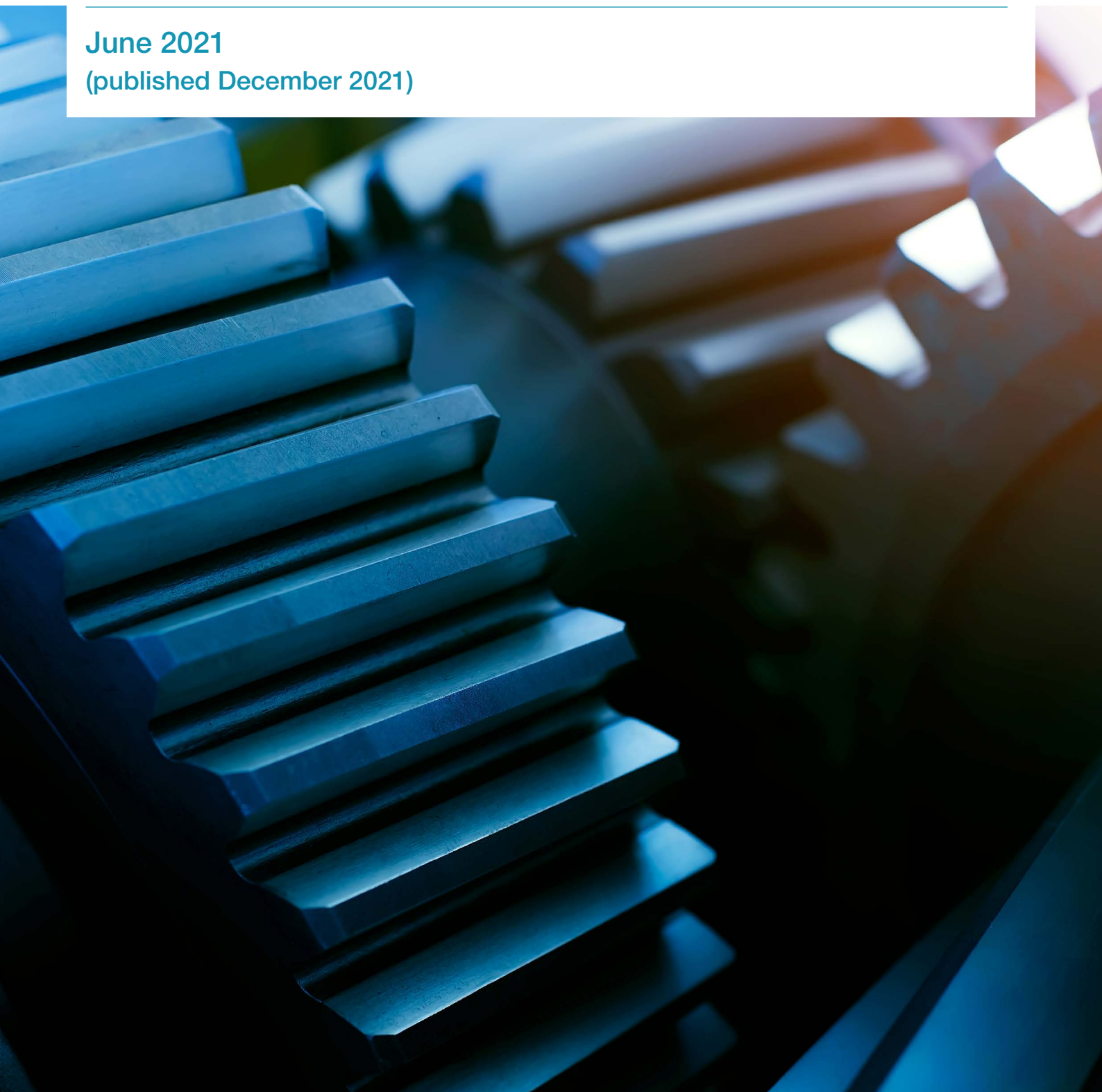


Asia-Pacific repo market survey

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Since the early 1990's, ICMA has played a significant role in promoting the interests and activities of the international repo market, and of the product itself. The European Repo and Collateral Council (ERCC), a special interest group established under the auspices of ICMA, represents the major firms active in Europe's cross-border repo markets.

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The survey

ICMA's European Repo and Collateral Council (ERCC) and ASIFMA's Secured Funding Markets Committee have been co-operating to extend the ICMA's semi-annual survey of the European repo market to the Asia-Pacific (APAC) repo market.

Co-operation started in June 2016 with the addition of a number of questions to the ICMA's European survey to provide greater granularity about APAC repo executed in Europe.

In December 2016, a pilot survey of repo desks located in the APAC region was conducted using a questionnaire based on that for the European survey.

The first regular APAC repo market survey took place in June 2020. The latest survey was conducted on June 9, 2021. The surveys are being timed to coincide with the ICMA's mid-year semi-annual European repo market survey.

The participants in the joint APAC survey are largely international banks. Consequently, the business encompassed tends to be cross-border rather than domestic repo.

