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The European repo market and the COVID-19 crisis

An ICMA European Repo and Collateral Council (ERCC) market report

April 2020

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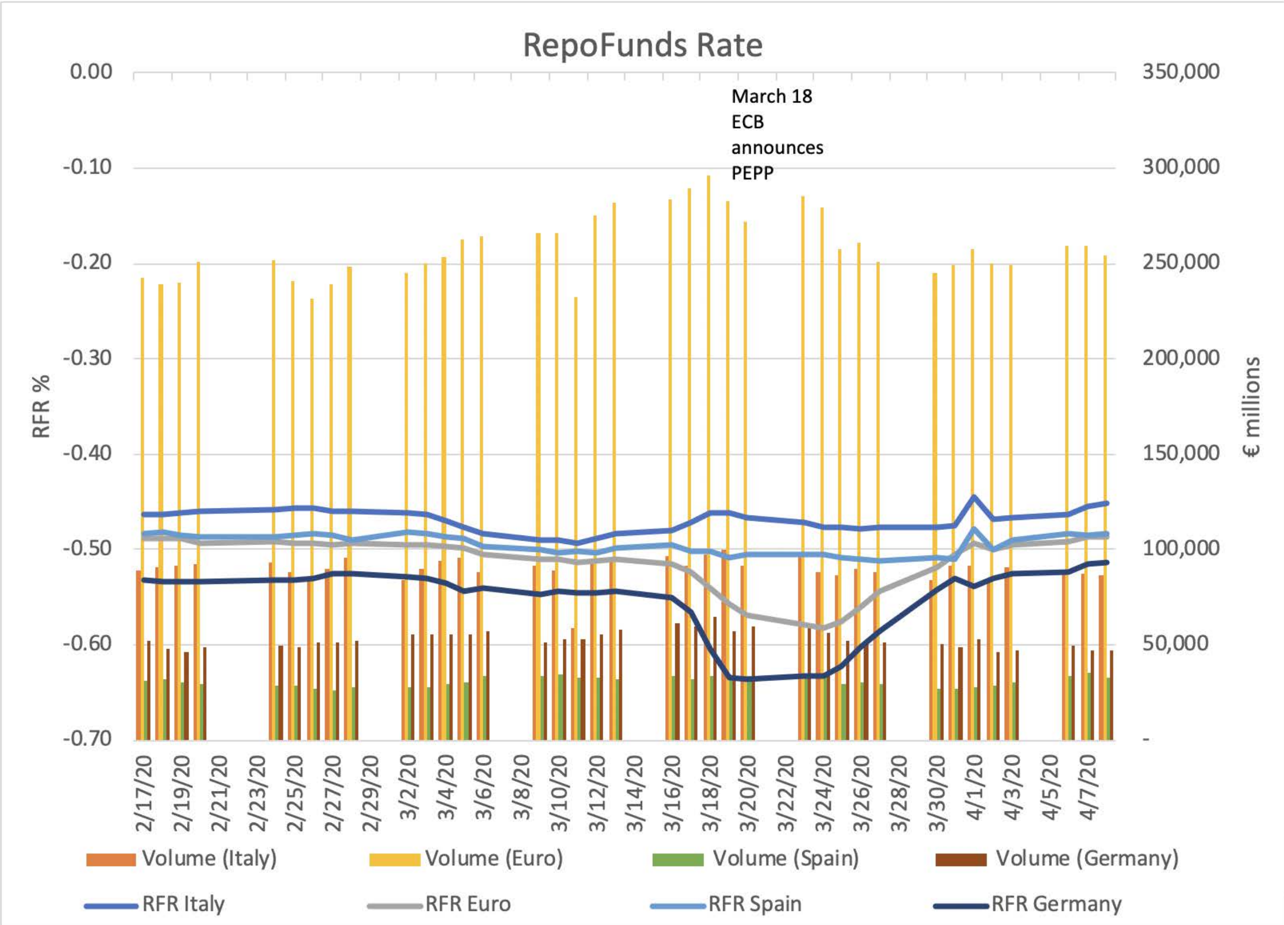
Overview

The headline feedback from market participants is that the European repo market, for the most part, has 'held up well' during the market turbulence stemming from the global COVID-19 pandemic that began in late February/early March 2020. However, this has not been without some strains. In particular, as the demand for repo has increased, banks' capacity to intermediate has remained constrained. Meanwhile, the market has had to deal with the disruption of operating remotely, with implications for both the supply of collateral and operational efficiency.

