>	0.052	64
<b>December 2017</b>	0.049	64
<b>June 2018</b>	0.053	62
<b>December 2018</b>	0.060	58
<b>June 2019</b>	0.054	55
<b>December 2019</b>	0.059	58

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

## Chapter 3: Conclusion

The European repo market, as represented by the survey sample, has resumed its recovery from the period of the European sovereign debt crisis. Anecdotal evidence suggests the growth in the market size has been accompanied by the general compression of bid/offer spreads and haircuts, which signals increased competition among dealers for customer business. The growth would also suggest that institutions are more confident of their ability to manage post-crisis regulation and year-end pressures. [A report by ICMA](#) on the state of the repo market observed a relatively muted end to 2019, in contrast to previous year-ends.

As regards the management of year-end pressures, the sharp fall in the share of forward repos could be significant, as they are believed to have been used to lock in cash and collateral ahead of the year-end.

Increased use of tri-party repo and general collateral (GC) financing facilities among the survey sample supports anecdotal evidence about the growth of customer business. It also suggests there has been little overall impact on the repo market of policy measures such as the tiering of the ECB deposit facility from September (whereby deposits up to six times the minimum reserve requirement are now interest-free rather than being subject to a negative rate), the restarting of quantitative easing by the ECB in November and the renewal of the Targeted Longer-Term Refinancing Operations programme (TLTRO). However, central bank purchases may have contributed to the reduced share of eurozone government securities.

## About the Author

This report was compiled by Richard Comotto, who is Senior Consultant to the ICMA's European Repo and Collateral Council on repo. He is also author of the ICMA's 'Guide to Best Practice in the European Repo Market' and its Repo FAQs; Course Director of the ICMA Professional Repo Market Course and of the ICMA-ISLA GMRA-GMSLA Workshop; and author of the ICMA SFTR Task Force's Reporting Recommendations.

# Appendix A: Survey Guidance Notes

The following extract is based on the Guidance Notes issued to participants in conjunction with the survey that took place on December 11, 2019.

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, December 11, 2019, and various breakdowns of these amounts, as well as the total value of all repos and reverse repos turned over the six months since the previous survey (which was on June 5, 2019).

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. simultaneous 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, December 11, 2019*. This means the value of transactions at their repurchase prices.
- h) "Outstanding" means repos and reverse repos with a repurchase date, or which will roll over, on or after Thursday, December 12, 2019. You should include all open repos and reverse repos that have been rolled over from Wednesday, December 11, 2019, to a later date and all *forward-forward repos and reverse repos* that are still outstanding as forward contracts at close on Wednesday, December 11, 2019.
- i) Give separate totals for (a) repos plus sell/buy-backs and (b) reverse repos plus buy/sell-backs.
- j) The survey seeks to measure the value of repos and reverse repos on a *transaction date basis*, rather than a purchase date basis. This means that you should include all repo and reverse repo contracts that have been agreed **before** close of business on Wednesday, December 11, 2019, 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.
- m) You should include *intra-group* transactions between different legal entities or between foreign branches and the parent company.