Methodology of the APAC survey

The survey broadly follows the methodology of the European survey, except for a more relaxed definition of repo (to include 'pledged repo'):

- APAC repo has been defined, for the purposes of the survey, as repos (1) involving at least one party dealing from a location in the APAC region in any currency or against any collateral or (2) between parties located anywhere but in an APAC currency and/or against collateral issued in the APAC region.
- Respondents were asked to identify the location of repo desks executing transactions rather than the location where the transactions were booked. This has been challenging for many banks.
- Repo has been defined for the purposes of this survey to include instruments that do not conform to the standard definition of repo as an instrument that transfers title to collateral, eg some Chinese 'pledged repo' and Japanese 'gentan'.
- The European and Asian surveys measure the value of repos and reverse repos outstanding at close of business on the survey date rather than turnover over a period. This snapshot of the market at one point in time understates the volume of short-term transactions, given that many of these run off between survey dates, but provides a meaningful picture of exposures.
- The results have not been adjusted for double-counting where the same transaction has been reported by two survey respondents.
- The results do not include repos by central banks which were part of their open market operations.

A key difference with the European survey has been to split the APAC survey into two parallel surveys, one for trading in Japan and the other for trading elsewhere in the APAC region.

New data about APAC repo in the European survey (June 2021)

- APAC repo accounts for a small, although not insignificant, share of the European market.
- The Japanese yen is overwhelmingly the main APAC currency traded in the European repo market.
- The European repo market is a net borrower of collateral issued in the APAC region.
- The most common APAC collateral traded in the European repo market is Japanese, of which 76% were JGBs.

APAC counterparties accounted for 4.3% of total outstanding value of repos and reverse repos reported by European dealers, down from 5.3% in December 2020. In terms of outstanding value, business with APAC counterparties fell to EUR 365 billion from EUR 431 billion.

In the European survey, 4.0% of transactions with APAC counterparties was in repos and 5.1% in reverse repos, compared with 4.0% and 6.7%, respectively, in June 2020. European dealers have therefore been net cash lenders (net collateral borrowers) but their net cash position contracted by 2021, which reflected a cut in gross cash lending.

APAC currencies accounted for 6.3% of total outstanding repos and reverse repos traded in Europe, little changed from 6.7% in June 2020. Japanese yen accounted for 5.2% (down from 5.7%). Reverse repos accounted for about 57% of transactions in yen and 60% in other APAC currencies (unchanged from the 2020 survey). In other words, European dealers remained net lenders of yen and other APAC currencies.

The overall share of APAC issued collateral repoed out and reversed in by European dealers was 5.1%, compared with 8.0% in the previous survey. These changes were largely driven by Japanese collateral, in particular, by JGBs. Japanese collateral accounted for 4.7% and JGBs for 3.5% of the outstanding value of the survey (compared with 6.4% and 4.8%, respectively, in June 2020). In addition, 0.4% of collateral in the European survey was issued in “other OECD APAC” countries; 0.6% was non-OECD APAC collateral; and 0.4% was in APAC eurobonds (all very similar shares to the last survey).

Survey results of the June 2021 APAC survey

Summary

Japan

- The Japan survey sample was slightly larger than in 2020.
- There were few major changes in the composition of repo business reported in the Japan survey. The most noteworthy were increased business with European counterparties, although less in euros, and more against US Treasuries.
- The overwhelming share of reported repos was still executed directly between parties by telephone and electronic messaging.
- Voice-brokers continued to play a more significant role in Japan than in the rest of Asia.
- Automatic and automated trading remained very limited in Japan, more so than in the rest of Asia.
- CCP-clearing accounted for a large share of outstanding business, albeit less than in Europe.
- Unsurprisingly, the Japanese yen remained predominant in the Japan survey, with the remaining business mainly in US dollars.
- The Japan survey continued to be largely in the form of gantan repo, which is very different to the composition of the Japanese market as reported by the Bank of Japan and the JSDA (which report mostly gensaki repo).
- All the reported transactions in the Japan survey continue to be fixed-rate.
- The maturity distribution of the Japan survey was still similar to that of the ICMA European repo survey with two exceptions: forward repos were even more prominent; and there was minimal business beyond three months.
- As expected, Japanese securities continued to dominate the Japan survey, particularly JGBs. US Treasuries had a small share.
- Most transactions in the Japan survey were documented under the GMRA.

Other APAC

- The non-Japan APAC survey was materially larger than in 2020.
- The non-Japan APAC survey sample largely traded US dollars, Australian dollars and euros against US, Australian and European collateral.
- The major changes in the composition of repo business in the APAC region outside Japan were a switch to net cash lending by the survey sample, more cross-border business, especially with counterparties in Europe, a drop in trading in JGBs but a jump in eurozone government securities and euros, more trading in US dollars and US Treasuries, more fixed-rate business, a fall in remaining maturities between one and six months but a jump in forward and open repos.
- The bulk of reported repo business remained cross-border, a significant share of which was still with counterparties in other APAC countries and Europe.
- Once again, the overwhelming share of reported repos was executed over-the-counter (OTC) directly between parties by telephone and electronic messaging.
- Voice-brokers played a modest role.
- Automatic and automated electronic trading was very limited. (Automated trading requires manual intervention to execute a deal. Automatic does not).
- Little business was CCP-cleared.
- The predominant currency was again the US dollar but there was significant business in Australian dollars and euros. About one-third of outstanding business was in Asian currencies.
- Transactions were overwhelmingly in repurchase transactions. There were small amounts of documented buy/sell-backs and Chinese pledged repo.
- Most non-Japan APAC transactions were documented under the GMRA.
- Compared with the European survey, short-dated and floating-rate repos took smaller shares but open repos were more important. Compared with Japan, there were more short dates and open repos.
- The overwhelming share of all collateral was non-government securities but the largest individual pools of collateral were in US Treasuries, eurozone government securities and Australian government securities. There were also material amounts of non-government US securities, JGBs, issues by international financial institutions and Chinese securities. Asian securities in total accounted for over 40% of collateral.