Market performance

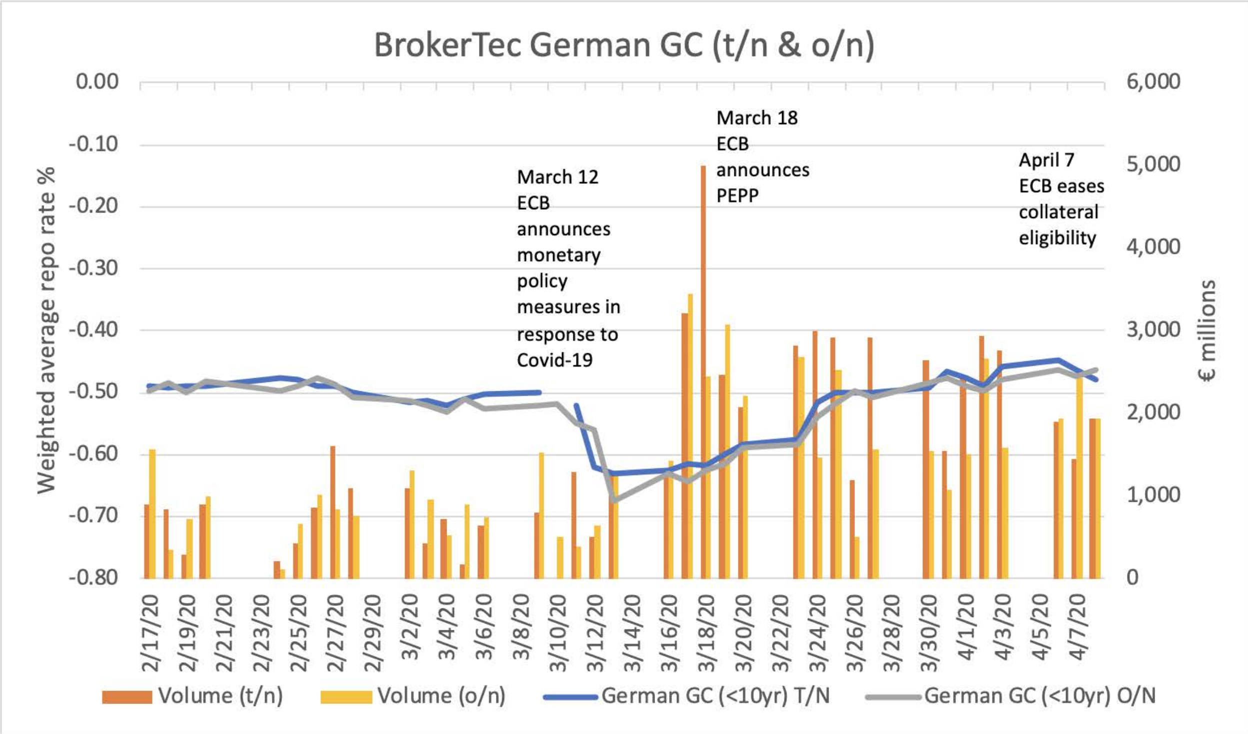
As the crisis accelerated, and as countries went into lockdown, in the first two weeks of March, repo market activity increased, driven partly by flows out of risk assets into the safety of short-term secured markets as well as collateral transformation to meet margin requirements or to cover fund outflows (see Figure 1). The flight to quality was most felt in German general collateral (GC), which richened in the third week of March by as much as 20bp to pre-crisis levels (see Figures 1 and 2), while Italian GC saw some minor cheapening, of between 5-8bp (see Figures 1 and 3), which seems to be partly off the back of hedge funds unwinding leveraged long BTP exposures.

