ICMA
International Capital Market Association

International Capital Market Association European Repo Market Survey

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Disclaimer

This report has been compiled by Richard Comotto, Senior Consultant to ICMA.

Contents

Executive Summary

In December 2021, the European Repo and Collateral Council (ERCC) of the International Capital Market Association (ICMA) conducted the 42nd in its series of semi-annual surveys of the repo market in Europe.

The 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 8, 2021. Replies were received from 57 institutions, mainly banks. Returns were also made separately by the principal automatic repo trading systems (ATS) and tri-party agents in Europe, giving the size and composition of almost all automatic electronic repo trading and tri-party collateral management in Europe.

Total repo business

The total value of the repo contracts outstanding on the books of the 57 institutions who participated in the latest survey was a record **EUR 9,198 billion**, compared with EUR 8,726 billion in June. The latest total represents a rise in the headline number of 5.4% since June and 11.0% year-on-year.

Trading analysis

The share of voice-brokers recovered, largely at the expense of the ATS. In other words, ATS captured less of the growth in the survey than did voice-brokers, which would be indicative of a shift to OTC repo. However, there was strong growth in ATS business outside the survey sample, although not across all platforms.

In contrast to ATS, there were signs of weaker activity on automated repo trading systems, which are largely used for dealer-to-client business (whereas automatic systems execute interdealer business).

Tri-party repo staged a modest recovery.

Clearing and settlement analysis

The share of anonymous (CCP-cleared) repo trading by the survey sample declined, continuing the downward trend followed since June 2016. The share of post-trade clearing also declined but remained significant.

Cash currency analysis

The share of the euro in the survey recovered at the expense of all other currencies to reach its highest level since June 2019. However, the share of the euro in tri-party repo reported separately by the agents continued to retreat, touching a six-year low. The counterparts were further rises in the share of the US dollar and pound sterling.

Collateral analysis

There were increases in the shares of German and US government securities and, to a lesser extent, French and Japanese securities. However, the combined share of European collateral (UK plus EU) in the form of government securities diminished further. In trading on the ATS, there was a surge in activity in Italian government securities, while the shares of German, French and UK government securities fell back sharply.

The survey sample became a large net borrower of French, Italian and UK government securities and JGBs but a significant net lender of German, Spanish and US government securities.

In contrast to the rest of the market, there was growth in the share of government securities used as collateral in tri-party repo managed by the ICSDs due to a large increase in the allocation of French, German, Italian, UK and US government securities and German non-government issues (possibly agency securities). UK gilts provided the largest single share of the tri-party collateral pool.

Contract analysis

There was a significant increase in the share of the repo legal agreements in use by the survey participants which were Global Master Repurchase Agreements (GMRA).

Maturity analysis

The survey showed the usual end-year seasonality in the form of a rebound in the share of longer-dated repos and an increase in the weighted average term to maturity.

There was also a continuation of the switch that took place in June 2020 in the aggregate maturity transformation profile of the survey sample to a negative gap (borrowing short-term and lending longer-term). The size of the gap has become seasonal, tending to go more negative in June and less negative in December.

Product analysis

The share of securities lending conducted on repo desks continued its recent seasonal pattern by increasing to virtually the same level as in December 2020.

Concentration analysis

The concentration of business in the survey moderated, with the top 10 institutions ceding share to the next tiers.

Chapter 1: The Survey

On December 8, 2021, the European Repo and Collateral Council (ERCC) of the International Capital Market Association (ICMA) conducted the 42nd in its series of semi-annual surveys of the repo market in Europe, the first of which took place in June 2000.

The survey was carried out and the results analysed on behalf of ICMA by the author, Richard Comotto, under the guidance of the ERCC Council.

1.1 What the survey asked

The survey asked financial institutions operating in Europe for the value of the cash side of repos and reverse repos that were still outstanding at close of business on Wednesday, December 8, 2021 (in other words, the stock of live transactions on the survey date rather than the flow of transactions since the last survey). The survey covered all types of true repo (which means repurchase transactions, reverse repurchase transactions, buy/sell-backs and sell/buy-backs but not synthetic or pledge structures).

The survey also asked participating institutions to break down their data into repo and reverse repo; as well as by location of counterparty; method of execution; cash currency; type of contract; type of repo rate; remaining term to maturity; method of clearing and settlement; origin of collateral; and some other categories. In addition, institutions have been asked to report the outstanding value and composition of any securities lending and borrowing conducted from their repo desks. Since 2017, the survey has asked for the value of turnover since the previous survey and, since 2019, the legal agreements under which participants transacted repos.

The detailed results of the survey are set out in Appendix C. An extract of the accompanying Guidance Notes is reproduced in Appendix A.

In addition to the data provided by participating institutions, since 2003, data has also been provided separately by the principal automatic repo trading systems (ATS) and by the main tri-party repo agents in Europe. The latter have also reported tri-party securities lending since 2016. Members of the Wholesale Market Brokers' Association provided data between 2002 and 2017.

In an appendix to this report, there is a review by the author of the UK and EU SFTR public data published over 2021 (Appendix D).

1.2 The response to the survey

The latest survey was completed by 57 offices of 51 financial groups. The current total is two less than in the June 2021 survey as one firm joined and three dropped out.

Of the current 57 survey participants, 46 were headquartered across 15 European countries, including Norway (1), Switzerland (2) and the UK (6). 37 participants were headquartered across 12 of the 27 member states of the EU (there continue to be no institutions in the survey from Finland and Sweden, and only one from a former Accession State). 31 participants were headquartered across 11 of the 19 countries of the eurozone. Others survey participants were headquartered in Japan (5) and North America (9). 16 participants were branches or subsidiaries of foreign parents or supranational entities. Most of these (15) were located in the UK.

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. Participants were asked to report both their UK and EU offices where they have separated operations since Brexit. 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, June 8, 2022.

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 website. The latest forms will be published shortly before the next survey at 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 will receive, in confidence, a list of their rankings across the various categories of the survey.

Chapter 2: Analysis of Survey Results

The aggregate results of the latest two surveys (June and December 2021) and of the surveys in each December in the four previous years (2017-2020) are set out in Appendix C. The full results of all previous surveys can be found at www.icmagroup.org. Please note that the ICMA is not at liberty to disclose data reported by individual participants.

Total repo business (Q1)

The total value, at close of business on December 8, 2021, of repos and reverse repos outstanding on the books of the 57 institutions which participated in the latest survey was an all-time record of **EUR 9,197.5 billion**, compared with the previous record of EUR 8,725.7 billion on June 9, 2021, a rise of 5.4% since June survey and 11.0% year-on-year.

The survey sample as a whole continues to be a net cash lender (net securities borrower) to the rest of the market, now by a record margin. The survey sample has consistently been a net cash lender since 2012.

Figure 2.1 – Total business

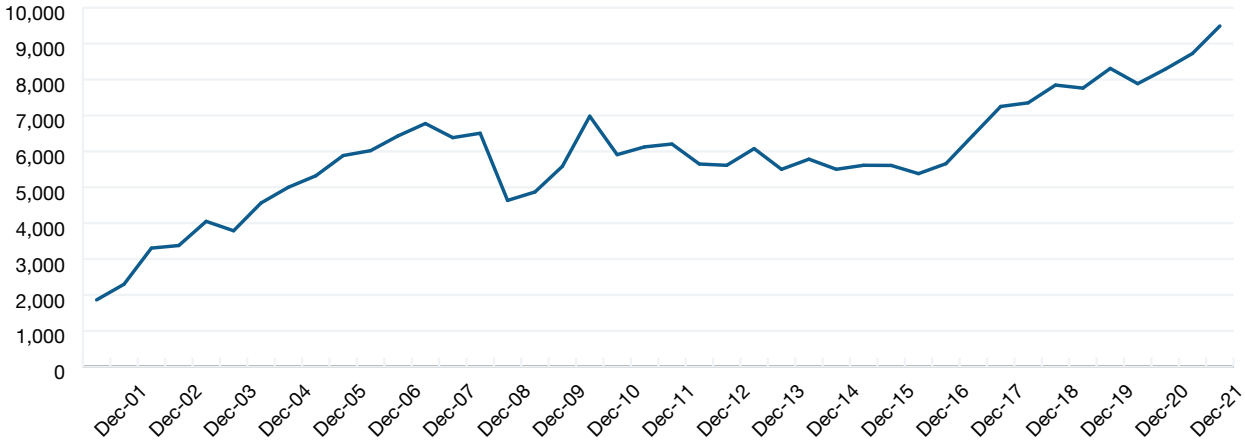
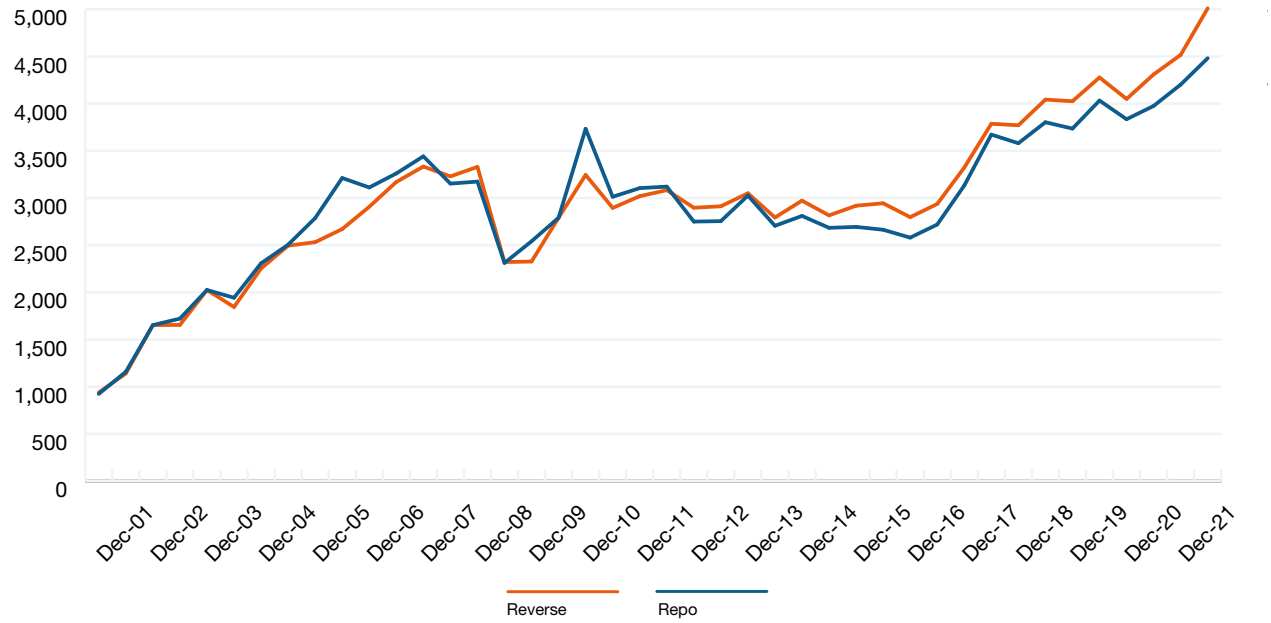


Table 2.1 – Total repo business

survey	total	repo	reverse repo
2021 December	9,198	47.8%	52.2%
2021 June	8,726	48.2%	51.8%
2020 December	8,285	48.0%	52.0%
2020 June	7,885	48.6%	51.4%
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 2.2 – Total repo versus reverse repo business



It is important to remember that the ICMA 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 (turnover) between two dates, gauges the risk position of the market. However, the survey data are difficult to reconcile with the flow numbers published by some other sources, which are more useful for some business analyses. It also means that the share of shorter-term repos is understated compared with flow data, given that shorter-term repos will run off faster between surveys than longer-term repos.

The values measured by the survey have not been adjusted for the double-counting of the same transactions by pairs of survey participants. However, a study by the author (see the report of the December 2012 survey) suggested that the problem of double-counting was not very significant. Interestingly, a trade repository in Europe has estimated that two-sided reporting has been less than 30% under EU SFTR and less than 15% under UK SFTR, which is consistent with the author's estimate of double-counting in 2012.

The survey also does not include the very significant value of repos transacted with central banks as part of official monetary policy operations.

In order to accurately measure 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 survey numbers. Some of the changes could reflect the entry and exit of institutions into and out of the survey, mergers between banks or the reorganization of repo books across banking groups. To overcome the problem caused by such changes in the sample of survey participants, comparisons have been made of the aggregate outstanding contracts reported by a sub-sample of institutions which have participated continuously in several surveys.

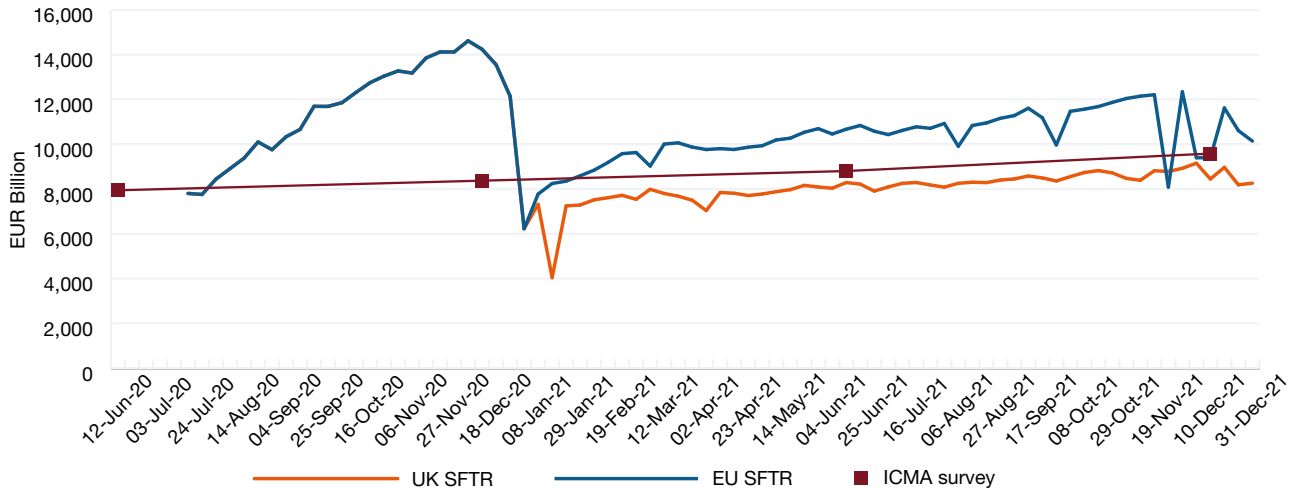
Of the 57 institutions which participated in the latest survey, 54 had also participated in the previous two (that is, in the three latest surveys). Overall, the aggregate value of outstanding repos and reverse repos transacted by the constant sample of these 54 institutions rose by 5.3% since the June 2021 survey and 11.2% year-on-year (compared with +5.3% and +10.7%, respectively, in June 2021). The fact that there was little difference with the growth in the headline numbers suggests that changes in the survey sample did not have a significant impact.