## 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 or semi-automatic trading systems (e.g. BrokerTec, Eurex Repo, MTS and tpREPO) but not voice-assisted electronic systems used by voice-brokers (where voice-brokers record and communicate transactions agreed by telephone or electronic messaging) or automated systems such as GMLX or TradeWeb (which offer a request-for-quote (RFQ) trading model). Nor does use of an ATS include trading assisted by electronic means of structured messages and confirmations such as Bloomberg’s RRRRA and similar screens.
- 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, MEFF and Eurex Clearing) should be recorded in either (1.1.3.4) or (1.1.3.5). (1.1.3.4) is for GC financing systems. These are ATS that are connected to a CCP **and** a tri-party repo service. Examples include Eurex Repo Euro GC Pooling (EGCP), LCH SA’s €GCPlus and LCH Ltd’s £GC. They do not include GC basket trading on ATS in which the seller manually selects the securities to be delivered from a list prescribed by the 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).
- (1.2.1) 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.
- (1.2.2) Questions (1.1.3.1) to (1.1.3.5) measure repos and reverse repos transacted on automatic or semi-automatic trading systems such as BrokerTec, Eurex Repo, MTS and tpREPO, but not voice-assisted electronic systems used by voice-brokers (where voice-brokers record and communicate transactions agreed by telephone or electronic messaging) or automated systems such as GMLX or TradeWeb (which offer a request-for-quote (RFQ) trading model). This question asked for the total value of business transacted on any electronic trading system, whether automatic, semi-automatic or automated, and therefore including automated systems such as GMLX or TradeWeb, which offer a request-for-quote (RFQ) trading model. Electronic trading is defined in terms of where the contract is executed and so does **not** include voice-assisted electronic systems used by voice-brokers or trading assisted by electronic means of structured messages and confirmations such as Bloomberg’s RRRRA and similar screens.
- 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, December 11, 2019, with a repurchase date on Thursday, December 12, 2019;
  - overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, December 11, 2019.
- (1.7.1.2) 2–7 days – this means:
- all contracts transacted prior to Wednesday, December 11, 2019, with a repurchase date on Friday, December 13, 2019, or any day thereafter up to and including Wednesday, December 18, 2019;
  - contracts transacted on Wednesday, December 11, 2019, with an original repurchase date on Friday, December 13, 2019, or any day thereafter up to and including Wednesday, December 18, 2019 (irrespective of the purchase date, which will vary).
- (1.7.1.3) More than 7 days but no more than 1 month – this means:
- all contracts transacted prior to Wednesday, December 11, 2019, with a repurchase date on Thursday, December 19, 2019, or any day thereafter up to and including Monday, January 13, 2020;
  - contracts transacted on Wednesday, December 11, 2019, with an original repurchase date on Thursday, December 19, 2019, or any day thereafter up to and including Monday, January 13, 2020 (irrespective of the purchase date, which will vary).
- (1.7.1.4) More than 1 month but no more than 3 months – this means:
- all contracts transacted prior to Wednesday, December 11, 2019, with a repurchase date on Tuesday, January 14, 2020, or any day thereafter up to and including Wednesday, March 11, 2020;
  - contracts transacted on Wednesday, December 11, 2019, with an original repurchase date on Tuesday, January 14, 2020, or any day thereafter up to and including Wednesday, March 11, 2020 (irrespective of the purchase date, which will vary).
- (1.7.1.5) More than 3 months but no more than 6 months – this means:
- all contracts transacted prior to Wednesday, December 11, 2019, with a repurchase date on Thursday, March 12, 2020, or any day thereafter up to and including Thursday, June 11, 2020;
  - contracts transacted on Wednesday, December 11, 2019, with an original repurchase date on Thursday, March 12, 2020, or any day thereafter up to and including Thursday, June 11, 2020 (irrespective of the purchase date, which will vary).
- (1.7.1.6) More than 6 months but no more than 12 months – this means;
- all contracts transacted prior to Wednesday, December 11, 2019, with a repurchase date on Friday, June 12, 2020, or any day thereafter up to and including Friday, December 11, 2020;
  - contracts transacted on Wednesday, December 11, 2019, with an original repurchase date on Friday, June 12, 2020, or any day thereafter up to and including Friday, December 11, 2020 (irrespective of the purchase date, which will vary).
- (1.7.1.7) More than 12 months – this means;
- all contracts transacted prior to Wednesday, December 11, 2019, with a repurchase date on Monday, December 14, 2020, or any day thereafter;
  - contracts transacted on Wednesday, December 11, 2019, with an original repurchase date on or after Monday, December 14, 2020 (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 traded or which it is possible to trade on a MiFIR-regulated trading venue (regulated market, multilateral trading facility or organised trading facility), which are subject to the settlement requirements of the EU CSDR, forward-forward repos are defined for the purposes of this survey as contracts with a purchase date of Monday, December 9, 2019, 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, December 12, 2019). For repos transacted in the OTC market or against collateral not regulated under CSDR, 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 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.

(1.8.1) and (1.8.2) should not include any repos transacted across GC financing systems and recorded in (1.8.3).

- 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” such as:

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)

Council of Europe Development Bank

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)

In addition, securities issued by the EU should be included.

(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.