Pledged repo is a collateralized instrument found in the Chinese domestic market. It is a loan secured by pledged collateral rather than a transfer of legal title to the collateral. It is therefore not a true repo and is exposed to uncertainty about the consequences of a default by an insolvent counterparty because the collateral rights of the non-defaulting party will be subject to the statutory insolvency regime rather than the contractual default management provisions of the counterparties' legal agreement.

Gentan repo is a collateralized instrument used by Japanese counterparties. It is a secured loan documented as a cash-collateralized securities loan but is in reality a disguised repo (eg the cash amount stays constant). The reason for packaging a repo as a securities loan was to avoid a securities transaction tax (now abolished) which applied to sale-and-repurchase transactions like repo but not to loans.

Gensaki repo is a collateralized instrument used by Japanese counterparties that has largely replaced the gentan repo. It is a true repo. Gensaki repo have been through several evolutions. The latest version is equivalent to international-style repurchase transactions documented under the GMRA.

Overview

The **Japan** survey reported an outstanding value of repos and reverse repos for the survey sample on June 9 of USD 202.9 billion, compared with USD 215.7 billion last year. Average daily turnover over the year to 9 June was almost USD 33 billion, with an average deal size of about USD 63 million. Repos were on average larger than reverse repos (USD 94 million versus USD 49 million).

The Japan survey sample was a net cash lender and net securities borrower (69% of outstanding value was in reverse repos, down sharply from 95% last year) except in Australian dollar cash and collateral, repos against JGBs, gensaki and repos with only one day remaining to maturity.

The **non-Japan APAC** survey reported USD 260.1 billion in outstanding value and an average daily turnover of USD 29 billion, compared with USD 216.7 billion and almost USD 37 billion per day in 2020. Average deal size was some USD 56 million, compared with USD 76 million in the last survey.

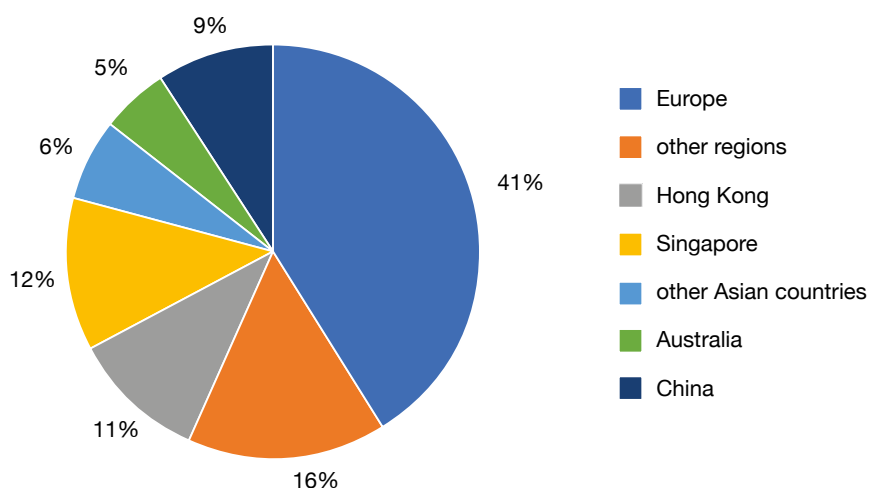
The non-Japan APAC survey sample switched in 2021 to being a net cash lender and therefore a net securities borrower (58% of outstanding value was in reverse repo, compared with 43% in the 2020 survey).

Geographical analysis

The major share of the outstanding business reported in the non-Japan APAC survey was cross-border with counterparties in the APAC region (43%, compared with 48%) and European counterparties, whose share jumped to 41% from 34% last year, at the expense of counterparties in Australia (5%, compared with 7%), Hong Kong (11% from 19%), “other APAC” countries (7% from 11%), the US and other regions (down to 16% from 20%).

The survey sample was a net cash borrower from China and the US. It switched to being a net cash lender to Australia, Hong Kong and Europe.