Between June and December 2021, 33 of the 57 institutions who responded to the latest survey and were also in the previous survey expanded their repo books (compared to 27 out of 59 between December 2020 and

June 2021). The repo books of 21 institutions contracted over the same period (compared to 28 between the previous two surveys). The median percentage change was +3.6% compared to -1.0% in the half-year to June. The average unweighted change for the respondents who increased the size of their repo books was +46.4%, whereas the average unweighted change for those who cut their books was -13.9%. The weighted average change was +15.5%. The growth in the size of the survey over the second-half of 2021 was therefore broadly based.

The total value of all outstanding repos reported under the Securities Financing Transactions Regulations (SFTR) in the EU and the UK on December 10, 2021 (the reporting date closest to a survey date) was EUR 9,396 billion in the EU and EUR 8,448 billion in the UK, totaling EUR 17,844 billion. In contrast to the survey sample, the European market as measured by SFTR data contracted in the second-half of 2021 (-5.9% since 11 June 2021). Given that the core of the ICMA survey sample constitutes dealers, this difference in trends would suggest that interdealer activity outperformed the rest of the repo market. The ICMA survey is now equivalent to 52% of the EU and UK total, compared with 46% in June (but note that SFTR data are believed to be inflated by various factors, which were discussed in a previous review of the first year of the regulation).

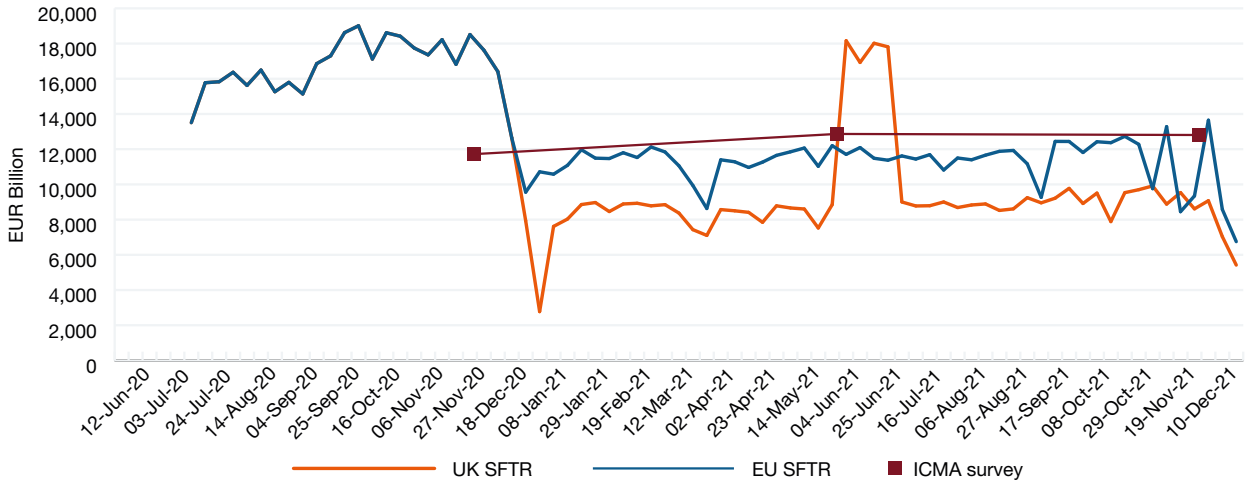
Figure 2.3 – ICMA survey versus SFTR public data: outstanding amounts



Institutions accounting for 50% of the total value of the survey reported their repo turnover over the six months since the previous survey. Grossing up for those survey participants who did not report their turnover (pro rata with their relative aggregate share of total outstanding business) suggests that the daily average turnover for the whole survey sample over the second-half of 2021 was EUR 2,624 billion per day, compared to EUR 2,540 billion between the December 2020 and June 2021 surveys (+3.3%).

Turnover in repo reported under SFTR in the week ending December 10, 2021, was EUR 1,869 billion per day in the EU and EUR 1,722 billion per day in the UK, totaling EUR 3,591 billion. This represents a fall of 14.7% since the week ending June 11, 2021. Consequently, the turnover of EUR 2,624 billion estimated in the ICMA survey increased to 73% of the SFTR number.

Figure 2.4 – ICMA survey versus SFTR public data: weekly turnover



Trading analysis (Q1.1)

Table 2.2 – Trading analysis

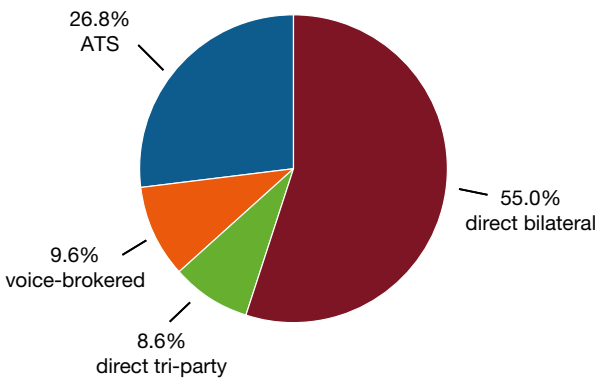
	December 2021		June 2021		December 2020	
	share	users	share	users	share	share
direct	63.6%	57	63.4%	59	63.4%	60
of which tri-party	*8.6%*	*45*	*8.0%*	*43*	*8.8%*	*42*
voice-brokers	9.6%	39	8.3%	39	9.5%	38
ATS	26.8%	46	27.5%	46	27.1%	48

The share of voice-brokers recovered, largely at the expense of the ATS. In other words, ATS captured less of the growth in the survey than did voice-brokers. The focus of the growth in the survey was cross-border trading into the eurozone (from both inside and outside the zone).

Table 2.3 – Numbers of participants reporting particular types of business

	Dec-21	Jun-21	Dec-20	Jun-20	Dec-19	Jun-19
ATS	46	46	48	46	46	45
anonymous ATS	44	41	42	42	41	40
voice-brokers	39	39	38	43	43	40
tri-party repos	45	43	42	37	41	38
total	57	59	60	61	58	55

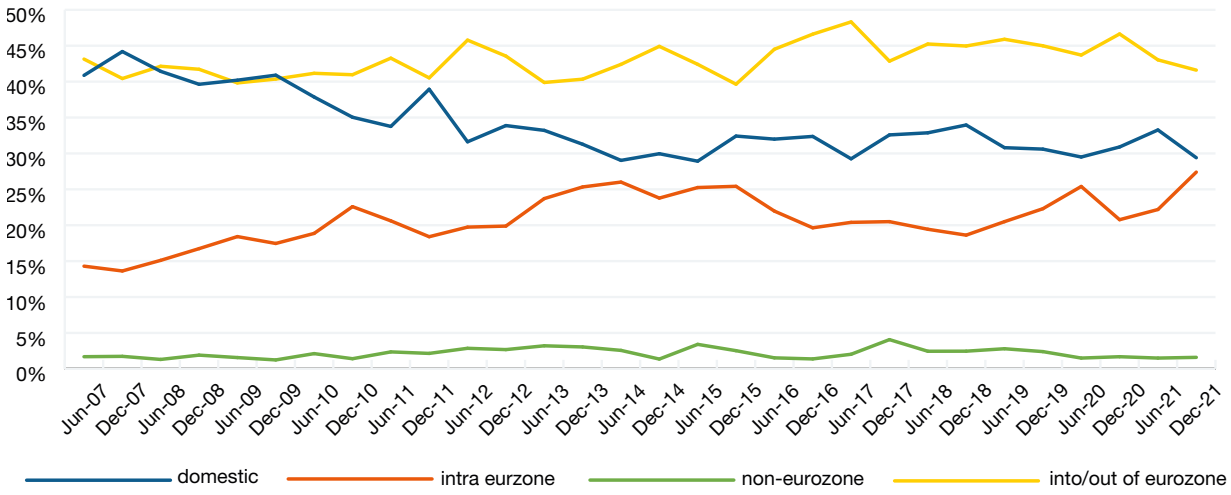
Figure 2.5 – Trading analysis



Despite losing share in the survey, data provided separately by the principal ATS in Europe showed that the outstanding value of repos executed on ATS jumped back by 9.3% to EUR 1,201.1 billion. However, in terms of the turnover, automatic electronic trading dropped 2.1%% to an average daily value of EUR 560 billion and the number of transactions by 15.6%, implying a larger average deal size of EUR 32 million. Performance varied significantly between the different ATS.

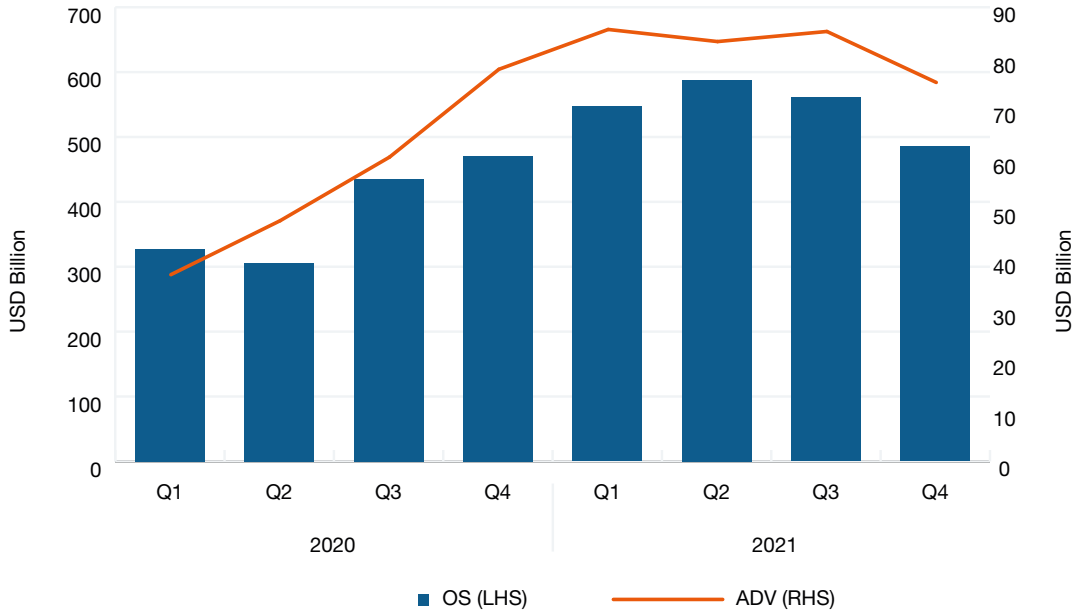
The growth in repos reported directly by the principal ATS was specifically in intra-eurozone cross-border repos, which increased to 27.4% from 22.2%, largely at the expense of domestic business, which fell to 29.4% from 33.3% in June (which is a corrected number).

Figure 2.6 – Outstanding of ATS business by location of counterparties



In contrast to ATS, there were signs of weaker activity on automated repo trading systems, which are often called request-for-quote (RFQ) systems and are largely used for dealer-to-client business (whereas automatic systems execute interdealer business). Turnover data published by Tradeweb, which is probably the largest automated repo trading system in Europe and is the only automated system to publish data, showed a fall in average daily turnover of repo on its European platform in the second-half of 2021 of 5.0% compared with the first-half and a fall of 7.8% in the value of outstanding repos between end-2020 and end-2021 (see Figure 2.7).

Figure 2.7 – Monthly turnover and outstanding value in European repo on Tradeweb

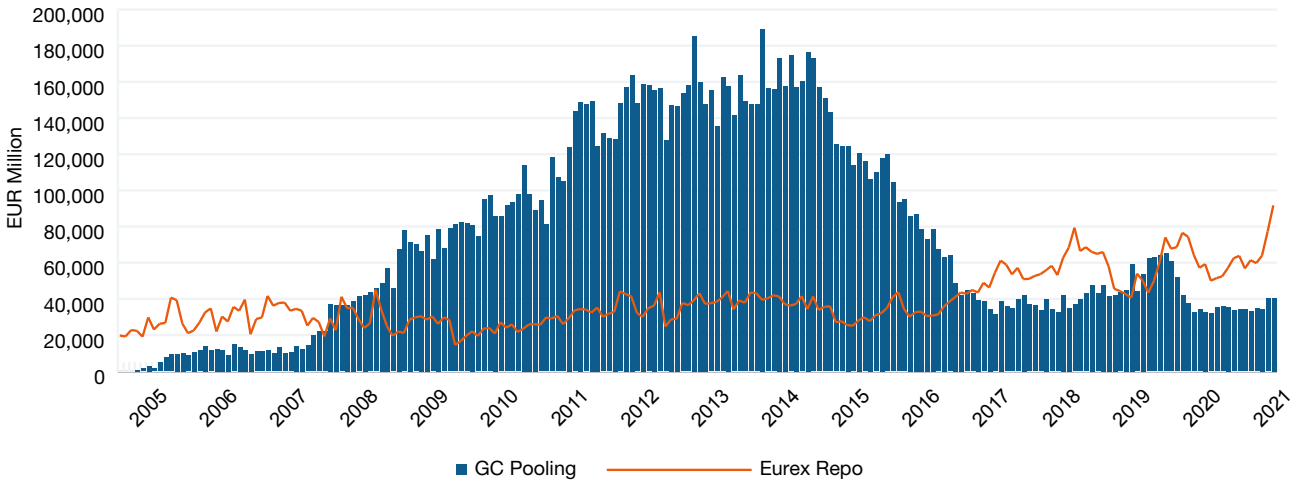


Source: Tradeweb

On Eurex Repo and GC Pooling, average daily turnover fell between the first-half and second-half of 2021. GC Pooling fell back from about EUR 53 billion per day to almost EUR 44 billion, while Eurex Repo, which trades both GC and specific/special collateral, slowed over the second-half from EUR 147 billion to EUR 145 billion (all figures are on a term-adjusted basis).

However, the Eurex annual figures obscure a significant uplift in activity in the last quarter in the outstanding value of both Eurex Repo and GC Pooling, in particular, in French and Spanish government bonds (to peaks of over EUR 95 billion and EUR 43 billion in late November/early December). In Eurex Repo, this was due to securities borrowing in response to scarcity in advance of the year-end and, in the case of Spanish bonds, demand for collateral for the Eurosystem's TLTRO refinancing facility. In GC Pooling, increased activity in the last quarter is reported to have been driven by favourable rates at some maturities and the funding of specials trading on Eurex Repo.