- 2.1 This question asks for the total gross value of transactions with a transaction date on or after June 6, 2019 (the day after the previous survey date), to and including December 11, 2019 (the latest survey date). In other words, it asks for the **turnover** or flow of business over the six month interval and includes all business transacted since the last survey date, even if it has matured before the survey date. This section is therefore different from the rest of the survey, which asks for the value of business outstanding on the survey date, in other words, the stock of transactions.
- 2.2 This question asks for the **number** of individual transactions with a transaction date on or after June 6, 2019 (the day after the previous survey date), to and including December 11, 2019 (the latest survey date), even if it has matured before the survey date. In other words, this is the number of tickets written.
- 3 “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.
- 4.1 “Active” means about once a week or more often.

## For further help and information

If, having read the Guidance Notes, you have any further queries, please e-mail the ICMA Centre at [reposurvey@icmagroup.org](mailto:reposurvey@icmagroup.org). 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

List of respondents	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	Dec-16	Jun-17	Dec-17	Jun-18	Dec-18	Jun-19	Dec-19
ABN Amro Bank				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			
AXA Bank Europe	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	x	x		x			
Banca d'Intermediazione Mobiliare (IMI)								x	x	x	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
Banco BPI								x	x	x	x	x	x	x	x	x	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	
Bank Austria (also known as UniCredit Bank Austria)								x		x	x	x	x	x	x	x	x	x	x	x
Bank fuer Arbeit und Wirtschaft und Oesterreichische Postsparkasse (Bawag)	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x
Bank of Ireland	x	x	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														
Landesbank Berlin	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
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												
BHF-Bank International	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	x
Bundesrepublik Deutschland Finanzagentur	x	x	x	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	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								
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
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		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	x	x	x
Daiwa Securities SMBC Europe	x	x	x	x	x	x	x	x	x	x	x	x								
Dekabank Deutsche Girozentrale						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
DNB Bank ASA												x	x	x	x	x	x	x	x	x
Deutsche Bank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Deutsche Postbank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			

List of respondents	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	Dec-16	Jun-17	Dec-17	Jun-18	Dec-18	Jun-19	Dec-19
Belfius Bank (formerly Dexia)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Banque Internationale Luxembourg (formerly Dexia BIL)														x	x		x			x
Dexia Kommunal Bank Deutschland	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
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		
Hypothekenbank Frankfurt International (formerly Eurohypo Europäische Hypothekenbank)	x	x	x	x	x	x	x	x	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	
HSBC																				
HSBC Athens	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
HSBC France																				
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	x	x					
ING Bank		x	x	x	x	x	x	x	x	x	x	x	x	x						
Intesa SanPaolo	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Jefferies International Ltd				x		x	x	x	x	x	x	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	x	x
KfW			x	x		x	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		
Landesbank Baden-Württemberg, Stuttgart	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					
Lloyds Bank Commercial Banking																		x	x	x
Lloyds Bank Plc															x	x	x	x	x	x
Macquarie Bank			x	x	x	x	x	x	x	x	x	x	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	x
Mitsubishi Securities International	x	x	x	x	x	x			x	x	x			x	x	x	x	x	x	x
Mizuho International	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Morgan Stanley	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x
National Australia Bank													x							
National Bank of Greece														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	x	x
Nordea Markets	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	x	x	x
Nova Ljubljanska Banka d.d.		x	x	x	x	x	x	x		x			x	x	x	x		x	x	x



<b>List of respondents</b>	<b>Jun-10</b>	<b>Dec-10</b>	<b>Jun-11</b>	<b>Dec-11</b>	<b>Jun-12</b>	<b>Dec-12</b>	<b>Jun-13</b>	<b>Dec-13</b>	<b>Jun-14</b>	<b>Dec-14</b>	<b>Jun-15</b>	<b>Dec-15</b>	<b>Jun-16</b>	<b>Dec-16</b>	<b>Jun-17</b>	<b>Dec-17</b>	<b>Jun-18</b>	<b>Dec-18</b>	<b>Jun-19</b>	<b>Dec-19</b>		
Nykredit Bank A/S																					x	
Piraeus Bank													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	x	x
Royal Bank of Canada				x		x			x	x	x	x	x	x	x	x	x	x	x	x	x	x
NatWest Markets (formerly Royal Bank of Scotland)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
RBI	x			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	x	x
Standard Chartered																						x
Toronto Dominion Bank							x	x		x	x	x	x	x	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	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	x	x
Westdeutsche Landesbank Girozentrale			x																			
entry	5	3	5	10	5	9	8	4	2	4	0	7	1	2	4	3	3	2	0	4		
exit	6	3	4	4	7	0	2	2	4	2	2	0	6	3	5	3	5	6	3	2		
	<b>57</b>	<b>57</b>	<b>58</b>	<b>64</b>	<b>62</b>	<b>71</b>	<b>65</b>	<b>67</b>	<b>65</b>	<b>67</b>	<b>65</b>	<b>72</b>	<b>67</b>	<b>65</b>	<b>64</b>	<b>64</b>	<b>62</b>	<b>58</b>	<b>55</b>	<b>57</b>		