Figure 1: RepoFunds Rate



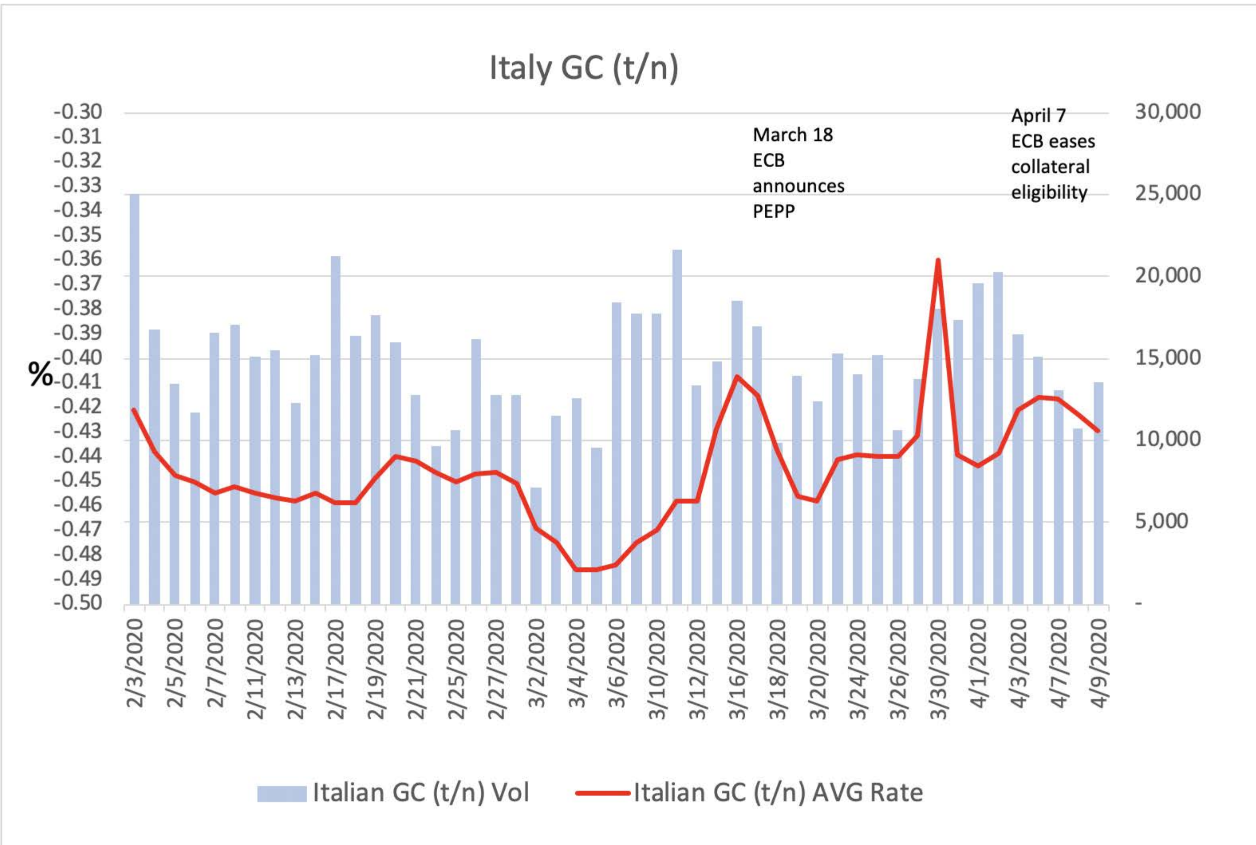
Source: ICMA analysis using CME Group and MTS Markets data