Figure 1 – Geographical analysis - APAC excluding Japan



Trading analysis

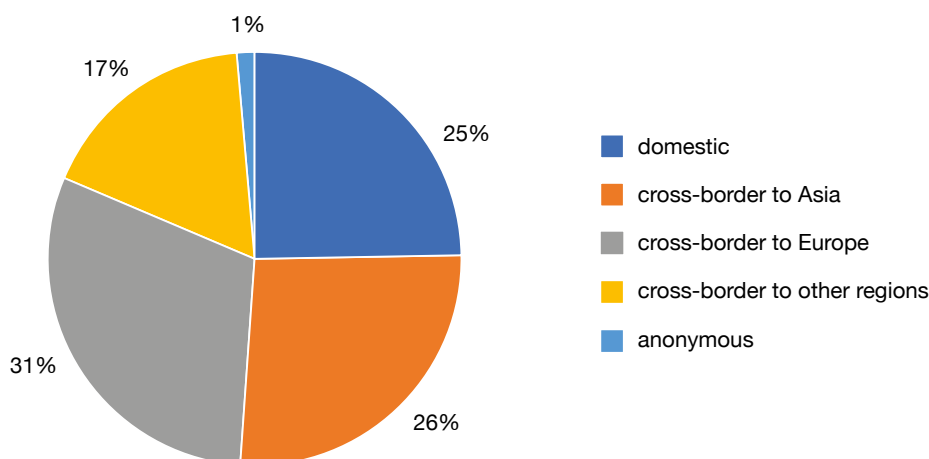
Parties in the **Japan** survey transacted 86% of their repos and reverse repos directly with their counterparties and 14% via voice-brokers, presumably Tanshi brokers (compared with 83% and 17%, respectively, in the last survey). Electronic trading remained negligible but almost 18% of outstanding value had been CCP-cleared, although this was down from the 30% reported in June 2020.

The survey sample continued to be a net cash lender to direct counterparties (but only 76% of the outstanding value of direct transactions was in reverse repo, compared with 94% in 2020) and net cash borrowers in voice-brokered repo (70% of the outstanding value of voice-brokered transactions were in repo, compared with zero last year). A very small amount of reverse repo was transacted electronically.

As in the Japan survey, most of the business reported in the **non-Japan APAC** survey had been transacted directly between parties (89%, compared with 94% in the previous survey). Over 3% had been transacted electronically, compared with just under 2% in 2020. The remainder (8%, compared with 5% last year) had been arranged by voice-brokers. Just over 1% had been negotiated electronically and anonymously (on a platform connected to a CCP), compared with just under 1% last year.

The survey identified 25% of outstanding value as having been negotiated between counterparties in the same country (down from 38% in 2020), 74% negotiated cross-border (up from 62%) and just 1% negotiated anonymously. Of the cross-border business, 27% was with counterparties in other APAC countries (down from 29%), 31% with European counterparties (up from 20%) and 17% with counterparties in other regions, including the US (up from 13%). The trading analysis differs from the geographical analysis in that it shows a lower share for counterparties in Europe (31%, compared with 41%). This may be due to differences between where a trade is executed and where it is booked and managed.

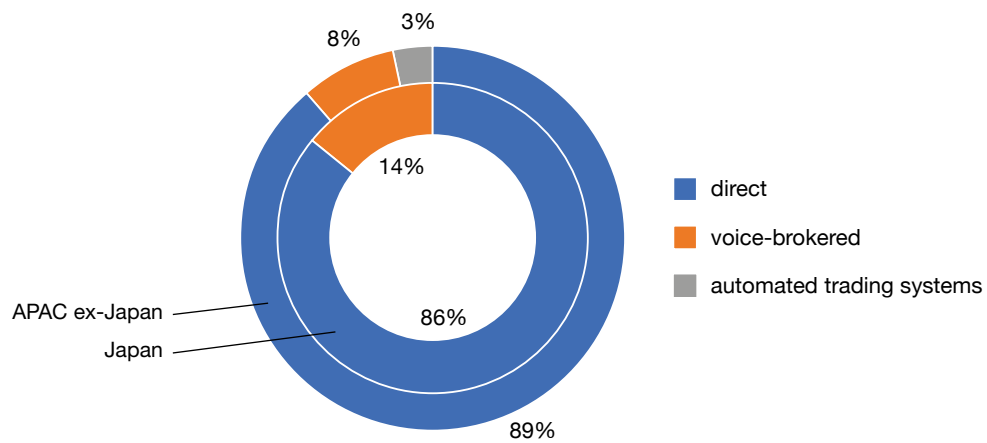
Figure 2 – Trading analysis - domestic v cross-border.



The survey sample switched to net cash lending to counterparties in the same country (62% of the outstanding value of domestic trades was in reverse repos, compared with 27% in 2020) and in cross-border transactions with Europe (reverse repos were 60%, up from 41%). There was also a switch to net cash borrowing in cross-border transactions with “other regions” (repo was 59%, up from 34% in 2020). Cross-border business with APAC counterparties continued to be net cash lending (62%, compared with 55%). CCP-cleared and electronically-traded transactions continued to be overwhelmingly net cash borrowing.

There was also a switch to net cash lending through directly-negotiated repos (58% was in reverse repos, the inverse of 2020) and the survey sample remained a net cash lender via voice-brokers (63% was in reverse repos, down from 70%) and a net cash borrower through electronic trading (81% was in repos, down from 90%).