Figure 2.8 – Average daily turnover on Eurex Repo and GC Pooling (EUR million, 20-day moving average, adjusted for double-counting)



Source: Eurex Repo

Tri-party repo recovered to 8.6% from 8.0% in December. However, the outstanding value of all tri-party business reported separately by the five principal tri-party agents operating in Europe (Bank of New York Mellon, Clearstream, Euroclear, JP Morgan and SIS) remained almost static at EUR 670.8 billion and would have been lower had it not been for the tri-party activity of global custodians.

The share of tri-party repo accounted for by GC financing facilities (electronic markets for CCP-cleared, tri-party repos) continued to increase, reaching 9.9% from 9.5%. The value of outstanding repo on these facilities increased to EUR 78.4 billion from EUR 63.9 billion in June (+8.1%).

Tri-party repo continued to provide the survey sample with net cash. The net position largely reflected very low gross tri-party lending (26.4% compared with 23.3% in June).

Geographical analysis (Q1.1)

Table 2.4 – Geographical analysis

	December 2021		June 2021		December 2020	
	share	users	share	users	share	users
domestic	25.1%		24.8%		26.2%	
cross-border to (other) eurozone	20.0%		18.4%		18.5%	
cross-border to (other) non-eurozone	37.6%		38.8%		37.3%	
anonymous	17.2%	44	17.9%	41	18.0%	42

Figure 2.9 - Geographical analysis

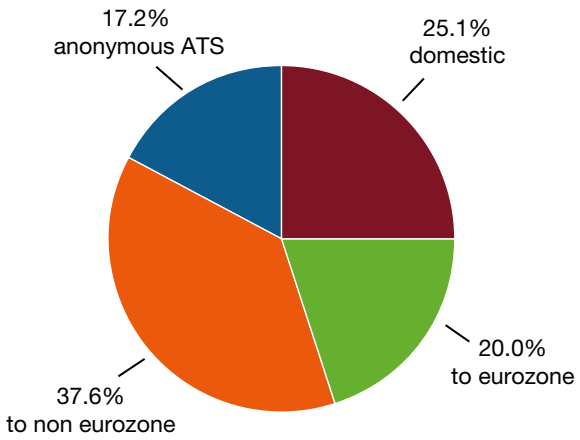


Table 2.5 – Geographical comparisons in December 2021 (December 2020)

	main survey	ATS	tri-party
domestic	25.1% (24.8%)	29.4% (33.3%)	39.2% (33.8%)
cross-border	57.6% (57.2%)	70.6% (66.7%)	60.8% (66.2%)
anonymous	17.2% (17.9%)		

The share of domestic repo business in the survey and in tri-party repo recovered in December but as noted earlier, fell back in ATS in favour of intra-eurozone cross-border repos.

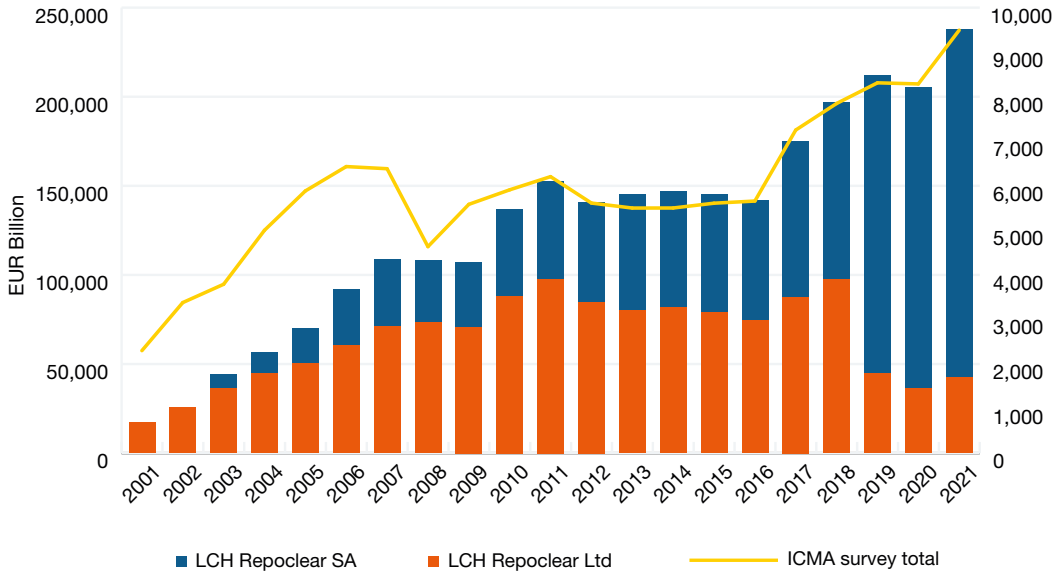
Clearing and settlement analysis (Q1.2 and Q1.8)

The share of anonymous (CCP-cleared) repo trading declined over the second-half of 2021. This activity has fluctuated around a downward trend since June 2016, when the share of anonymously-traded repo fell off a plateau of about 25% that had been reached in 2013. However, the value of anonymous trades increased, by 0.7% to EUR 1,467.2 billion.

The share of ATS business that was cleared on a CCP recovered to 98.4% from 97.8% in June.

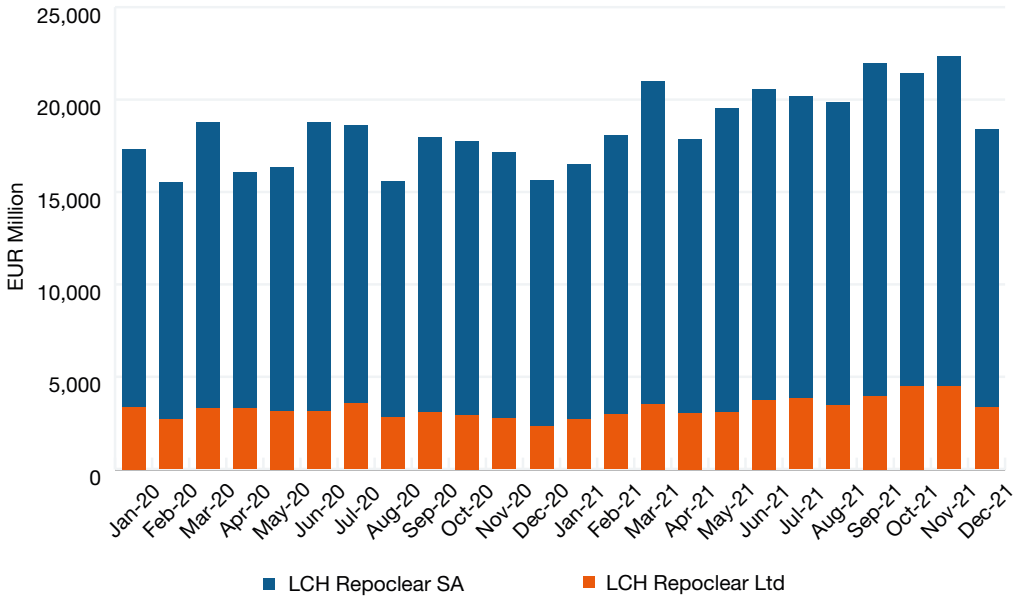
Turnover data from LCH RepoClear, the largest repo CCP in Europe, continues to be correlated with the survey (see Figure 2.10). LCH turnover grew by 10.5% in the first-half of 2021 and a further 9.4% in the second-half. This was faster than the growth rates of 5.3% and 5.4%, respectively, in the overall survey, suggesting that the expansion of clearing was outside the core interdealer market covered by the survey.

Figure 2.10 – Annual cleared notional turnover on LCH RepoClear (EUR billion, double-counted)



The growth in RepoClear turnover trended up over 2021, peaking in the four main bond futures expiry months, before the usual seasonal downturn in December.

Figure 2.11 – Monthly cleared notional turnover on LCH RepoClear in 2020 (EUR billion, double-counted)



Source: LCH

While the bulk of CCP-clearing is of repos transacted on ATS, a significant proportion of CCP-cleared repo continues to be transacted directly and registered with a CCP post trade, although this fell back in December to 12.3% from 14.3% of the survey.

Figure 2.12 – Post-trade CCP-clearing

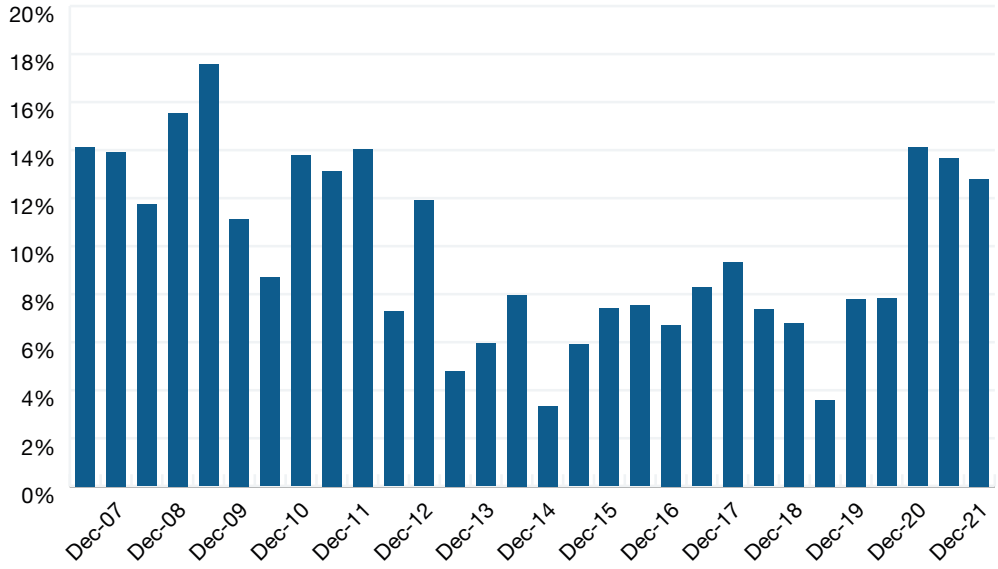
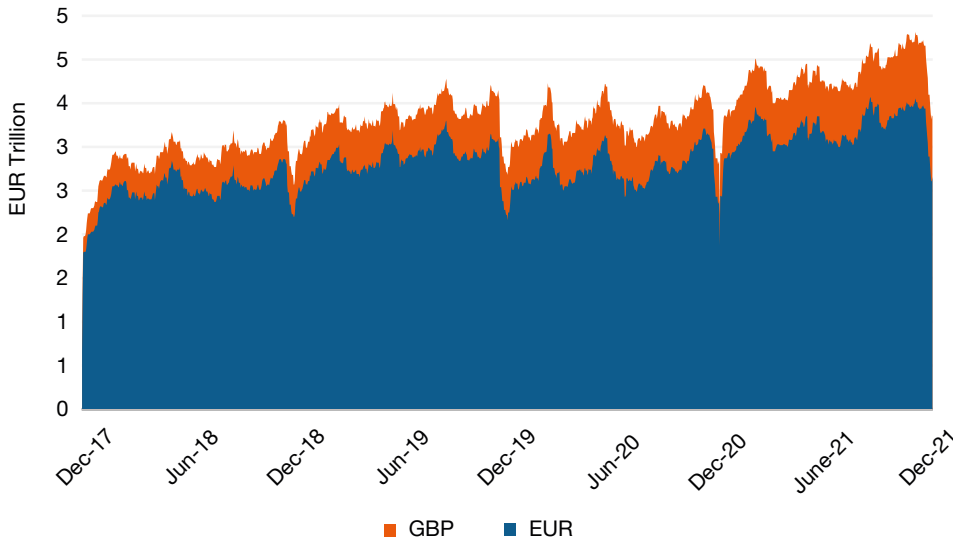


Figure 2.13 shows the outstanding value of repos cleared by LCH (open interest). The average daily outstanding value of cleared euro repo on LCH SA rose by 4.5% in the second-half of 2021 compared to the first-half and 15.5% over the second-half of 2020, while sterling repo on LCH Ltd rose by 20.5%% and 19.5%, respectively. The daily frequency illustrates the strongly seasonal pattern of clearing. The average outstanding value of repos cleared by LCH shifted up in 2021 after dropping in 2020.

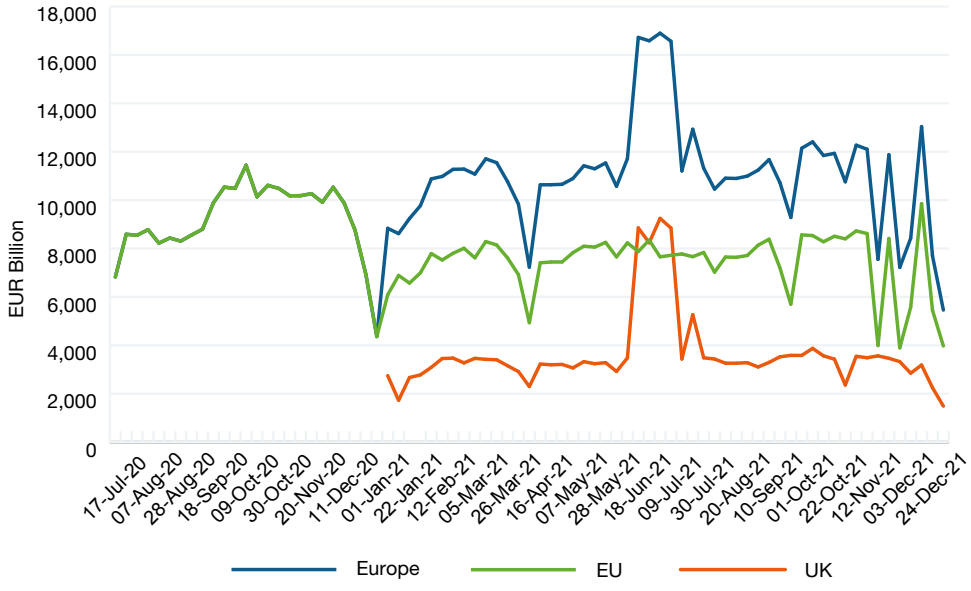
Figure 2.13 – Daily outstanding turnover on LCH RepoClear 2018-2020 (EUR trillion, double-counted: calculated using same methodology as ICMA survey)



Source: LCH

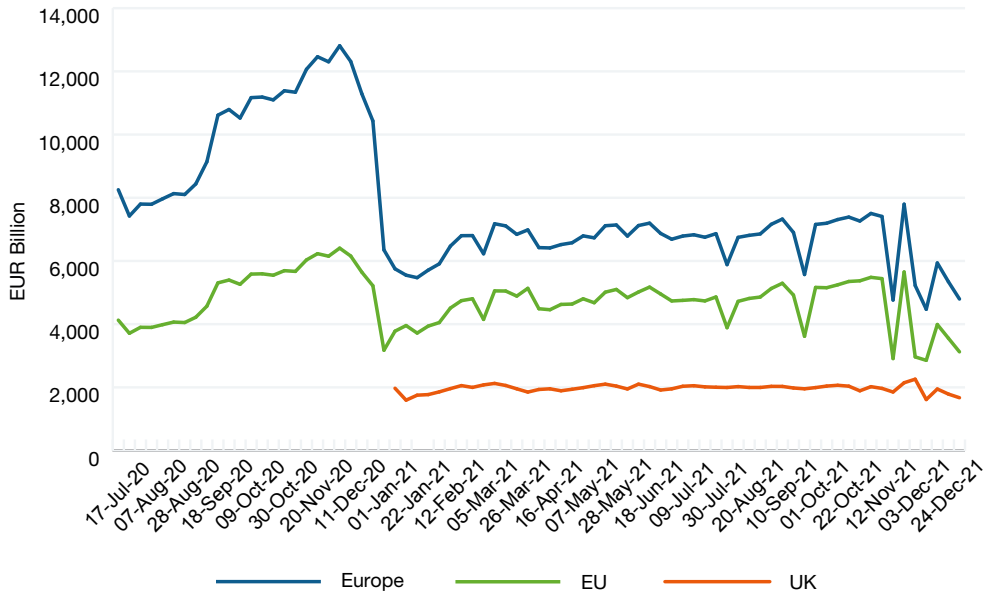
SFTR public data showed an upward trend in reported CCP-cleared repos in the EU over the year in terms of both turnover and outstanding business (see Figures 2.14 and 2.15) but there were violent fluctuations in November and December before the usual seasonal dip.