Figure 2: BrokerTec German GC



Source: ICMA analysis using data provided by BrokerTec Europe (CME Group)

Figure 3: MTS Italian GC



Source: MTS Markets

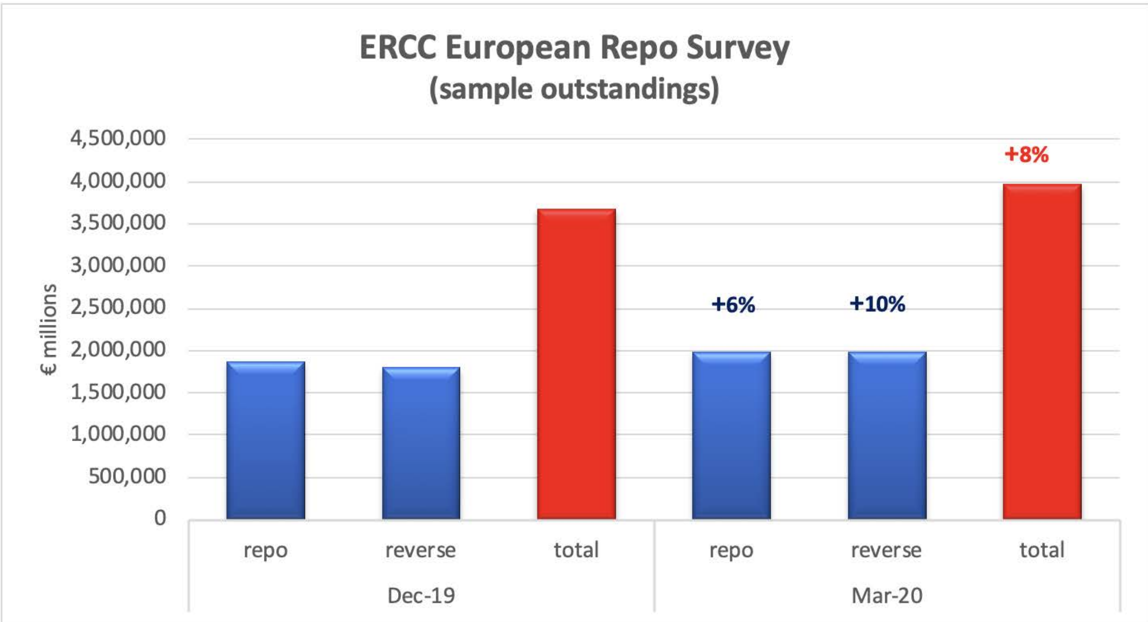
The announcement of the ECB's Pandemic Emergency Purchase Programme (PEPP) on March 18 marked the nadir of the crisis (and followed a record day of volumes for very short-dated German GC), and as the sell-off in risk assets took pause, so Euro GC levels began to normalize, heading back to the ECB Deposit Rate, with Germany cheapening relative to other Eurozone sovereign credits. Italian GC did see some temporary cheapening over quarter-end, but nothing abnormal.

Market access

While the demand to access the repo market increased during the height of the crisis, banks' capacity to intermediate that access did not. Buy-side participants report an increased reliance on the repo market as fund outflows drove the need to generate cash against holdings, as well as to meet margin calls against derivatives positions as volatility increased. However, it would seem that banks struggled to keep pace with client demand. Many report limiting business to top tier clients, with no capacity for new business. Banks further report that in light of the heightened volatility, it was more a case of RWA (risk weighted assets) limits becoming the binding constraint on business, rather than the Leverage Ratio, particularly for one-directional business flows (such as net borrowers of cash).