## Appendix C: Summary Of Survey Results

	Dec-15	Dec-16	Dec-17	Dec-18	Jun-19	Dec-19
<b>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)</b>	<b>5,608</b>	<b>5,656</b>	<b>7,250</b>	<b>7,846</b>	<b>7,761</b>	<b>8,310</b>
<b>Of the amounts given in response to question (1) above:</b>						
<b>1.1 How much was transacted:</b>						
<b>direct</b> with counterparties						
• in the <b>same country</b> as you	14.2%	13.7%	16.2%	16.5%	17.2%	16.3%
• cross-border in (other) <b>eurozone countries</b>	12.3%	11.6%	11.6%	10.3%	12.0%	10.2%
• cross-border in <b>non-eurozone countries</b>	28.4%	35.4%	35.4%	32.9%	32.3%	34.7%
through <b>voice-brokers</b>						
• in the <b>same country</b> as you	5.3%	5.5%	5.7%	4.7%	4.0%	5.1%
• cross-border in (other) <b>eurozone countries</b>	3.0%	3.0%	3.1%	3.3%	3.1%	3.0%
• cross-border in <b>non-eurozone countries</b>	3.4%	2.0%	3.4%	2.8%	1.0%	1.8%
on <b>ATs</b> with counterparties						
• in the <b>same country</b> as you	5.0%	4.1%	4.0%	5.4%	4.2%	4.9%
• cross-border in (other) <b>eurozone countries</b>	3.3%	2.8%	1.7%	1.9%	1.9%	1.2%
• cross border-border in <b>non-eurozone countries</b>	1.4%	1.3%	1.7%	2.0%	1.9%	1.7%
• anonymously across a GC financing system	4.0%	1.8%	0.9%	1.1%	1.1%	0.9%
• anonymously across a central clearing counterparty but not GC financing	19.6%	18.9%	16.2%	19.3%	21.1%	20.2%
• total through a central clearing counterparty	31.0%	27.4%	26.4%	27.2%	25.9%	29.9%
<b>1.2 How much of the cash is denominated in:</b>						
• EUR	63.2%	61.8%	60.9%	60.5%	62.0%	53.6%
• GBP	12.4%	11.3%	12.3%	12.4%	13.3%	13.6%
• USD	16.0%	18.8%	14.7%	19.4%	17.0%	18.9%
• SEK, DKK	2.4%	2.1%	5.9%	1.6%	1.7%	1.9%
• JPY	5.0%	4.8%	4.5%	4.5%	4.5%	5.4%
• CHF	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
• other Asian and Pacific currencies		0.5%	0.4%	0.6%	0.4%	0.9%