Figure 3 – Trading analysis - type of venue



Currency analysis

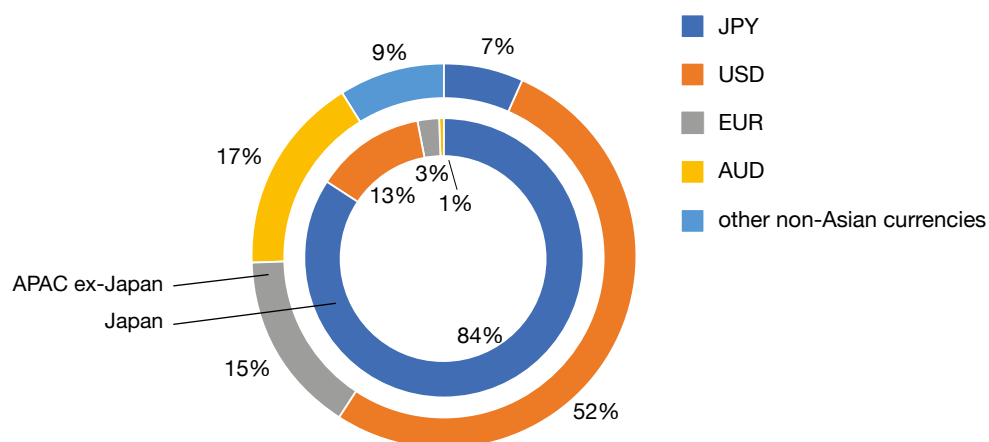
The bulk of the business reported in the **Japan** survey continued to be in Japanese yen (84%, compared with 86% in 2020). This was slightly higher than Bank of Japan statistics for the domestic market (82% in August 2021). Most of the remainder was in US dollars (13%, compared with 8% in the 2020 survey). The share of euros fell below 3% from 5% and Australian dollars dropped below the 1% recorded in 2020.

The survey sample was a net lender of all currencies except Australian dollars. The US dollar position of the survey sample is consistent with the reported position of foreign dealers in the domestic market as reported by the Bank of Japan, where they are mainly lenders of dollars, usually to exploit cross-currency arbitrage opportunities.

The most traded currency reported in the **non-Japan APAC** survey was the US dollar (52%, compared with 47% last year). Of the remainder, 32% was in APAC currencies, down from 48% in 2020, mainly due to fall in the share of Japanese yen to 7% from 26% and a rise in the share of the euro to 15% from 5%. The share of Australian dollars was 17% (up from 15%), under 1% was Hong Kong dollars (from 2%), 2% was Singapore dollars (up from 1%) and 3% in Chinese renminbi (up from 1%). The weight of business in the renminbi switched to the offshore from the onshore currency. The share of cross-currency business fell to 8% from 16%.

The survey was a net cash borrower in Chinese renminbi, yen and minor APAC currencies but it switched to being a net cash lender through cross-currency repos (64% were reverse repos, compared with 31% in 2020).

Figure 4 – Currency analysis



Instrument analysis

63% of the outstanding value reported in the **Japan** survey was in gentan, unchanged from 2020. As noted last year, this high share is surprising given the general shift in the Japanese market since 2018 towards the updated form of new gensaki. Gensaki accounted for 30% of the latest survey (also unchanged) and international-style repurchase transactions (typically under the GMRA) were 8% (compared with 7%).

As last year, gentan provided net cash lending in 2021 (90% was reverse repo, compared with 94%), whereas gensaki switched from net cash lending to net cash borrowing (73% in repo, down from 4% in 2020). Repurchase transactions were primarily for net cash lending (67% in reverse repo, down from 100%).

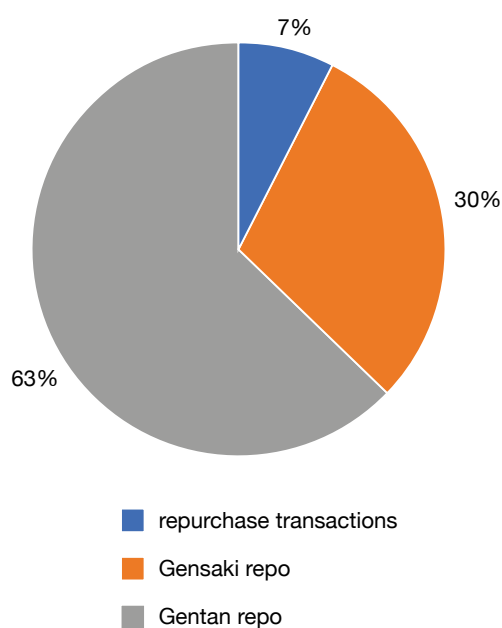
Once again, no tri-party repos were reported, despite this type of transaction accounting for a significant share of the GC repo market in Japan in the form of Subsequent Collateral Allocation Repo (SCAR). This discrepancy probably reflects the international focus of the business of the survey sample which is likely to be securities rather than cash-driven and therefore less likely to use GC and tri-party repos.

The primary type of repo reported in the **non-Japan APAC** survey continued to be repurchase transactions (94%, compared with 96% in 2020). Only 4% were documented buy/sell-backs (down sharply from 16%). Some 3% was pledged repo, which are domestic Chinese transactions, up from 1%.