ICMA's ERCC conducted a snap repo survey at the end of March to ascertain changes in banks' balance sheets during the crisis. While only 22 of the usual 60 or more participants provided data, this nonetheless helps to corroborate the anecdotal reports (see Figure 4). The data suggests that most larger banks did increase their balances through March, although many smaller banks tended to reduce their repo footprint, in some cases dramatically. The sample data points to an overall increase in outstandings of about 8% from the December 2019 survey, but a median adjustment of -4.0% across the sample.

Figure 4: ERCC March 2020 'snapshot' survey



Source: Survey data from ERCC members

Buy-sides suggest that while they were successfully able to manage their liquidity through the early part of March (offsetting fund outflows with positive margin inflows), as this became more challenging, and as access to the repo market became more imperative, they report that banks simultaneously began to reduce their repo capacity. Partly this was due to the approaching quarter-end (when banks ordinarily wind-down their repo books), but potentially also the result of banks increasing their direct lending to corporate clients (as the commercial paper market dried up), reducing the cash available to lend through the repo market. They note that it was ultimately ECB (and other central bank) intervention that helped to ease the mounting tension, reversing the ongoing sell-off in risk assets and freeing up banks' credit lines. They are also keen to emphasize that as helpful, and necessary, as the central bank actions were, a timelier response would have been preferred, not least as by this point some firms report having run down their liquidity buffers and were struggling to generate cash against their assets to meet margin calls.

Collateral

While collateral *fluidity* faced challenges due to limits on banks' intermediation capacity, participants also report more acute differentiation based on collateral quality as well as a reduction in aggregate supply across asset classes.

In terms of a flight to quality, this can be seen most demonstrably in the richening of German government GC in mid-March (see Figure 2). However, it was the spread between ECB eligible assets and non-eligible saw the most significant widening as Risk Weighted Asset (RWA) measures took their toll on dealer's balance sheets (this was more notable in the US, *see further on*). This resulted in collateral upgrade trades (extendibles and evergreens) being rolled-off. Meanwhile, as the valuations of the lower-grade side of these trades (mainly equities and investment grade corporates) collapsed relative to the higher-grade side (mostly sovereign bonds), so firms scrambled to source assets to maintain the transactions. There are reports of counterparties substituting equities with government bonds to restore equilibrium.

Supply, particularly for specifics, also seems to have come under pressure across all asset classes, as lending pools and facilities reduced access. Participants note that as market conditions became more stretched, compounded by the operation challenge of working remotely, lending securities became a second order priority as they coped with more immediate demands. This included sovereign wealth funds and central banks, affecting the supply of high-quality assets, as well as lower grade securities.

Settlement fails

There are widespread reports of a significant increase in settlement fails during the peak of the turbulence, with some reporting average daily fails increasing by a factor of four-to-five times normal rates, and spread across a broad range of asset classes. While settlement fails are not in themselves driven by repo or securities lending activity, repo desks tend to be closer to settlement issues than most trading functions given that it is usually part of their responsibility to borrow securities (both for their firms and clients) in order to avoid settlement fails.

The marked spike appears to be attributable to two main factors. Firstly, reductions in the supply of specific securities as the crisis deepened, and secondly operation challenges as firms adjusted to working remotely. Participants talk of problems contacting clients to confirm settlement instructions and technical delays in processing trades as a result of more manual intervention. Another observation relates to issues with outsourced middle- and back-office functions, particularly those based in India where the lockdown has been more severe. However, ICSDs report that lending programs remained operational during this time, and were successful in minimizing fails rates, which otherwise could have been much higher.

As markets normalized, and as operational processes bedded-in to their new environment, settlement efficiency appears to have improved, although not back to normal levels, with reports that average fails are perhaps double average rates. Furthermore, the instances of fails are now reported to be more heavily skewed to the lower end of the credit spectrum, particularly in high yield and emerging markets, where secondary market liquidity has been especially poor over recent weeks. While there are suggestions that buy-ins have been issued in certain cases, there is a realization that in these market conditions their effectiveness is relatively limited.