	Dec-15	Dec-16	Dec-17	Dec-18	Jun-19	Dec-19
• other currencies	0.9%	0.7%	1.2%	1.0%	1.0%	5.6%
<b>1.3 How much is cross-currency?</b>	2.6%	1.8%	1.4%	2.5%	1.5%	1.7%
<b>1.4 How much is:</b>						
• classic repo	83.9%	85.2%	86.0%	93.1%	92.4%	91.7%
• documented sell/buy-backs	15.6%	14.6%	13.8%	6.7%	7.3%	8.1%
• undocumented sell/buy-backs	0.6%	0.2%	0.2%	0.2%	0.2%	0.2%
<b>1.5 How much is:</b>						
• fixed rate	83.8%	81.4%	80.6%	80.7%	79.0%	85.0%
• floating rate	10.6%	12.1%	13.2%	13.1%	14.1%	9.0%
• open	5.6%	6.4%	6.2%	6.1%	6.9%	6.0%
<b>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:</b>						
• 1 day	23.5%	18.9%	16.9%	18.9%	17.1%	16.9%
• 2 - 7days	18.9%	21.2%	22.6%	17.5%	18.4%	17.3%
• more than 7 days but no more than 1 month	14.3%	16.1%	15.9%	14.6%	18.0%	16.8%
• more than 1 month but no more than 3 months	18.9%	18.9%	16.3%	16.1%	11.1%	13.3%
• more than 3 months but no more than 6 months	4.7%	4.3%	4.4%	3.6%	4.6%	4.7%
• more than 6 months	2.8%	2.5%	2.5%	2.5%	3.2%	5.1%
• more than 12 months	1.7%	1.3%	1.5%	1.4%	2.5%	3.4%
• forward-forward repos	9.6%	10.5%	12.2%	19.3%	18.5%	12.9%
• open	5.7%	6.4%	7.8%	6.0%	6.6%	9.6%
<b>1.7 How much is tri-party repo:</b>	11.0%	12.0%	8.6%	6.9%	8.0%	8.7%
• for fixed terms to maturity	94.2%	76.5%	87.9%	79.6%	82.4%	78.1%
• on an open basis	5.8%	6.9%	3.7%	8.0%	6.6%	6.3%
GCF		16.7%	8.4%	12.4%	10.9%	15.6%
<b>1.8 How much is against collateral issued in:</b>						
Austria						
• by the central government	0.8%	0.8%	0.7%	0.9%	0.8%	0.8%
• by other issuers	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%

	<b>Dec-15</b>	<b>Dec-16</b>	<b>Dec-17</b>	<b>Dec-18</b>	<b>Jun-19</b>	<b>Dec-19</b>
Belgium						
• by the central government	2.0%	2.3%	2.0%	3.0%	3.1%	2.8%
• by other issuers	0.9%	0.7%	1.0%	0.7%	0.4%	0.3%
Denmark						
• by the central government	0.4%	0.3%	0.4%	0.2%	0.2%	0.4%
• by other issuers	1.0%	0.5%	1.0%	0.4%	0.5%	0.5%
Finland						
• by the central government	0.4%	0.3%	0.4%	0.5%	0.5%	0.3%
• by other issuers	0.1%	0.0%	0.0%	0.1%	0.0%	0.3%
France						
• by the central government	9.3%	11.1%	12.2%	12.6%	13.2%	12.0%
• by other issuers	1.6%	1.0%	1.0%	1.0%	0.8%	1.0%
Germany						
• by the central government	16.5%	18.8%	17.9%	15.2%	15.0%	12.3%
pfandbrief	0.7%	0.7%	0.7%	0.9%	0.1%	0.3%
• by other issuers	2.9%	1.4%	1.0%	1.0%	1.3%	0.9%
Greece						
• by the central government	0.0%	0.1%	0.1%	0.2%	0.2%	0.3%
• by other issuers	0.0%	0.1%	0.1%	0.2%	0.1%	0.1%
Ireland						
• by the central government	0.3%	0.2%	0.1%	0.2%	0.3%	0.3%
• by other issuers	0.9%	0.1%	0.1%	0.2%	0.3%	0.3%
Italy						
• by the central government	8.4%	10.4%	11.2%	12.2%	14.2%	13.7%
• by other issuers	1.3%	0.4%	0.6%	0.8%	0.6%	0.4%
Luxembourg						
• by the central government	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%
• by other issuers	0.3%	0.3%	0.2%	0.3%	0.1%	0.2%
Netherlands						
• by the central government	1.8%	2.1%	1.5%	1.8%	1.7%	1.0%
• by other issuers	0.6%	0.4%	0.2%	0.3%	0.2%	0.2%
Portugal						
• by the central government	0.5%	0.4%	0.4%	0.5%	0.5%	0.5%
• by other issuers	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%
Spain						
• by the central government	4.9%	4.1%	4.0%	4.0%	4.6%	5.0%
• by other issuers	2.0%	1.1%	1.4%	1.0%	0.7%	0.8%