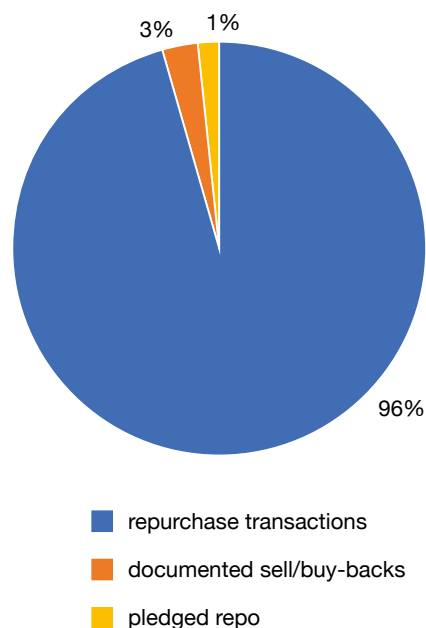
11% of the outstanding value of the survey was tri-party repo (down from 20%).

Net cash lending and securities borrowing was focused through GMRA-style repurchase transactions and net cash borrowing through the other types of repo.

Figure 5 – Instrument analysis - Japan



Instrument analysis - APAC ex-Japan

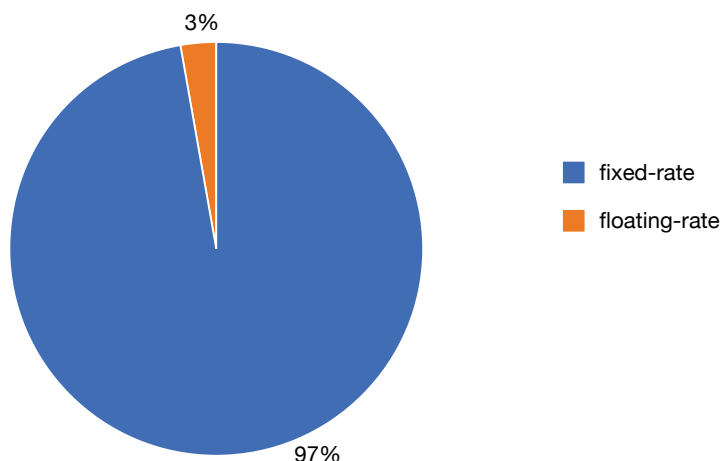


Rate analysis

All the repo reported in the **Japan** survey continues to be fixed rate.

The share of fixed-rate repos in **non-Japan APAC** survey jumped to 97% from 80% in 2020, with floating-rate dropping to 3% from 14%.

Figure 6 – rate analysis - APAC ex-Japan



Maturity analysis

The survey measures the stock of business still outstanding on the survey date and not the flow of business over the preceding year. This means short-term transactions are under-represented because most run off between survey dates. They would represent a much higher share of turnover.

In the **Japan** survey, short-dated repo accounted for 61%, up from 56% in 2020. Transactions with a remaining maturity of one day accounted for 9% of outstanding value, 18% was for two to seven days and 34% for other short dates. These shares compared with 15%, 17% and 23%, respectively, in June 2020, indicating a lengthening within short-dated maturities. The overall maturity profile of the survey is more skewed to the longer term than the domestic market in Japan (where 38% of outstanding value in 2020 was for one-day).

A very substantial share of outstanding business continues to be in forward repos (27%, compared with 33% last year). However, it is possible that some or much of the repos reported in the survey as forwards were actually for delayed settlement dates of T+3 or T+4 and were not traded as forwards. Delayed settlement periods would reflect the challenges of cross-border settlement across several time zones.

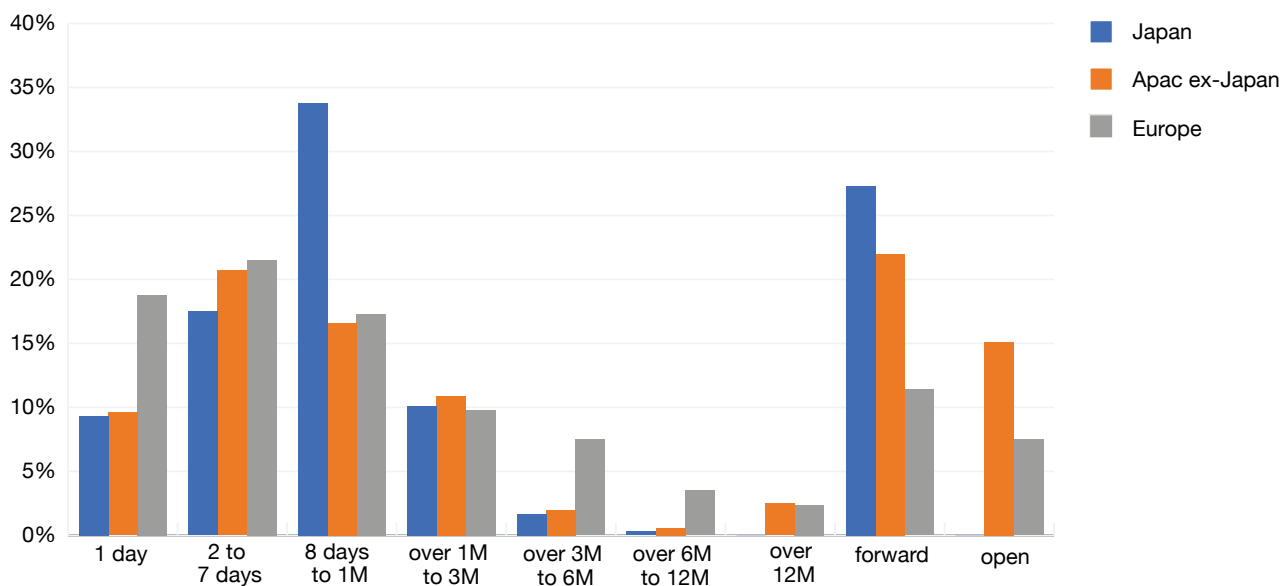
Of the remaining outstanding business reported to the Japan survey, 10% had remaining maturities of between one and three months (little changed from 11% last year). There was little business outstanding in Japan beyond three months, none beyond one year and no open trades.