Haircuts

A number of banks have suggested that one of the impacts of the market turbulence has been a widening of haircuts, reversing a trend over the past months. While some dealers report of a growing trend of being put into competition by clients, not on quotes but on haircuts, the sharp spike in volatility and increased need of clients to access the repo market have meant that some banks have felt inclined to reinstate more conservative haircuts. It is notable that CCPs have not seen a need to increase haircuts during this time.

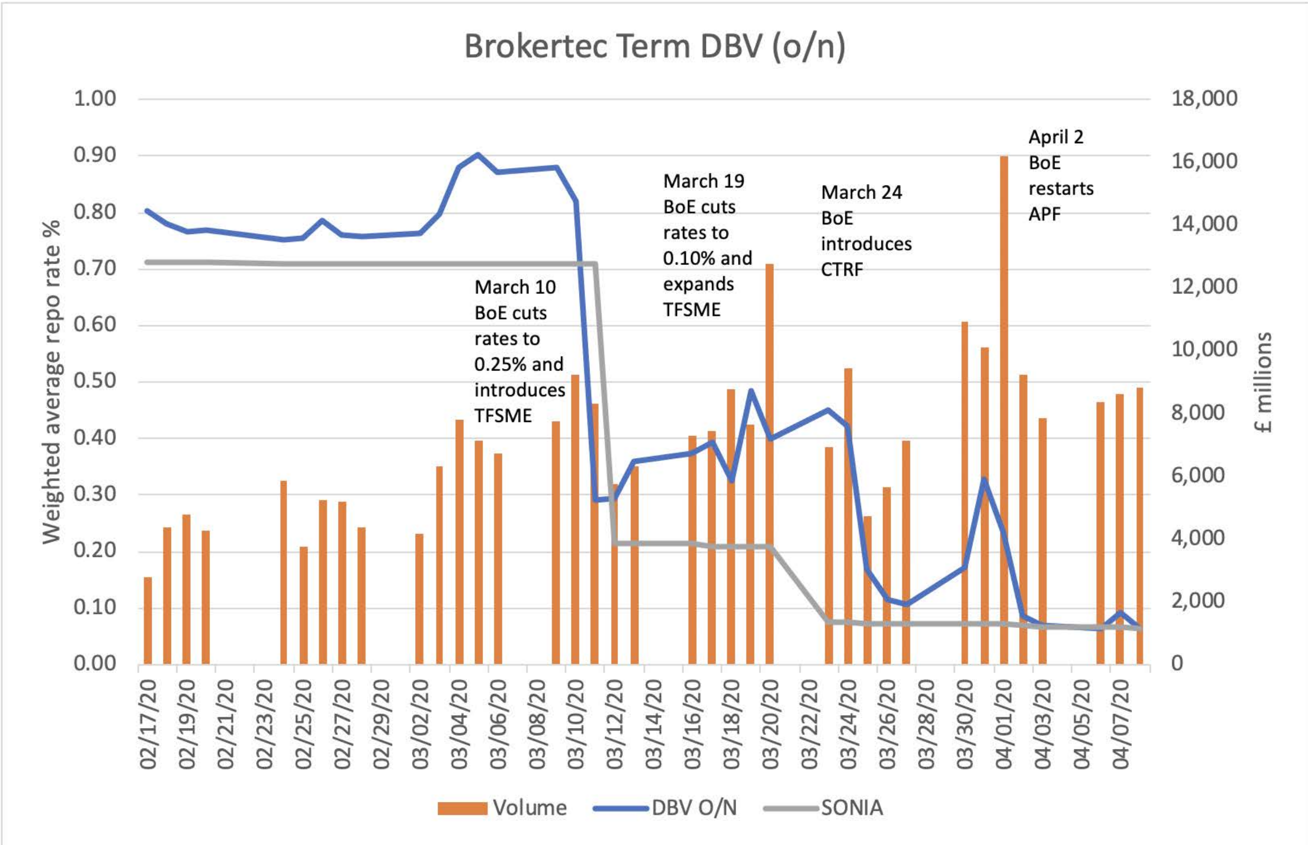
Margin management

Market stakeholders also flag challenges related to managing the margin process during increased volatility, particularly with respect to different processes and timings across different margin arrangements: cleared, uncleared, derivatives, exchanges, bilateral, etc. Fragmentation in these various processes not only creates operational inefficiencies, but have serious implications for intraday liquidity management, particularly when the underlying numbers are significant, as has been the case during recent weeks. Participants highlight the need to standardize margin arrangements across the market.