Figure 2.14 – new CCP-cleared repos reported under SFTR (EUR trillion)



Source: DTCC, Regis-TR, Unavista

Figure 2.15 – outstanding CCP-cleared repos reported under SFTR (EUR trillion)



Source: DTCC, Regis-TR, Unavista

The survey share of GC financing (mainly Eurex's GC Pooling service but also LCH's €GCPlus) increased in the second-half of 2021 to 0.9% from 0.6%. As a percentage of the tri-party business reported by the survey sample, the share of GC financing grew to 9.9% from 9.2% in June, reflecting in part the sluggishness of tri-party repo. GC financing's share of electronic business, as reported directly by ATS, was steady at 3.3% and its share of tri-party reported directly by the agents expanded to 10.3% from a corrected June share of 9.5%.

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

Table 2.6 – Cash currency analysis

	December 2021	June 2021	December 2020
EUR	56.9%	54.5%	54.4%
GBP	15.7%	16.9%	16.5%
USD	18.8%	19.5%	19.2%
DKK, SEK	1.5%	1.6%	1.4%
JPY	4.8%	5.2%	5.7%
CHF	0.1%	0.0%	0.1%
other APAC	1.0%	1.1%	1.5%
other currencies	1.2%	1.2%	1.2%
cross-currency	2.0%	2.3%	2.7%

The share of the euro recovered in the second-half of 2021 at the expense of all other currencies to reach its highest level since June 2019.

However, the share of the euro in tri-party repo reported directly by the agents continued to fall back, touching a six-year low of 44.5% from 48.6% in June. The counterpart was a further rise in the share of the US dollar to 42.9% from 40.0%, as well as an increased share for the pound sterling, which grew to 9.2% from 7.7%.

Figure 2.16 – Currency analysis

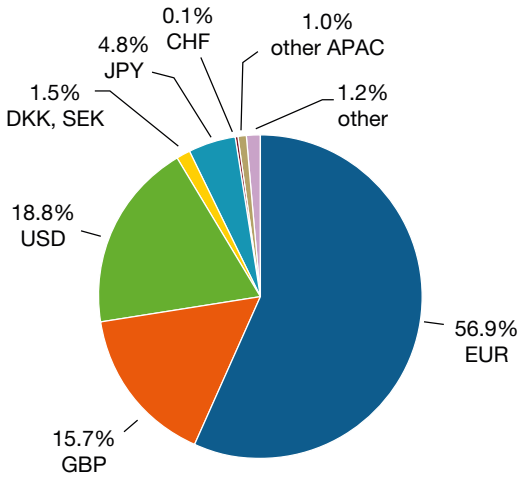


Table 2.7 – Currency comparison in December 2021

	main survey	ATS	tri-party
EUR	56.9%	90.2%	44.5%
GBP	15.7%	9.2%	9.2%
USD	18.8%	0.5%	42.9%
DKK, SEK	1.5%	0.0%	0.4%
JPY	4.8%	0.0%	1.7%
CHF	0.1%	0.0%	0.4%
other APAC	1.0%	n/a	0.1%
etc	1.2%	0.1%	0.9%
cross-currency	2.0%		

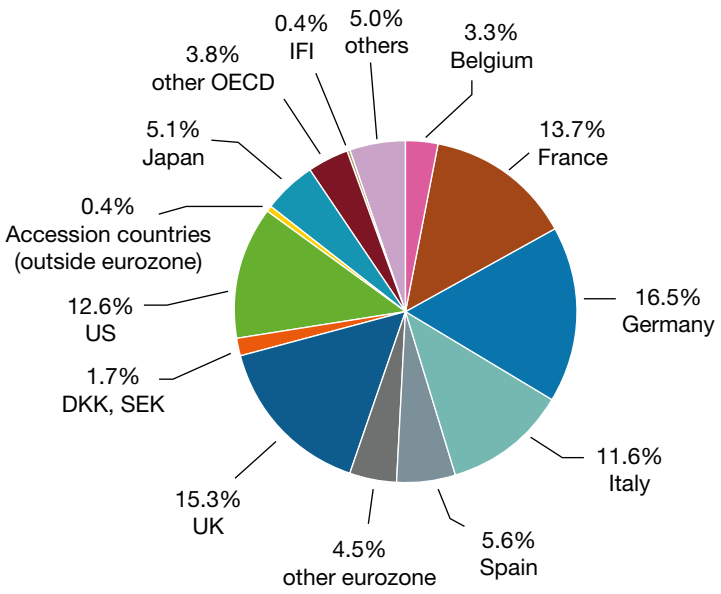
Collateral analysis (Q1.9)

Growth in the survey in the second-half of 2021 was in major eurozone securities, both core and periphery, but principally German government securities, US Treasuries and, to a lesser extent, French government securities and JGBs. However, the combined share of European collateral in the form of government securities (EU plus UK) retreated further to 90.7% from 91.2% in June. Some of decline in government securities may have reflected the sharp fall in issuance in the last quarter of 2021

Table 2.8 – Collateral analysis

	December 2021	June 2021	December 2020
Germany	16.5%	14.8%	15.5%
Italy	11.6%	11.6%	11.7%
France	13.7%	13.2%	12.7%
Belgium	3.3%	3.6%	3.4%
Spain	5.6%	5.5%	5.2%
other eurozone	4.5%	4.5%	4.3%
DKK, SEK	1.7%	2.2%	1.7%
former EU Accession	0.4%	0.5%	0.5%
EU institutions	0.3%	0.3%	0.5%
UK	15.3%	16.0%	16.2%
international institutions	0.4%	0.2%	0.2%
US Treasuries	10.4%	8.7%	8.1%
other US	2.2%	2.3%	2.4%
Japan government	3.9%	3.5%	5.2%
other Japan	1.1%	1.2%	1.1%
other OECD ex APAC	3.5%	6.4%	5.4%
other APAC OECD	0.3%	0.4%	0.8%
eurobonds	1.6%	1.7%	1.9%
other fixed income	3.0%	3.1%	3.0%
equity	0.4%	0.3%	0.3%

Figure 2.17 - Collateral analysis (main survey)



The share of securities issued by EU institutions being used as repo collateral was unchanged at 0.3% of the survey. In tri-party repo reported directly by the agents, their share dropped sharply to 4.4% from 26.8%.

In trading on ATS, there was a surge in Italian government securities to 42.6% from 34.4% in June, while German government securities fell back sharply to 13.8% from 18.8%, French government securities to 11.2% from 15.6% and UK gilts to 9.9% from 11.6%.

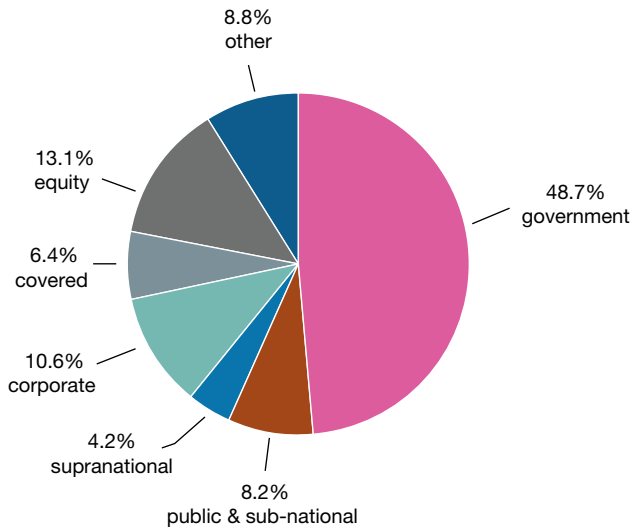
The survey sample became a large net borrower of French, Italian and UK government securities and JGBs (equivalent to 1.6%, 2.7%, 2.6% and 2.6%, respectively, of the survey) but a significant net lender of German, Spanish and US government securities (equivalent to 3.0%, 0.8% and 4.2%, respectively).

The share of government securities used as collateral in tri-party repo managed by the ICSDs rebounded to 48.7% from 44.6% in June. This was due to a large increase in the allocation of French, German, Italian, UK and US government securities and German non-government issues. UK gilts provided the largest single share of the tri-party collateral pool.

Table 2.9 – Tri-party repo collateral analysed by type of asset

	December 2021	June 2021	December 2020
government securities	48.7%	44.6%	46.7%
public agencies / sub-national governments	8.2%	5.5%	7.9%
supranational agencies	4.2%	4.7%	3.6%
corporate bonds	10.6%	11.6%	15.5%
covered bonds	6.4%	5.6%	6.4%
residential mortgage-backed	1.0%	1.2%	1.2%
commercial mortgage-backed	0.3%	0.3%	0.4%
other asset-backed	1.4%	1.5%	1.7%
CDO, CLN, CLO, etc	1.1%	2.2%	1.6%
convertible bonds	2.9%	2.5%	1.2%
equity	13.1%	20.0%	11.9%
other	2.0%	0.1%	2.1%

Figure 2.18 - Collateral analysis (tri-party agents) by type of asset



A significant fall in unrated securities (probably equity allocated by global custodian tri-party agents) increased the shares of securities rated below AAA, including non-investment grade issues. However, the share of lower-rated collateral may have reflected the strong issuance of corporate bonds in the second-half of 2022.

Table 2.10 – Tri-party repo collateral analysed by credit rating

	December 2021	June 2021	December 2020
AAA	18.4%	21.9%	23.3%
AA	27.5%	26.3%	26.8%
A	12.8%	8.9%	13.1%
BBB	13.4%	11.5%	14.9%
below BBB-	10.1%	6.2%	6.3%
A1/P1	4.0%	2.7%	2.8%
A2/P2	0.1%	0.0%	0.1%
Non-Prime	0.1%	0.0%	0.2%
unrated	13.8%	22.3%	12.6%