	Dec-15	Dec-16	Dec-17	Dec-18	Jun-19	Dec-19
Sweden						
• by the central government	0.9%	0.9%	2.9%	0.6%	0.6%	0.4%
• by other issuers	0.7%	0.9%	1.9%	0.7%	0.7%	0.4%
UK						
• by the central government	10.6%	10.0%	12.1%	11.0%	11.9%	13.4%
• by other issuers	2.3%	1.8%	1.6%	1.7%	1.3%	1.2%
US Treasury	5.1%	7.9%	4.6%	8.8%	6.4%	8.8%
US other issuers	1.0%	2.2%	1.2%	2.6%	2.1%	2.4%
US but settled across EOC/CS						
<b>other countries</b>						
Bulgaria						
• by the central government						
• by other issuers						
Cyprus						
• by the central government						
• by other issuers						
Czech Republic						
• by the central government	0.0%	0.1%	0.1%	0.2%	0.1%	0.1%
• by other issuers	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
Estonia						
• by the central government						
• by other issuers						
Hungary						
• by the central government	0.0%	0.1%	0.0%	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						
• by other issuers						
Lithuania						
• by the central government						
• by other issuers						
Malta						
• by the central government						
• by other issuers						
Poland						
• by the central government	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%
• by other issuers	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
Romania						

	Dec-15	Dec-16	Dec-17	Dec-18	Jun-19	Dec-19
• by the central government						
• by other issuers						
Slovak Republic						
• by the central government						
• by other issuers						
Slovenia						
• by the central government						
• by other issuers						
Other EU members by central government	0.2%	0.1%	0.1	0.1%	0.1%	0.1%
Other EU members by other issuers	0.1%	0.0%	0.1	0.0%	0.0%	0.0%
• by official international financial institutions	2.1%	1.9%	0.1	0.7%	0.5%	0.5%
Japan						
• Japanese government	3.2%	2.8%	3.3	3.4%	3.6%	5.1%
• Other Japanese issuers	1.6%	1.5%	1.1	1.4%	0.2%	1.4%
Other Asian & Pacific OECD countries in the form of fixed income securities, except eurobonds		0.5%	0.8	0.4%	1.8%	1.4%
Other OECD countries in the form of fixed income securities, except eurobonds		4.1%	3.7	4.3%	4.8%	4.2%
other OECD	5.5%					
non-OECD EMEA	0.6%	0.6%	0.5	0.5%	0.7%	0.6%
non-OECD Asian & Pacific	0.6%	0.4%	0.3	0.4%	0.5%	0.6%
non-OECD Latin America	0.7%	0.5%	0.4	0.4%	0.5%	0.4%
eurobonds issued by European entities		1.1%	1	0.8%	0.8%	0.8%
eurobonds issued by US entities		0.1%	0.1	0.1%	0.1%	0.2%
eurobonds issued by Asian & Pacific entities		0.3%	0.3	0.3%	0.3%	0.5%
eurobonds issued by other entities		0.3%	0.3	0.3%	0.4%	0.4%
equity	0.1%	0.3%	0.2	0.2%	0.4%	0.3%
collateral of unknown origin or type	2.4%	1.6%	1.2	1.0%	0.6%	0.2%
collateral in tri-party which cannot be attributed to a country or issuer	4.8%	2.4%	2.3	1.3%	1.5%	1.6%

	Dec-15	Dec-16	Dec-17	Dec-18	Jun-19	Dec-19
<b>Q2 What is the total value of securities loaned and borrowed by your repo desk: to/from counterparties</b>						
in the <b>same country</b> as you						
• in fixed income	35.7%	24.7%	29.6%	22.3%	24.3%	20.4%
• in equity	0.4%	0.5%	0.3%	0.1%	0.8%	0.2%
• cross-border in (other) <b>eurozone</b> countries						
• in fixed income	35.0%	34.8%	29.7%	32.1%	34.1%	24.8%
• in equity	1.2%	1.5%	1.8%	1.3%	1.1%	0.2%
• cross-border in <b>non-eurozone</b> countries						
• in fixed income	26.9%	37.5%	37.2%	43.1%	37.8%	53.4%
• in equity	0.7%	1.1%	1.5%	1.1%	2.0%	1.0%
for which the term to maturity is						
<b>fixed</b>	66.7%	62.9%	66.9%	72.8%	69.2%	70.8%
<b>open</b>	33.3%	37.1%	33.1%	27.2%	30.8%	29.2%

## 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 to commence, dedicated repo or collateral market activity, is willing to abide by the rules and has sufficient professional expertise, financial standing and technical resources to meet its obligations as a member.

The 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 six or seven times a year.

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





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