Sterling market

Similar to the Euro market, the Sterling government repo market saw increased volumes as the crisis took hold. Again, the capacity for banks to intermediate and the cost of balance sheet have played out, and can be seen in the increased spread of the overnight repo rate to SONIA following the bank of England cut on March 10, and still further following the March 19 cut (from around 10-15bp to 25-30bp). This widening was more pronounced in term markets, where LDI (liability-driven investor) flows pushed 6-month and longer gilt GC to around 60bp above the SONIA rate. It was not until the launch of the Bank's Contingent Term Repo Facility (CTRF) on March 24 that helped to free up dealer capacity and so tighten both short-dated and term repo rates.

Figure 5: BrokerTec DBV Term Overnight Market



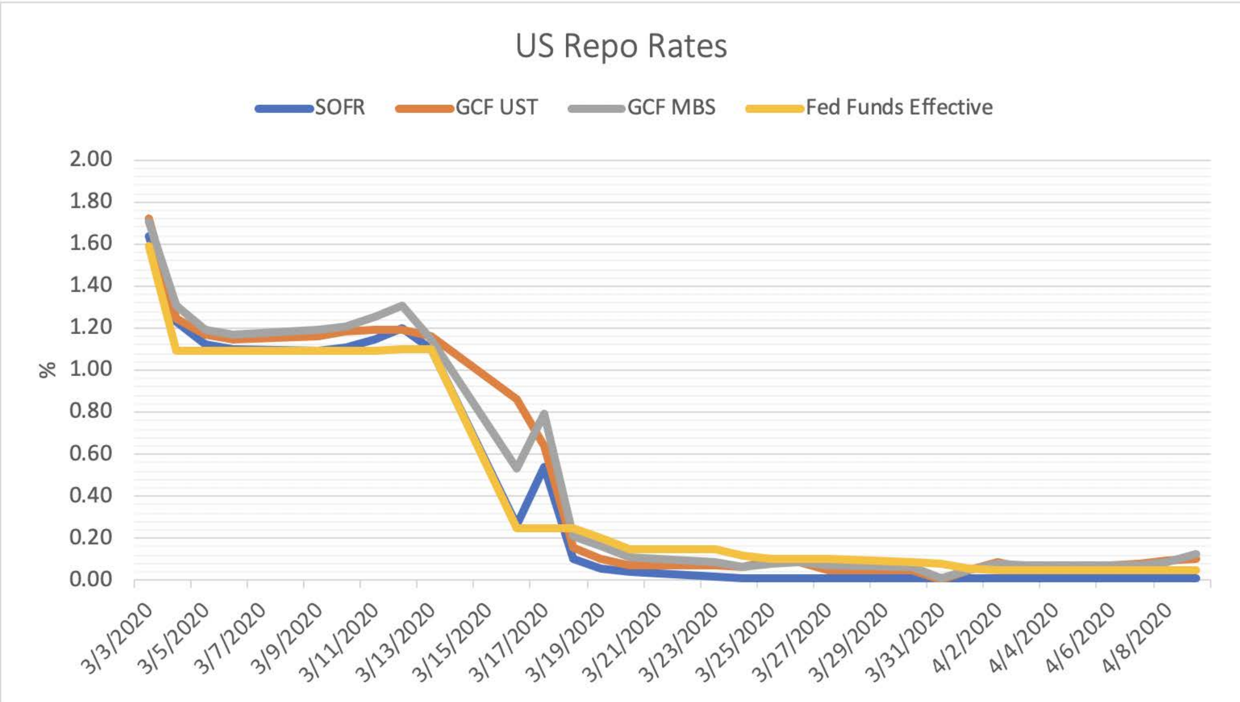
Source: ICMA analysis using data provided by BrokerTec Europe (CME Group) and Bloomberg