Figure 2.19 - Collateral analysis (tri-party agents) by credit rating - changes

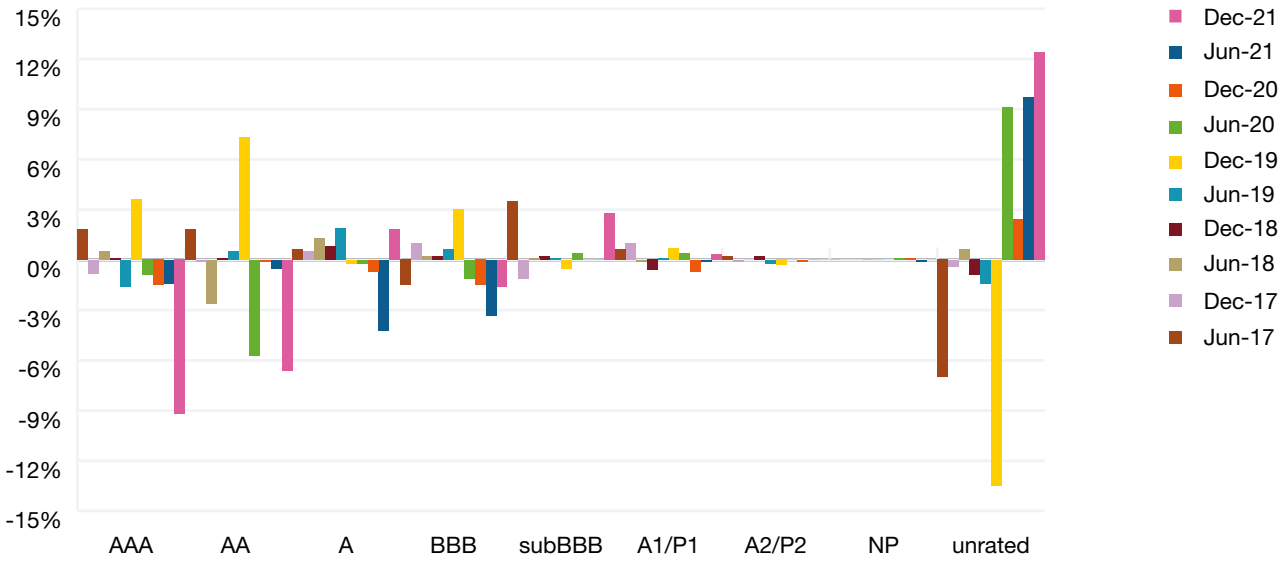


Figure 2.20 – Historic collateral analysis (tri-party agents) by credit rating

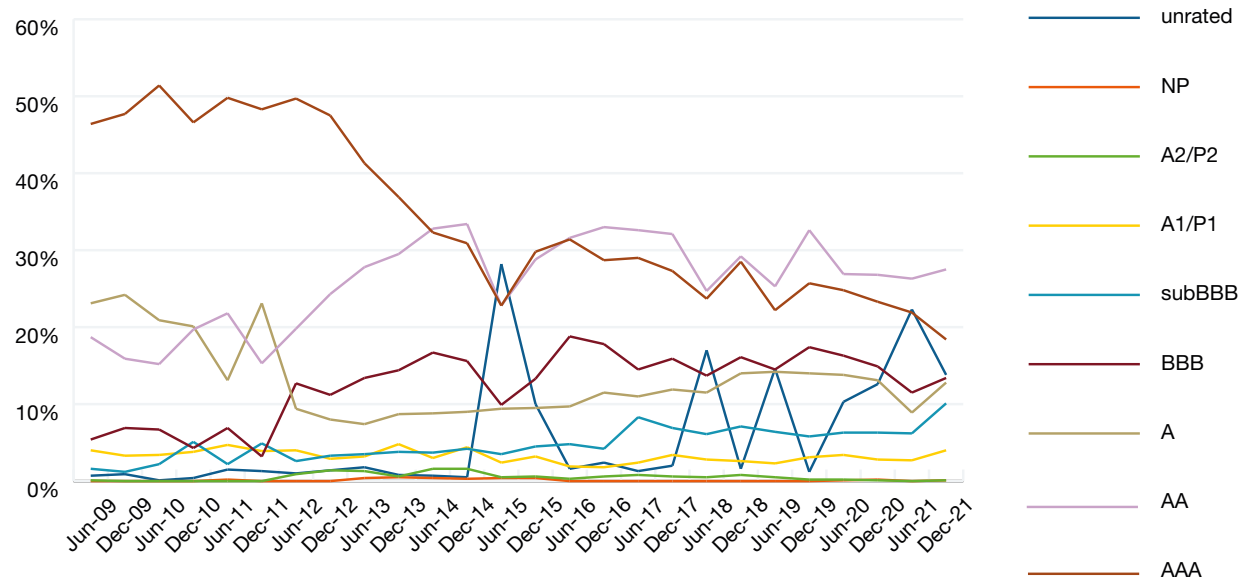
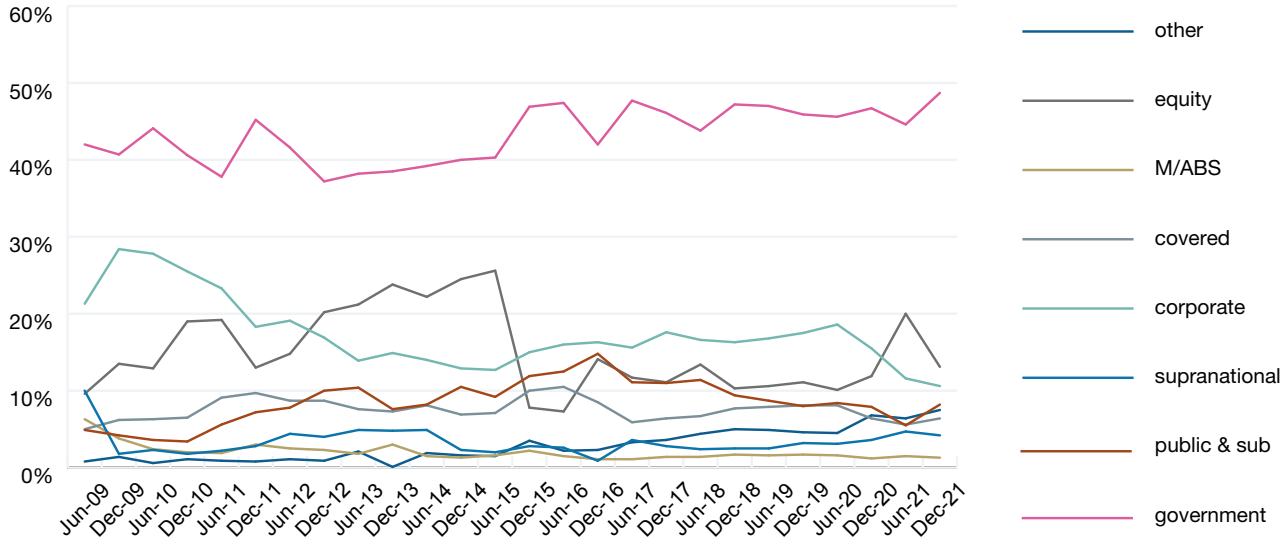


Figure 2.21 – Historic collateral analysis (tri-party agents) by type of asset



While weighted average haircuts on public sector and supranational securities widened, those on government and most credit issues narrowed.

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

	December 2021	June 2021	December 2020
government securities	2.5%	3.1%	2.0%
public agencies / sub-national governments	2.7%	2.6%	2.6%
supranational agencies	1.8%	1.4%	2.0%
corporate bonds (financial)	3.3%	3.2%	3.3%
corporate bonds (non-financial)	3.1%	3.2%	3.6%
covered bonds	1.0%	2.7%	0.8%
residential mortgage-backed	1.7%	2.2%	2.4%
commercial mortgage-backed	1.3%	2.6%	1.8%
other asset-backed	4.1%	4.5%	4.1%
CDO, CLN, CLO, etc	2.5%	2.5%	2.7%
convertible bonds	2.8%	3.7%	3.7%
equity	1.7%	2.7%	1.2%
other	1.5%	1.2%	1.8%

Contract analysis (Q1.5)

Figure 2.22 - Contract analysis

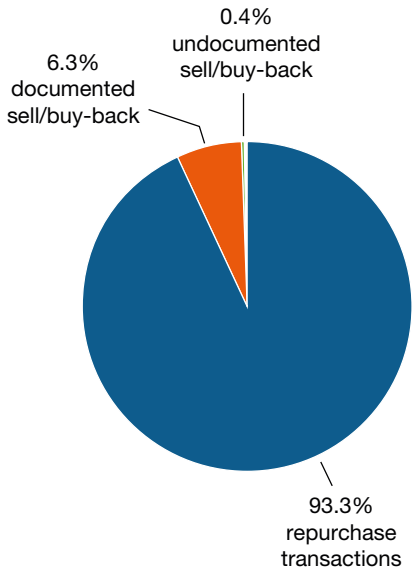


Table 2.12 – Contract comparison in December 2021 (December 2020)

	main survey	ATS	tri-party
repurchase transactions	93.3% (92.3%)	92.6% (92.2%)	100.0% (100.0%)
documented sell/buy-backs	6.3% (7.5%)	7.4% (7.8%)	
undocumented sell/buy-backs	0.4% (0.2%)		

Of the master agreements used by survey participants, a record 84.8% were reported to be the ICMA Global Master Repurchase Agreement (GMRA), up from 80.3% in December.

Repo rate analysis (Q1.6)

Figure 2.23 - Repo rate analysis

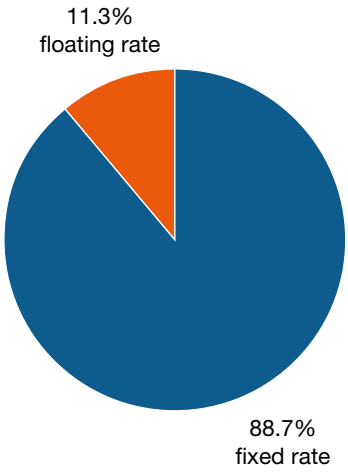


Table 2.13 – Repo rate comparison in December 2021 (December 2020)

	main survey	ATS	tri-party
fixed rate	88.7% (88.8%)	97.7% (98.5%)	52.9% (56.3%)
floating rate	11.3% (11.1%)	2.3% (1.5%)	47.1% (43.7%)

Maturity analysis (Q1.7)

Table 2.14 – Maturity analysis

	December 2021	June 2021	December 2020
open	6.2%	7.5%	6.2%
1 day	17.1%	18.8%	18.0%
2 days to 1 week	19.4%	21.5%	19.3%
1 week to 1 month	14.1%	17.3%	13.7%
>1 month to 3 months	17.1%	9.8%	15.6%
>3 months to 6 months	8.2%	7.5%	8.2%
>6 months to 12 months	3.3%	3.8%	3.5%
>12 months	2.6%	2.4%	2.4%
forward-start	12.1%	11.4%	13.2%

Figure 2.24 – Maturity analysis (main survey)

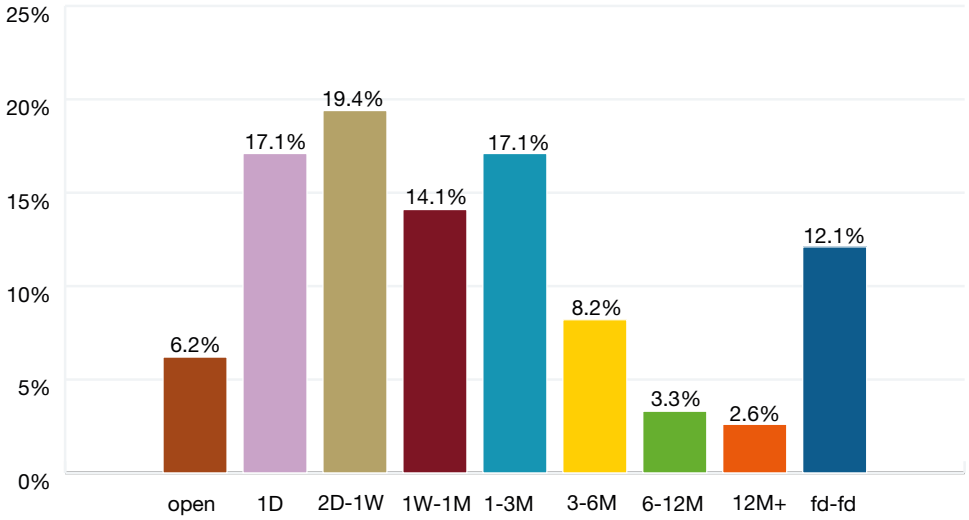


Figure 2.25 – Maturity analysis: short dates, longer terms & forwards (main survey)

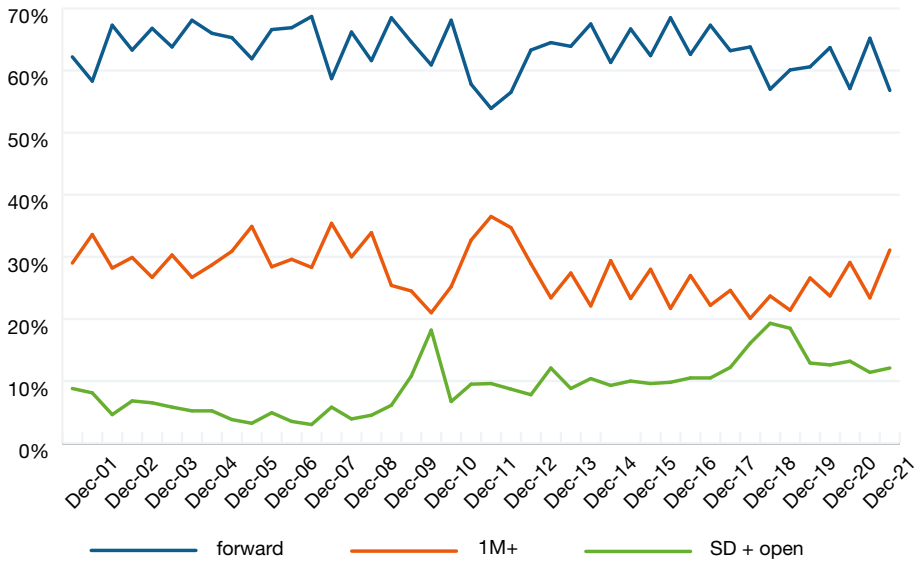


Figure 2.26 – Maturity analysis: non-forward terms (main survey)

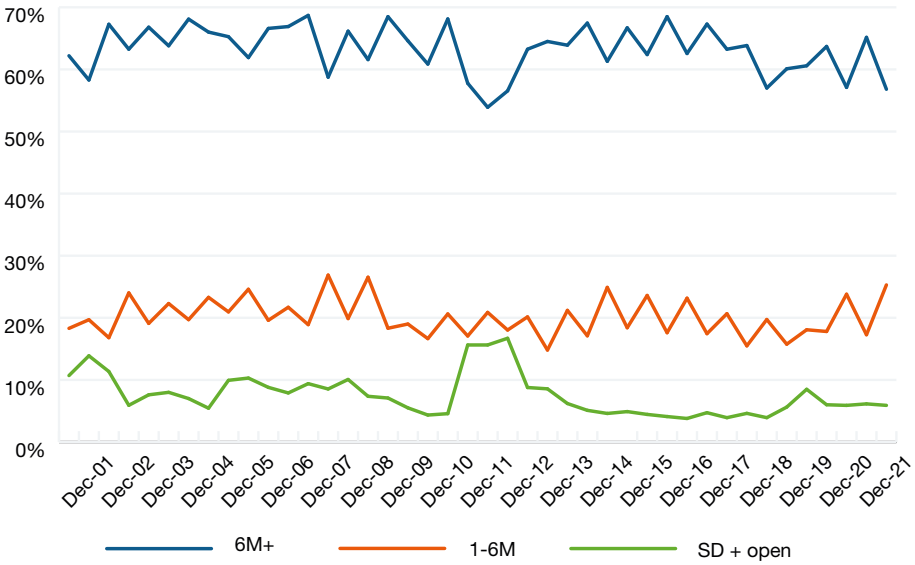
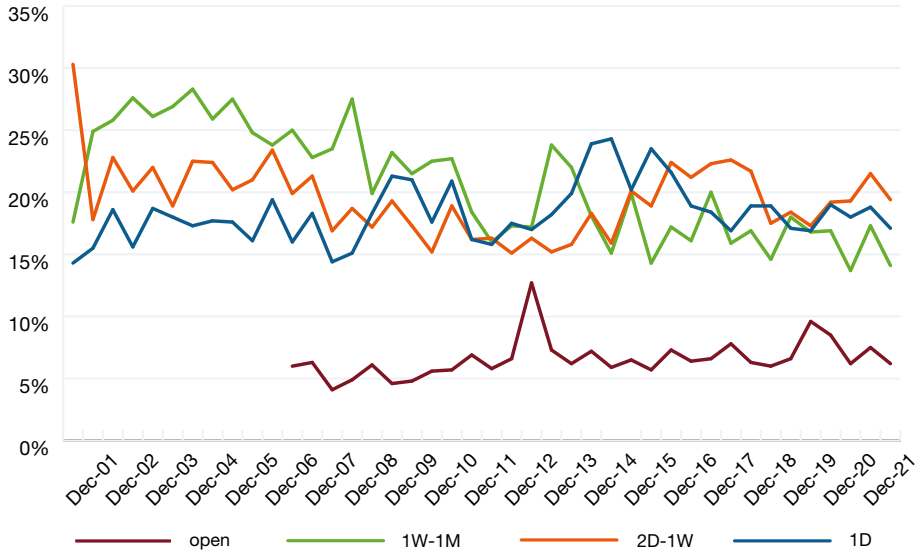


Figure 2.27 – Maturity analysis: breakdown of short dates plus open (main survey)



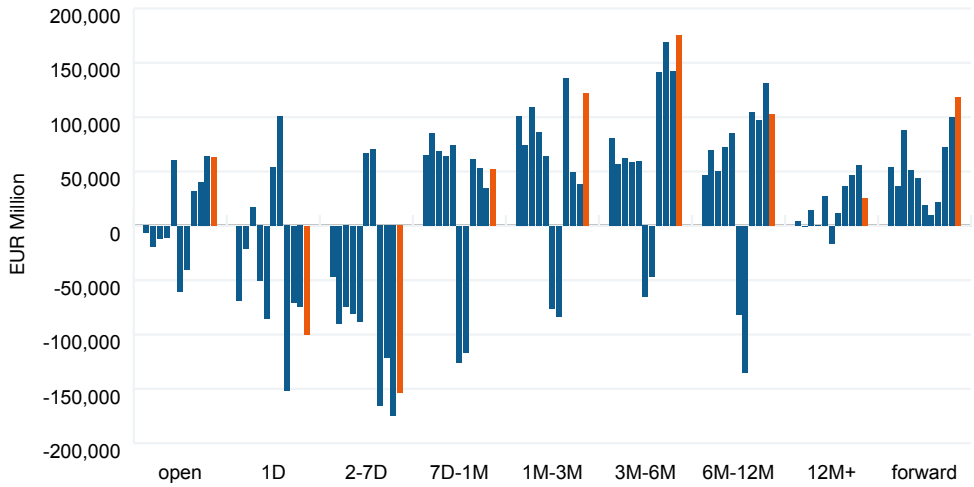
The survey showed the usual mid-year seasonality in the form of a rebound in the share of short-dated repos (one month or less remaining to maturity). Short dates typically shrink at year-end, as cash borrowers seek term funding into the new year, and then recover by mid-year.