The survey sample in Japan were net cash borrowers in one-day repo (76% were repos, down from 82% in 2020) but net cash lenders in longer-term and forward repos.

Some 47% of outstanding value reported in the **non-Japan APAC** survey was in short dates (down from 53% in the previous survey), of which, 17% had more than one week but no more than one month remaining to maturity (compared with 28%). 13% was between one and six months, sharply down from 27% last year. Forward repos jumped to 22% from 10% and business beyond one year grew to 3% from 1%. Open repo was 15%, compared with 7% last year. There was therefore an overall shift into open, long-term and forward repos.

In 2020, the survey sample was a net cash borrower across most remaining maturities, particularly over one to six months (where 67% were reverse repos) and over one year, but a net cash lender over two to seven days, while short dates as a whole were in equilibrium. Broadly-speaking, the survey sample ran a positive maturity gap (borrowing long, lending short). In the latest survey, the sample became a net cash borrower in short dates as a whole (55% of which was repo) but a net cash lender between one and 12 months and in open and forward repo. In other words, the survey sample switched to a negative gap.

Figure 7 – Maturity analysis



Collateral analysis

The overwhelming share of the collateral reported in the **Japan** survey was again in domestic fixed-income securities (84%, compared with 86% last year), almost entirely JGBs. This is much lower than in the Bank of Japan statistics for the domestic market (where JGBs account for almost 98%). A very small amount of Japanese non-government securities were repoed by the survey sample.

The only other significant source of collateral in the Japan survey was US Treasuries, which grew to 10% from 6%.

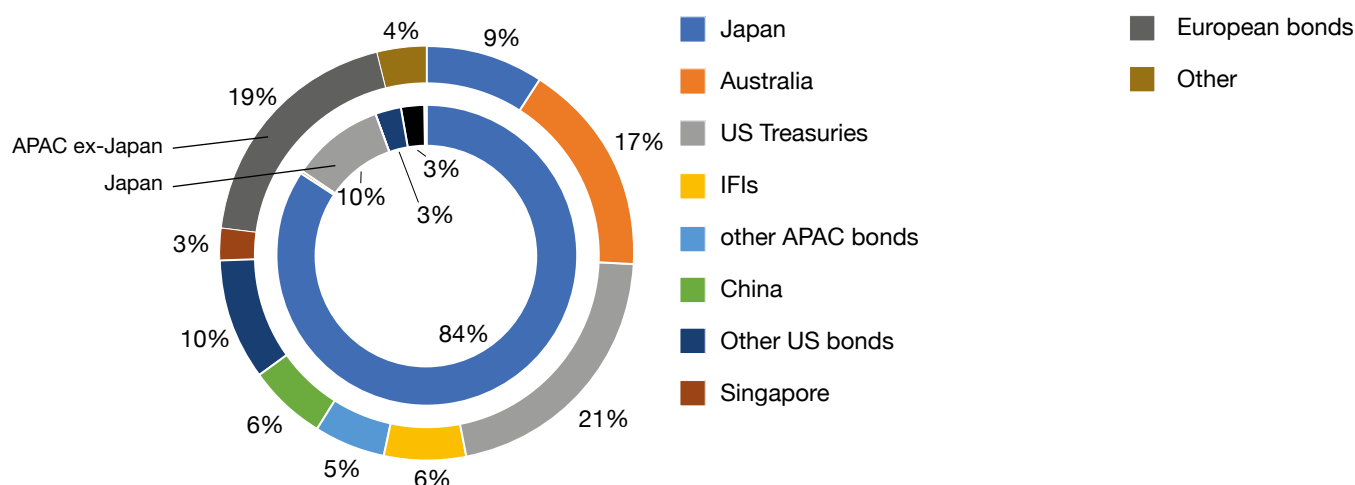
Other US securities increased to 3% from 2%. Most of the remaining collateral was euro-denominated government securities, which accounted for 2% (down from 3% in 2020).