Reflecting the jump in short dates, the weighted average term to maturity of outstanding repos was longer at 34-77 days compared with 31-69 days in June.[1]

The recovery of forward repo reflected the anticipation of market tightening over year-end but it is possible that interest-rate positioning may be resuming in view of the expected tightening of monetary policy by many central banks. The recovery of forward repos would also have helped the share of voice-brokers, for whom these transactions are a core business.

The latest survey showed a continuation of the switch that took place in June 2020 in the aggregate maturity transformation profile of the survey sample to a negative gap (borrowing short-term and lending longer-term). The size of the gap appears to have become seasonal, tending to go more negative in June and less negative in December. In December 2021, compared with December 2020, there was more net cash lending (net securities borrowing) between one and six months as well as in open repo and forwards.

Figure 2.28 – Maturity analysis: maturity transformation profile --- net reverse repo (main survey)



1 The lower end of the range assumes that all transactions have the minimum term in each maturity band: the upper end assumes the maximum and a term of 31 days for open repo.

Figure 2.29 – Maturity analysis (ATS)

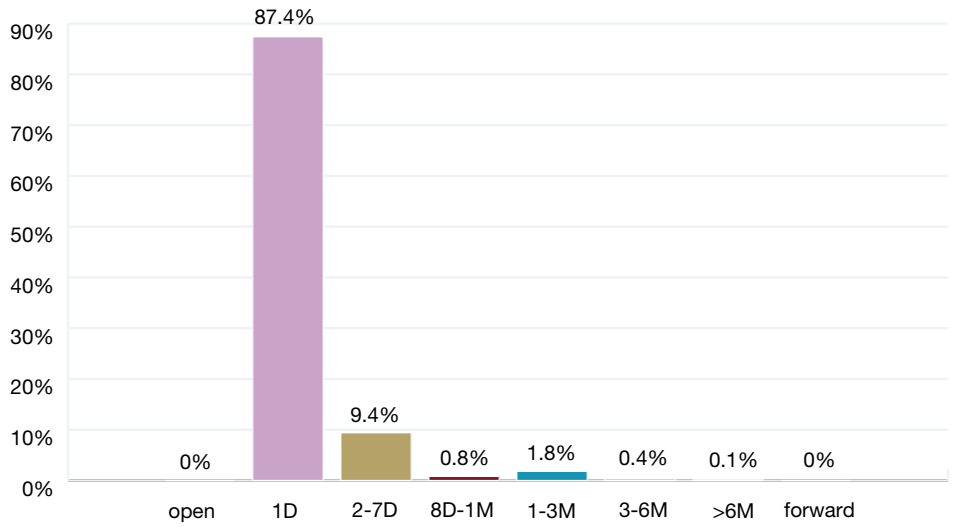


Figure 2.30 – Maturity analysis (tri-party agents)

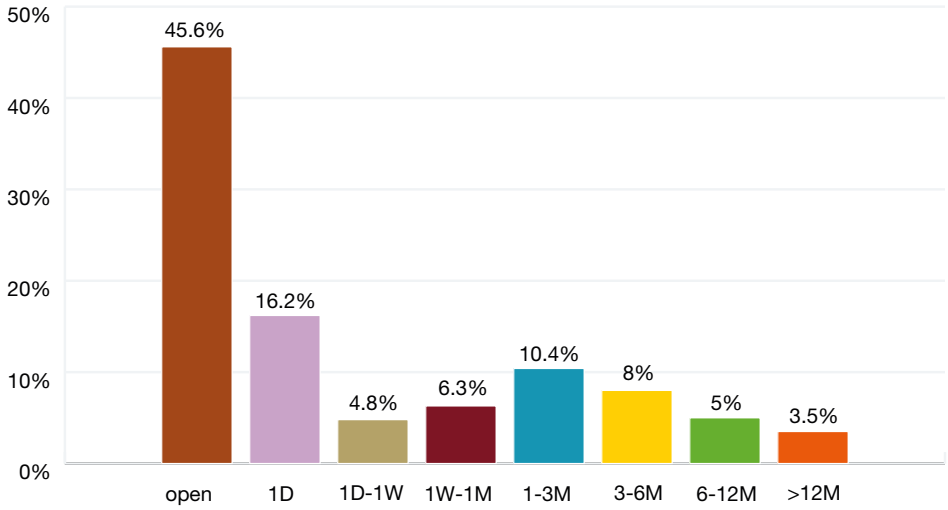


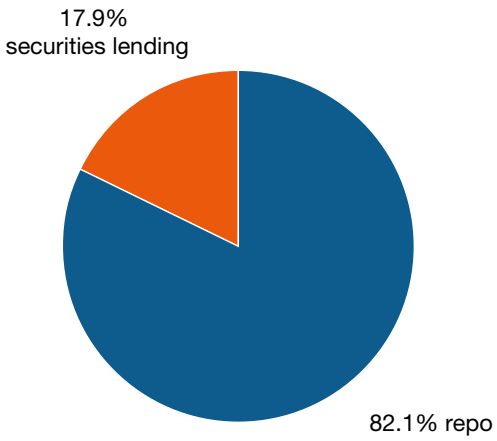
Table 2.15 – Maturity comparison in December 2021 (December 2020)

	main survey	ATS	tri-party
open	6.2% (7.5%)	-	45.6% (44.9%)
1 day	17.1% (18.8%)	87.4% (85.2%)	16.2% (17.5%)
2 days to 1 week	19.4% (21.5%)	9.4% (11.3%)	4.8% (8.8%)
1 week to 1 month	14.1% (17.3%)	0.8% (1.7%)	6.3% (7.6%)
>1 month to 3 months	17.1% (9.8%)	1.8% (1.5%)	10.4% (6.6%)
>3 months to 6 months	8.2% (7.5%)	0.4% (0.3%)	8.0% (7.2%)
>6 months to 12 months	3.3% (3.8%)	0.1% (0.1%)	5.0% (4.6%)
>12 months	2.6% (2.4%)	0.0% (0.1%)	3.5% (2.7%)
forward-start	12.1% (11.4%)	0.0% (0.0%)	

Product analysis (Q2)

The share of securities lending conducted on repo desks bounced back to 17.9%, virtually the same as its December 2020 level of 17.6%. Since December 2020, securities lending undertaken on repo desks has displayed a seasonal pattern, increasing in December and retreating in June.

Figure 2.31 - Product analysis

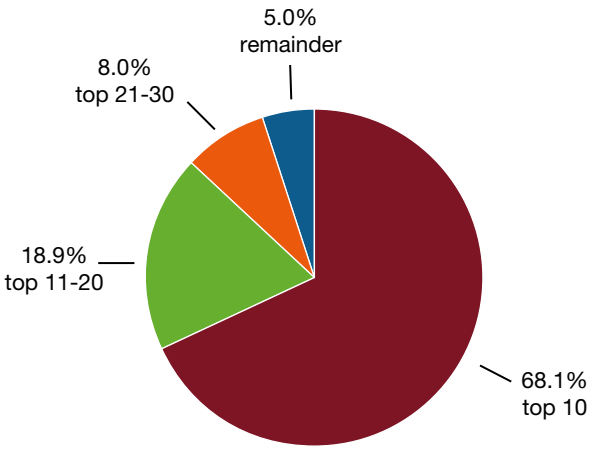


Concentration analysis

Table 2.16 – Concentration analysis

	December 2021	June 2021	December 2020
top 10	68.1%	69.0%	65.6%
top 20	87.0%	87.2%	84.1%
top 30	95.0%	95.1%	93.6%
other	5.0%	4.9%	6.4%

Figure 2.32 - Concentration analysis



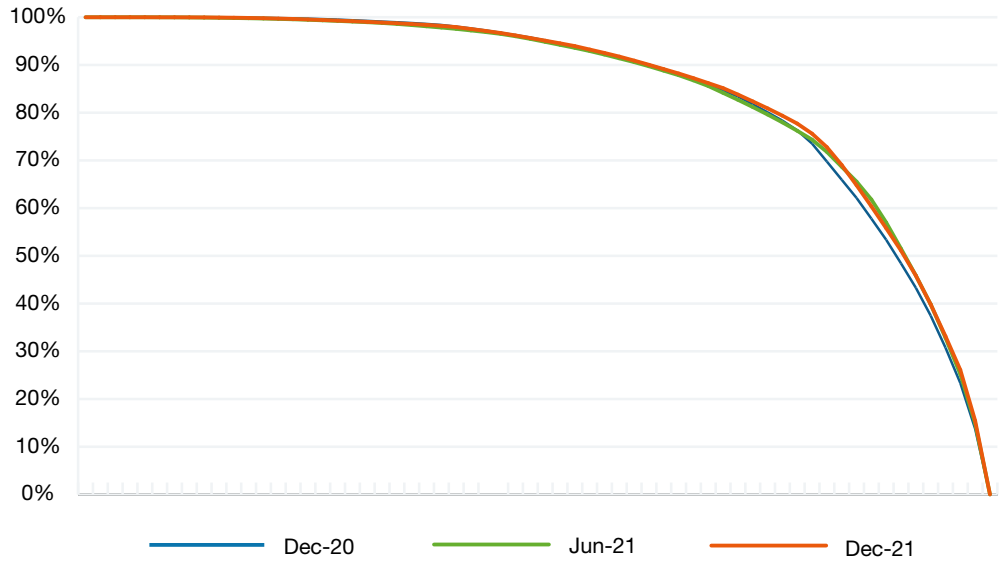
The concentration of business in the survey sample fell back, with the top 10 institutions ceding ground to those in lower tiers, confirming the broadly-based nature of the growth in the survey sample.

Table 2.17 – Herfindahl Index[2]

	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	59
June 2010	0.105	57
December 2010	0.064	57
June 2011	0.074	58
December 2011	0.065	62
June 2012	0.062	60
December 2012	0.054	69
June 2013	0.046	63
December 2013	0.046	66
June 2014	0.046	64
December 2014	0.043	64
June 2015	0.044	64
December 2015	0.041	70
June 2016	0.050	66
December 2016	0.056	65
June 2017	0.052	64
December 2017	0.049	64
June 2018	0.053	62
December 2018	0.060	59
June 2019	0.054	59
December 2019	0.059	60
June 2020	0.069	61
December 2020	0.062	60
June 2021	0.064	59
December 2021	0.060	57

2 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

Figure 2.33 – Cumulative distribution of market share



Chapter 3: Conclusion

The post-Covid rally in the European repo market, as represented in the ICMA survey, gathered pace in the second-half of 2021. This expansion was broadly-based across the survey sample but strongest in the second and third decades of participant. The survey sample appears to have grown faster than the European market as a whole (as measured by SFTR data), suggesting that growth was concentrated in the interdealer market represented by the survey sample. This would be consistent with the fact that, contrary to expectations of renewed decline, activity arranged by voice-brokers (whose clients are dealers) outpaced the rest of the market.

The performance of voice-brokers also points to particularly strong growth in OTC repo, as does the decline in the share of the survey taken by automatic electronic trading, particularly for German and French government securities (although trading in Italian government securities seems to have shifted towards the ATS). In this case, the vigorous growth in activity reported directly by the automatic trading systems (ATS) could indicate that dealers outside the survey sample were more active in electronic trading than the survey sample.

However, not all ATS shared in the growth of automatic electronic trading over the second-half of 2021. Growth appears to have been driven by special factors, in particular, the surge in the trading of Italian government securities (whereas automatic trading declined in other government securities). The motive forces were likely to have been substantial short-selling of government bonds in anticipation of higher yields, the seasonal tightening of dealer's balance sheets and central bank asset purchases. End-year pressures were reported to be as intense as in 2016 and, as indicated by the Eurex data, to have been building up since October after a disorderly end-quarter in September (see the ICMA report on The European Repo Market at 2021 Year-End by Andy Hill).

Selective access to Eurosystem lending programmes may have contributed to collateral scarcity, in which case, interdealer activity would have benefited from the need to redistribute securities. Collateral scarcity was particularly manifest, not just in the usual case of German securities, but in French and Spanish issues as well (French government securities were at times more expensive than their German counterparts while the tightness of the supply of peripheral eurozone securities was a surprise to the market).

Tri-party repo staged a modest recovery but continues to be weighed down by central bank liquidity, although this challenge may have been moderated by a reduction in net asset purchases by the Eurosystem in the second-half of 2021. There was an increase in the share of tri-party collateral in the form of high-quality government securities (French, German, UK and US), which is unusual. In conditions of scarcity, it may be that the allocation of such securities as general collateral to tri-party repo was intended to ensure the return of these securities at the maturity of the transactions by avoiding the risk of failed deliveries, which tend to increase in conditions of scarcity.

The contradiction between the decline in the share of anonymous (CCP-cleared) repos in the survey set against the healthy growth in the value of CCP-clearing reported by LCH supports the idea that the survey sample has expanded its business largely in the OTC market, with CCP-clearing growing mainly outside the sample. For dealers, there would have been tension between, on the one hand, the benefits of netting offered by CCP clearing (particularly at year-end) and, on the other hand, the reduced degree of concern over default risk and the abundance of central bank liquidity. For dealers in the survey sample, the balance of arguments seems to have tilted in favour of less netting.

There was the usual end-year rebound in longer-dated repo. And as is typically the case, this was concentrated in the one to three-month maturity band. This maturity band is of particular interest because it probably gives the best indication of collateral transformation.

A seasonal pattern seems to have been established in the sizeable securities lending that is executed on repo desks, with an increase in share in December. It may be that this reflects increased securities lending and borrowing ahead of the year-end, with non-bank financial institutions that only have a securities lending agreement in place.

About the Author

This report was compiled by Richard Comotto, who is Senior Consultant to the ICMA's European Repo and Collateral Council. 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 and Collateral Management Course and of the ICMA-ISLA GMRA-GMSLA Workshop and author of the ICMA SFTR Task Force's Reporting Recommendations and the ICMA CSDR Cash Penalty Best Practice Recommendations and FAQs. Richard also provides technical assistance on behalf of ICMA, IMF, World Bank, Asian Development Bank and other organizations to developing repo markets around the world.

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 8, 2021.

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 8, 2021, 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 9, 2021).

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, December 8, 2021. 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 9, 2021. You should include all *open repos and reverse repos* that have been rolled over from Wednesday, December 8, 2021, to a later date and all *forward-forward repos and reverse repos* that are still outstanding as forward contracts at close on Wednesday, December 8, 2021.

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 8, 2021, 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) Do not report synthetic repos.

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 GLMX 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 RRRA and similar screens. Transactions on automated trading systems (RFQ systems) should be included in (1.2.2) --- see below. 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 BrokerTec Quote, GLMX, MTS BondVision 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 GLMX 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 RRRA 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, which are reported in (1.7.3), 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. Open repos should also be included in fixed-rate repo (1.6.1) unless their repo rates are linked to interest rate indexes which will be refixed during the life of the repos, in which cases, they would be reported as floating-rate repos (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 8, 2021, with a repurchase date on Thursday, December 9, 2021;
- overnight, tom/next, spot/next and corporate/next contracts transacted on Wednesday, December 8, 2021.

(1.7.1.2) 2–7 days – this means:

- all contracts transacted prior to Wednesday, December 8, 2021, with a repurchase date on Friday, December 10, 2021, or any day thereafter up to and including Wednesday, December 15, 2021;
- contracts transacted on Wednesday, December 8, 2021, with an original repurchase date on Friday, December 10, 2021, or any day thereafter up to and including Wednesday, December 15, 2021 (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 8, 2021, with a repurchase date on Thursday, December 16, 2021, or any day thereafter up to and including Monday, January 10, 2022;
- contracts transacted on Wednesday, December 8, 2021, with an original repurchase date on Thursday, December 16, 2021, or any day thereafter up to and including Wednesday, Monday 10, 2022 (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 8, 2021, with a repurchase date on Tuesday, January 11, or any day thereafter up to and including Tuesday, March 8, 2022;
- contracts transacted on Wednesday, December 8, 2021, with an original repurchase date on Tuesday, January 11, 2022, or any day thereafter up to and including Tuesday, March 8, 2022 (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 8, 2021, with a repurchase date on Wednesday, March 9, 2022, or any day thereafter up to and including Wednesday, June 8, 2022;
- contracts transacted on Wednesday, December 8, 2021, with an original repurchase date on Wednesday, March 9, 2022, or any day thereafter up to and including Wednesday, June 8, 2022 (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 8, 2021, with a repurchase date on Thursday, June 9, 2022, or any day thereafter up to and including Wednesday, December 7, 2022;
- contracts transacted on Wednesday, December 8, 2021, with an original repurchase date on Thursday, June 9, 2022, or any day thereafter up to and including Wednesday, December 7, 2022 (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 8, 2021, with a repurchase date on Thursday, December 8, 2022, or any day thereafter;
- contracts transacted on Wednesday, December 8, 2021, with an original repurchase date on or after Thursday, December 8, 2022 (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 13, 2021, 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 9, 2021). 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)

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)

Securities issued by the EU (but not individual EU members) should now be included in the new question 1.9.37. EU issuers include:

European Commission

European Financial Stability Mechanism (EFSM)

European Financial Stability Facility (EFSF)

European Investment Bank (EIB)

European Stabilisation Mechanism (ESM)

(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 10, 2021 (the day after the previous survey date), to and including December 8, 2021 (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 10, 2021 (the day after the previous survey date), to and including December 8, 2021 (the latest survey date), even if it has matured before the survey date. In other words, this is the number of tickets written.

3 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 independent survey administrator at reposurvey@icmagroup.org.

Appendix B: Survey Participants

List of respondents	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	Jun-20	Dec-20	Jun-21	Dec-21
ABN Amro Bank	x	x	x	x	x	x	x	x												
Allied Irish Banks	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									
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	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	x	x	x	x
Banco Santander	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
UniCredit Bank Austria (Bank Austria)				x		x	x	x	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			
Bank Przemyslowo-Handlowy SA	x	x																		
Landesbank Berlin	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 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	
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																
BHF-Bank International	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
Caixabank (including Bankia)	x	x	x	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												
Bankia SA (formerly Caja de Ahorros y Monte de Piedad de Madrid (Caja Madrid))	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
CA-CIB (formerly Calyon)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
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												

List of respondents	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	Jun-20	Dec-20	Jun-21	Dec-21
Dekabank Deutsche Girozentrale		x	x	x	x	x	x	x	x	x	x	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							
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																		
DNB Bank ASA								x	x	x	x	x	x	x	x	x	x	x	x	x
DZ Bank	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
EFG Eurobank Ergasias	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	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
European Investment Bank																		x	x	x
Hypothekenbank Frankfurt International (formerly Eurohypo Europäische Hypothekenbank)	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
HSBC HSBC Athens HSBC France	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HSH Nordbank								x												
Unicredit Bank Germany (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										
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	x	x	x
JP Morgan	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
KBC	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
KfW		x	x	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			
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								
Lloyds Bank Commercial Banking														x	x	x	x	x	x	x
Lloyds Bank Plc											x	x	x	x	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	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	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												

List of respondents	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	Jun-20	Dec-20	Jun-21	Dec-21
National Bank of Greece									x	x										
Newedge		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	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	x	x	x
Nova Ljubljanska Banka d.d.	x	x	x	x		x		x	x	x	x	x		x	x	x	x	x	x	x
Nykredit Bank A/S																x	x	x	x	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
Royal Bank of Canada		x			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
RBI		x										x								
Société Générale	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Standard Chartered																x	x	x	x	x
Toronto Dominion Bank			x	x		x	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
UniCredit Bank AG Milano Branch	x	x	x	x	x		x	x	x	x	x		x			x	x	x	x	x
Unicredit Bank Spa												x		x	x	x	x	x	x	x
Westdeutsche Landesbank Girozentrale																				
	60	69	63	66	64	64	64	70	66	65	64	64	62	59	56	60	61	60	59	57

Appendix C: Summary Of Survey Results

	Dec-17	Dec-18	Dec-19	Dec-20	Jun-21	Dec-21
Q1 What are the total gross values of cash due to be repaid by you and repaid to you on repo transactions maturing after survey date? (figures in EUR billions)	**6,978**	**7,761**	**8,310**	**8,285**	**8726**	**9,198**
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	16.2%	16.5%	16.3%	16.5%	15.9%	16.5%
• cross-border in (other) **eurozone countries**	11.6%	10.3%	10.2%	13.1%	13.2%	13.1%
• cross-border in **non-eurozone countries**	35.4%	32.9%	34.7%	33.8%	35.1%	33.5%
through **voice-brokers**						
• in the **same country** as you	5.7%	4.7%	5.1%	4.9%	4.0%	4.3%
• cross-border in (other) **eurozone** countries	3.1%	3.3%	3.0%	3.2%	2.7%	3.9%
• cross-border in **non-eurozone** countries	3.4%	2.8%	1.8%	1.3%	1.6%	1.8%
on **ATSs** with counterparties						
• in the **same country** as you	4.0%	5.4%	4.9%	4.8%	4.9%	5.1%
• cross-border in (other) **eurozone** countries	1.7%	1.9%	1.2%	2.2%	2.5%	2.6%
• cross border-border in **non-eurozone** countries	1.7%	2.0%	1.7%	2.2%	2.1%	3.0%
• anonymously across a GC financing system	0.9%	1.1%	0.9%	0.5%	0.6%	0.7%
• anonymously across a central clearing counterparty but not GC financing	16.2%	19.3%	20.2%	17.5%	17.3%	15.3%
• total through a central clearing counterparty	26.4%	27.2%	29.9%	32.1%	31.5%	28.8%
• transacted across any electronic system				70.7%	32.4%	23.9%
1.2 How much of the cash is denominated in:						
• EUR	60.9%	60.5%	53.6%	54.4%	54.5%	56.8%
• GBP	12.3%	12.4%	13.6%	16.5%	16.9%	15.7%
• USD	14.7%	19.4%	18.9%	19.2%	19.5%	19.1%

	Dec-17	Dec-18	Dec-19	Dec-20	Jun-21	Dec-21
• SEK, DKK	5.9%	1.6%	1.9%	1.4%	1.6%	1.5%
• JPY	4.5%	4.5%	5.4%	5.7%	5.2%	4.7%
• CHF	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
• other Asian and Pacific currencies	0.4%	0.6%	0.9%	1.5%	1.1%	0.9%
• other currencies	1.2%	1.0%	5.6%	1.2%	1.2%	1.2%
1.3 How much is cross-currency?	1.4%	2.5%	1.7%	2.7%	2.3%	1.9%
1.4 How much is:						
• classic repo	86.0%	93.1%	91.7%	93.0%	92.3%	93.2%
• documented sell/buy-backs	13.8%	6.7%	8.1%	6.80%	7.5%	6.4%
• undocumented sell/buy-backs	0.2%	0.2%	0.2%	0.30%	0.2%	0.4%
1.5 How much is:						
• fixed rate	80.6%	80.7%	85.0%	87.7%	88.8%	89.0%
• floating rate	13.2%	13.1%	9.0%	10.5%	11.1%	11.0%
• open	6.2%	6.1%	6.0%	1.8%	0.1%	
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**	16.9%	18.9%	16.9%	18.0%	18.8%	16.6%
• **2 - 7days**	22.6%	17.5%	17.3%	19.3%	21.5%	18.6%
• more than **7 days** but no more than **1 month**	15.9%	14.6%	16.8%	13.7%	17.3%	13.7%
• more than **1 month** but no more than **3 months**	16.3%	16.1%	13.3%	15.6%	9.8%	16.7%
• more than **3 months** but no more than **6 months**	4.4%	3.6%	4.7%	8.2%	7.5%	7.9%
• more than **6 months**	2.5%	2.5%	5.1%	3.5%	3.8%	3.2%
• more than **12 months**	1.5%	1.4%	3.4%	2.4%	2.4%	2.7%
• **forward-forward repos**	12.2%	19.3%	12.9%	13.2%	11.4%	14.5%
• **open**	7.8%	6.0%	9.6%	6.2%	7.5%	6.1%
1.7 How much is tri-party repo:	8.6%	8.0%	8.7%	8.8%	8.0%	7.7%
• for **fixed terms to maturity**	87.9%	79.6%	78.1%	83.7%	83.1%	82.1%
• on an **open** basis	3.7%	6.9%	6.3%	10.8%	6.9%	6.8%
GCF	8.4%	12.4%	15.6%	5.5%	9.2%	11.1%
1.8 How much is against collateral issued in:						
Austria						
• by the central government	0.7%	0.9%	0.8%	0.9%	0.9%	0.9%
• by other issuers	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%

	Dec-17	Dec-18	Dec-19	Dec-20	Jun-21	Dec-21
Belgium						
• by the central government	2.0%	3.0%	2.8%	3.1%	3.3%	2.9%
• by other issuers	1.0%	0.7%	0.3%	0.3%	0.3%	0.4%
Denmark						
• by the central government	0.4%	0.2%	0.4%	0.3%	0.2%	0.2%
• by other issuers	1.0%	0.4%	0.5%	0.6%	0.6%	0.6%
Finland						
• by the central government	0.4%	0.5%	0.3%	0.4%	0.4%	0.4%
• by other issuers	0.0%	0.1%	0.3%	0.0%	0.0%	0.0%
France						
• by the central government	12.2%	12.6%	12.0%	12.2%	12.6%	13.2%
• by other issuers	1.0%	1.0%	1.0%	0.5%	0.5%	0.6%
Germany						
• by the central government	17.9%	15.2%	12.3%	14.8%	14.0%	14.3%
pfandbrief	0.7%	0.9%	0.3%	0.1%	0.1%	0.1%
• by other issuers	1.0%	1.0%	0.9%	0.6%	0.7%	1.4%
Greece						
• by the central government	0.1%	0.2%	0.3%	0.1%	0.1%	0.2%
• by other issuers	0.1%	0.2%	0.1%	0.0%	0.1%	0.1%
Ireland						
• by the central government	0.1%	0.2%	0.3%	0.3%	0.3%	0.4%
• by other issuers	0.1%	0.2%	0.3%	0.2%	0.2%	0.3%
Italy						
• by the central government	11.2%	12.2%	13.7%	11.4%	11.2%	11.5%
• by other issuers	0.6%	0.8%	0.4%	0.3%	0.4%	0.4%
Luxembourg						
• by the central government	0.1%	0.1%	0.0%	0.0%	0.1%	0.0%
• by other issuers	0.2%	0.3%	0.2%	0.4%	0.3%	0.3%
Netherlands						
• by the central government	1.5%	1.8%	1.0%	1.2%	1.2%	1.3%
• by other issuers	0.2%	0.3%	0.2%	0.2%	0.2%	0.2%
Portugal						
• by the central government	0.4%	0.6%	0.5%	0.5%	0.5%	0.5%
• by other issuers	0.1%	0.1%	0.2%	0.0%	0.0%	0.1%
Spain						
• by the central government	4.0%	4.0%	5.0%	4.8%	4.9%	5.2%
• by other issuers	1.4%	1.0%	0.8%	0.4%	0.6%	0.7%