The survey sample were net borrowers of JGBs (70% of outstanding transactions were reverse repo), US securities (58% of Treasuries and 82% of other US securities were reversed in) and eurozone government securities (84% was reversed in).

In the **non-Japan APAC** survey, there were big changes in collateral composition. The share of APAC securities dropped to 40% from 62% in 2020, reflecting a fall in the share of Japanese fixed-income securities (mainly JGBs) to 9% from 33%. The largest pool of collateral was in US Treasuries (21%, compared with 14%), eurozone government securities (up to 17% from virtually nothing in 2020) and Australian securities (unchanged at 16%). The share of issues by international financial institutions was unchanged at 6%, as were “other APAC” securities. US non-government securities increased to 10% from 3% and eurobonds to 6% from 2%. Equity dropped to zero from 5%. The overall share of government securities was 31%, compared with 30% in 2020.

Overall, the survey sample became a net borrower of government securities (62% were reverse repos, compared with 50%) and was a net lender only of securities issued in non-eurozone Europe and Japan and by non-government borrowers in the US. 73% of transactions against eurozone securities and 60% against US Treasuries were reverse repos. In 2020, the survey sample was a net borrower only of securities issued in Hong Kong or by international financial institutions and eurobonds.

Figure 8 – Collateral analysis

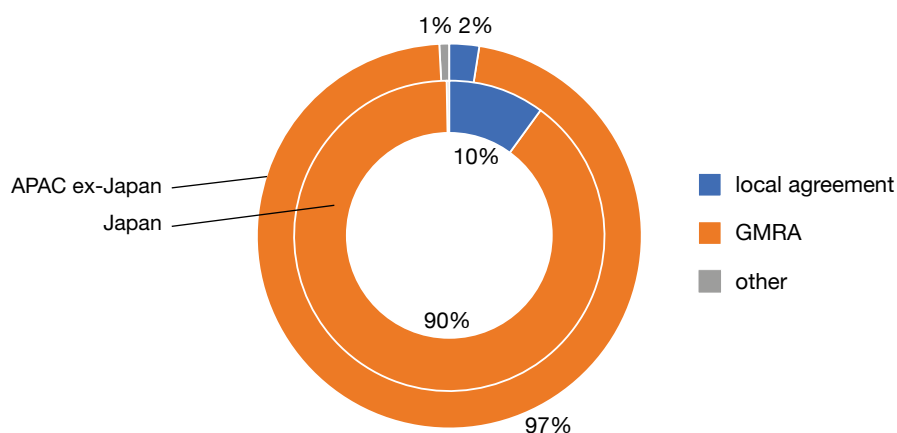


Contract analysis

90% of the legal agreements reported in the **Japan** survey were GMRAs, reflecting the cross-border nature of the survey sample's business. However, this statistic is at odds with the share of gentan repos, which are documented under a local master agreement.

In the **non-Japan APAC** survey, the bulk of legal agreements continue to be GMRAs (94%, compared with 89% last year). There was little cross-border use of other agreements (compared with 11% in 2020). Some 6% were local master agreements including the South Korean Greta.

Figure 9 – Contract analysis



What is a repo?

A repo is a sale of assets and a commitment by the seller to repurchase the same or similar assets in the future at a different price. The most common type of repo involves a sale of government securities and a commitment to repurchase the same issue of securities. The repurchase price is equal to the sale price plus what is called 'repo interest'. Should the seller fail to repurchase the assets at maturity, the buyer is free to recover his cash by selling them, which means that they act as collateral and reduce his credit risk. The buyer also has the right to sell the assets at any time during the repo (although he will need to buy back the assets from the market to return to the seller at the maturity of the repo). The right to sell collateral at any time means that repo also reduces the buyer's liquidity risk.

The seller's commitment to repurchase collateral means that he has only temporary use of the buyer's cash, while the buyer has only temporary use of the seller's assets. Therefore, despite its legal structure, a repo behaves like a secured loan/deposit. However, unlike a traditional secured loan/deposit, in which collateral is pledged, the transfer of legal title in a repo gives the buyer (cash lender) stronger control over the collateral should the seller become insolvent. This reduces his credit risk further.

In China, there is a market in 'pledged repo'. This is different to a standard repo, which is based on title transfer. If the seller in a pledged repo were to become insolvent, it is uncertain whether the buyer could immediately liquidate his collateral without interference from the insolvency process. And the buyer has no right to temporarily sell the collateral during the repo.

The repo market is essential to the functioning of a liquid secondary market in securities, as it is a cheap and resilient source of funding for market-makers and other dealers. It can also be used to borrow securities to settle short positions, including those acting as hedges, and to avoid settlement failures where an outgoing delivery depends on an incoming delivery that does not arrive on time. As a key source of funding for long positions and securities borrowing for short positions, repo is vital to the hedging and pricing of derivatives. The ability to go long of relatively cheap bonds and short of relatively expensive bonds also helps to ensure an accurate yield curve for pricing and valuing securities, including corporate bonds. A liquid repo market also provides a safe short-term asset for risk-averse non-bank investors. And it is the preferred venue for open market operations by central banks.

Most repos in the international market are traded under the Global Master Repurchase Agreement (GMRA) published by ICMA.

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