	Dec-17	Dec-18	Dec-19	Dec-20	Jun-21	Dec-21
Sweden						
• by the central government	2.9%	0.6%	0.4%	0.5%	0.5%	0.5%
• by other issuers	1.9%	0.7%	0.4%	0.3%	0.8%	0.3%
UK						
• by the central government	12.1%	11.0%	13.4%	14.8%	14.9%	14.1%
• by other issuers	1.6%	1.7%	1.2%	1.4%	1.1%	1.3%
US Treasury	4.6%	8.8%	8.8%	8.1%	8.7%	10.9%
US other issuers	1.2%	2.6%	2.4%	2.4%	2.3%	2.2%
US but settled across EOC/CS						
other countries						
Bulgaria						
• by the central government						
• by other issuers						
Cyprus						
• by the central government						
• by other issuers						
Czech Republic						
• by the central government	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%
• by other issuers	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%
Estonia						
• by the central government						
• by other issuers						
Hungary						
• by the central government						
• by other issuers						
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%					

	Dec-17	Dec-18	Dec-19	Dec-20	Jun-21	Dec-21
• by other issuers						
Romania						
• 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	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Other EU members by other issuers	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%
• by official international financial institutions	0.1%	0.7%	0.5%	0.2%	0.2%	0.4%
Japan						
• Japanese government	3.3%	3.4%	5.1%	5.2%	3.5%	3.9%
• Other Japanese issuers	1.1%	1.4%	1.4%	1.1%	1.2%	1.1%
Other Asian & Pacific OECD countries in the form of fixed income securities, except eurobonds	0.8%	0.4%	1.4%	0.8%	0.4%	0.3%
Other OECD countries in the form of fixed income securities, except eurobonds	3.7%	4.3%	4.2%	5.4%	6.4%	3.4%
Other OECD						
non-OECD EMEA	0.5%	0.5%	0.6%	0.7%	0.8%	0.7%
non-OECD Asian & Pacific	0.3%	0.4%	0.6%	0.6%	0.6%	0.5%
non-OECD Latin America	0.4%	0.4%	0.4%	0.3%	0.4%	0.3%
eurobonds issued by European entities	1%	0.8%	0.8%	0.8%	0.8%	0.8%
eurobonds issued by US entities	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%
eurobonds issued by Asian & Pacific entities	0.3%	0.3%	0.5%	0.5%	0.4%	0.3%
eurobonds issued by other entities	0.3%	0.3%	0.4%	0.5%	0.4%	0.3%
equity	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%
collateral of unknown origin or type	1.2%	1.0%	0.2%	0.2%	0.2%	0.1%
collateral in tri-party which cannot be attributed to a country or issuer	2.3%	1.3%	1.6%	1.2%	1.2%	1.4%
EU issues				0.5%	0.3%	0.3%
total gross values of repo & reverse repo with APAC				5.3%	4.3%	3.9%

	Dec-17	Dec-18	Dec-19	Dec-20	Jun-21	Dec-21
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	29.6%	22.3%	20.4%	19.6%	17.1%	22.1%
• in equity	0.3%	0.1%	0.2%	0.1%	4.4%	0.0%
• cross-border in (other) **eurozone** countries						
• in fixed income	29.7%	32.1%	24.8%	35.2%	19.5%	26.3%
• in equity	1.8%	1.3%	0.2%	1.2%	13.0%	0.3%
• cross-border in **non-eurozone** countries						
• in fixed income	37.2%	43.1%	53.4%	42.6%	35.6%	50.8%
• in equity	1.5%	1.1%	1.0%	1.3%	10.5%	0.4%
for which the term to maturity is						
fixed	66.9%	72.8%	70.8%	77.7%	52.7%	71.6%
open	33.1%	27.2%	29.2%	22.3%	47.3%	28.4%
Number of GMRAs			71%	73.4%	80.3%	84.9%

Appendix D: Review of SFTR public data on the European repo market in 2021

Reporting obligations under SFTR came into force in the EU-28 on 13 July 2020. The Brexit Transition Period closed at the end of 2020, so 2021 was the first full calendar year in which the European repo market was split between two different regulatory jurisdictions.

EU repo market

Chart 1 shows that there was moderate growth in average daily repo turnover in the EU over 2021. The peak was EUR 2.7 trillion per day in the week ending 17 December, just prior to the usual end-year collapse. The year-end was, as expected, less dramatic than at the end of 2020 (which coincided with the Brexit split) but still amounted to a drop of some 51% to EUR 1.3 trillion per day.

Chart 1: average daily turnover in all repo in the EU

In terms of outstanding size (see Chart 2), the EU repo market grew by 13% over 2021 from the week ending 22 January (a base period chosen to avoid the end-year collapse in repo activity). This compares with growth of 7.7% in the repo survey (although survey growth is measured from the December survey date).

Chart 2: end-week outstanding value in all repo in the EU

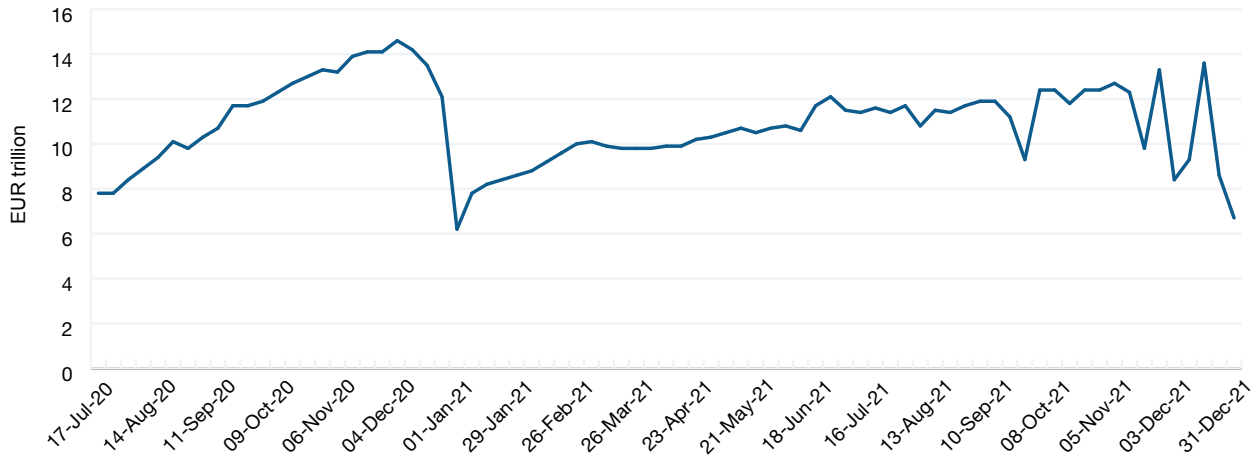


Table 1 below summarizes the changes in the EU repo market segment in 2021 by comparing EU-27 averages for 2021 with those of the EU-28 during the 25 weeks of 2020 that were covered by SFTR.

Table 1: SFTR public data for the EU repo market

repo = REPO+SBSC	13 July-December 2020	2021	change
average daily turnover	EUR 3,277 billion	EUR 2,249 billion	-31%
CCP-cleared	56.1%	66.6%	+10.5pp
EEA MIC	57.0%	60.9%	+3.9pp
nonEEA MIC	4.5%	5.0%	+0.5pp
XOFF	3.3%	1.5%	-1.8pp
XXXX	35.2%	32.1%	-3.1pp
EEA-EEA	63.8%	56.9%	-7.8pp
EEA-nonEEA	33.5%	43.1%	+9.6pp
nonEEA-EEA	0.5%	0.0%	-0.5pp
nonEEA-nonEEA	2.1%	0.0%	-2.1pp

Source: DTCC, KPDW, Regis TR, Unavista, author's own calculations.
pp = percentage points

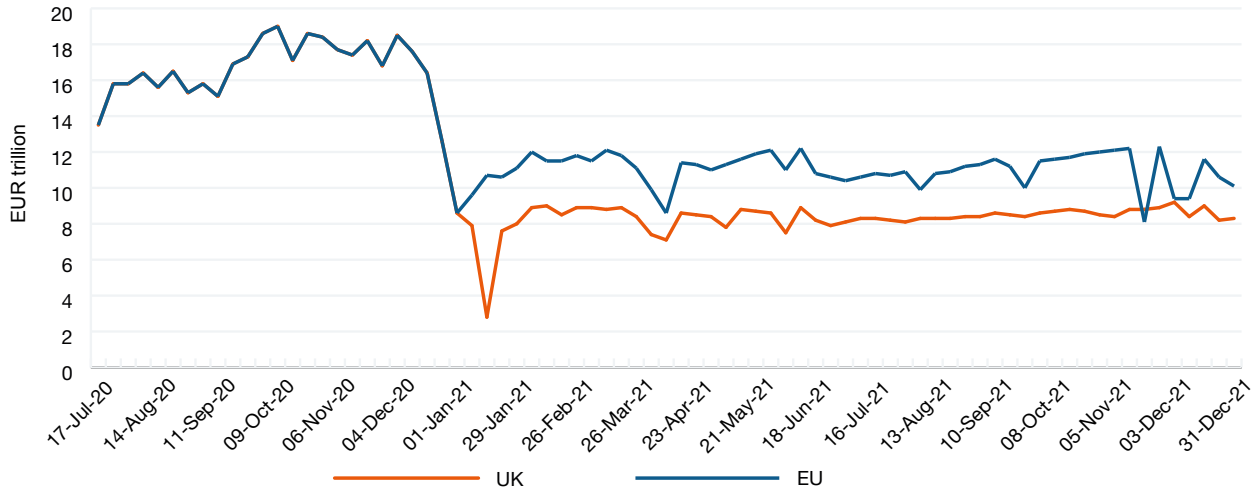
The data show that the EU repo market in 2021 is 31% smaller than the EU-28 market. Some or most of changes in the shares of transactions between EEA parties (EEA-EEA) and between EEA and non-EEA parties (EEA-nonEEA) may be driven by the duplication of trading arising from Brexit.

Chart 1 shows several sudden dips in turnover in 2021. The 22% drop in late March and early April coincides with the Easter holiday. The dips in the weeks ending 19 November and 3 December are simply due to a trade repository failing to publish data. However, it is not clear what may have caused the volatility in September, although this was an end-quarter and was particularly stressed in 2021. Some of the subsequent swings in November and December may have reflected issues arising from the migration of reporting to other trade repositories from Unavista, which is closing down its SFTR business.

UK repo market

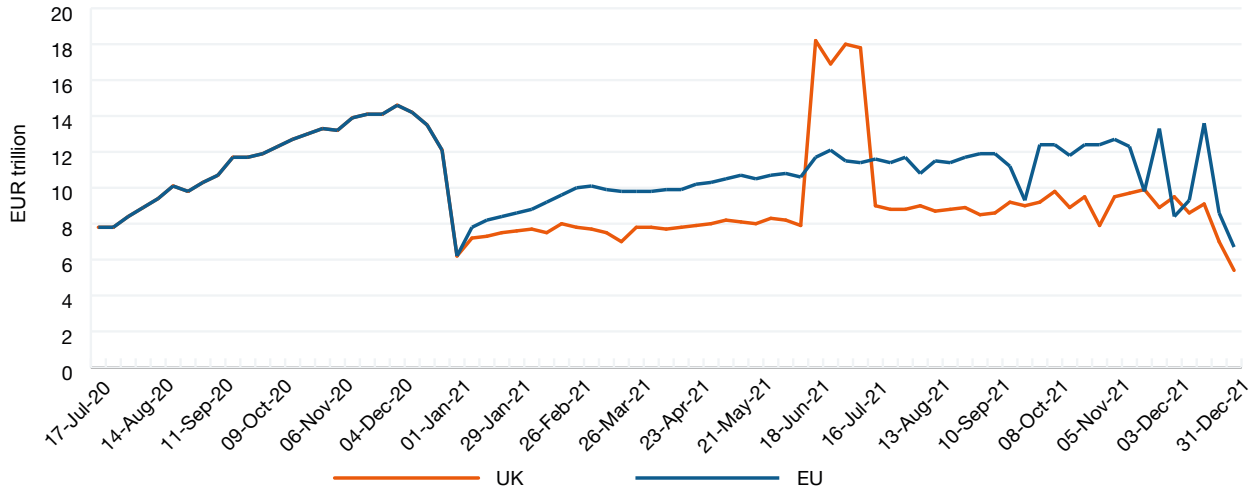
Chart 3 below shows moderate growth in average daily repo turnover in the UK over 2021 (ignoring the anomaly in June-July) with a peak just under EUR 2.0 trillion. Over 2021 as a whole, turnover in the UK repo market averaged 82% of the EU market.

Chart 3: average daily turnover in all repo in the UK and EU



In terms of outstanding size (see Chart 3 above), the UK repo market grew by 17% over 2021 compared with 7.7% in the repo survey (measured, as for the EU, from the week ending 22 January to the December 2021 survey date).

Chart 4: end-week outstanding value in all repo in the UK



The table below is the equivalent to Table 1 but for the UK.

Table 2: SFTR public data for the UK and (pre-2021) EU

repo = REPO+SBSC	13 July-December 2020	2021	change
average daily turnover	EUR 3,277 billion	EUR 1,838 billion	-44%
CCP-cleared	56.1%	33.3%	-22.8pp
EEA then UK MIC	57.0%	12.3%	-44.7pp
nonEEA then nonUK MIC	4.5%	30.8%	+26.3pp
XOFF	3.3%	4.8%	+1.5pp
XXXX	35.2%	52.2%	+17.0pp
EEA-EEA then UK-UK	63.8%	16.5%	-47.3pp
EEA-nonEEA then UK-nonUK	33.5%	83.6%	+50.1pp
nonEEA-EEA then nonUK-UK	0.5%	0.0%	-0.5pp
nonEEA-nonEEA then nonUK-UK	2.1%	0.0%	-2.1pp

Source: DTCC only, author's own calculations.
pp = percentage points

It is not possible to fully analyze the trading venue and counterparty location data for the UK in 2021 because one of the trade repositories was not able to distinguish UK from non-UK venues and parties. However, data from the other trade repository operating in the UK allow some tentative conclusions to be drawn.

The smaller post-Brexit share of UK MICs clearly reflects the hiving off of some euro business into EU branches and subsidiaries. The larger share of non-UK MICs is the counterpart. Brexit was also the driver of the shift from EEA-EEA to UK-nonUK trades. The larger share of OTC trades (XXXX) reflects the greater importance of this type of trading in the UK market before Brexit. The smaller share of CCP-clearing in the UK public data is due to inclusion of all repos cleared by LCH SA, CC&G and Eurex Clearing in the EU data.

Chart 3 illustrates the problems that trade repositories have had with the compilation of SFTR public data, which compares repo turnover between the EU and the UK over 2021. Most noticeably, there was the apparent explosion in UK turnover published by DTCC in June-July 2021. This anomaly has never been resolved.

Appendix E: 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 who transacts repo and associated collateral business in Europe, 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.

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