USD market

Despite the pressures widely reported in 2019 as the Fed looked to shrink its balance sheet, the speed and extent to which it has ballooned its balance sheet in recent weeks, supported by aggressive continuation of its Temporary Open Market Operations (TOMOs), has successfully pushed repo rates close to the 0% lower bound and kept them there (see Figure 6).

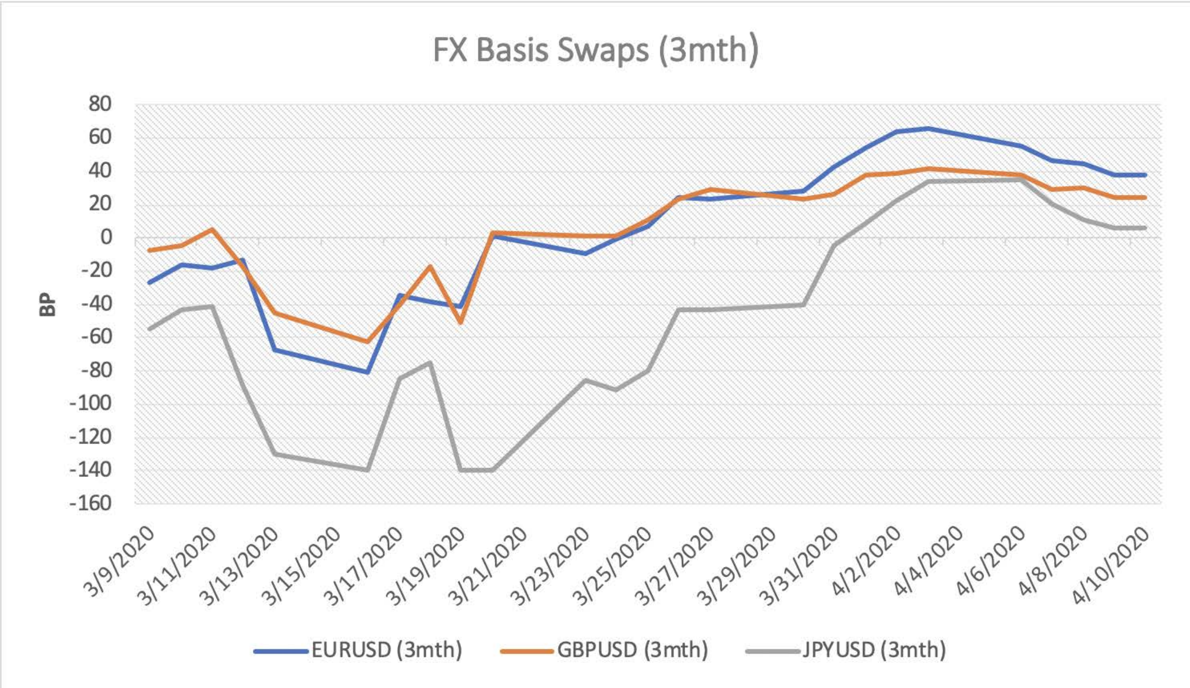
The extension of USD swap lines across a range of central banks in mid-March also seems to have been critical in keeping USD short-term rates low, reducing the global shortage of dollars and helping to normalize the currency basis (see Figure 7), which ordinarily attaches a healthy premium to the cost of borrowing USD through currency swaps. Some stakeholders have commented, however, that banks' access to these central bank swap facilities is not straightforward.

Figure 6: USD Repo rates



Source: ICMA analysis using Bloomberg data

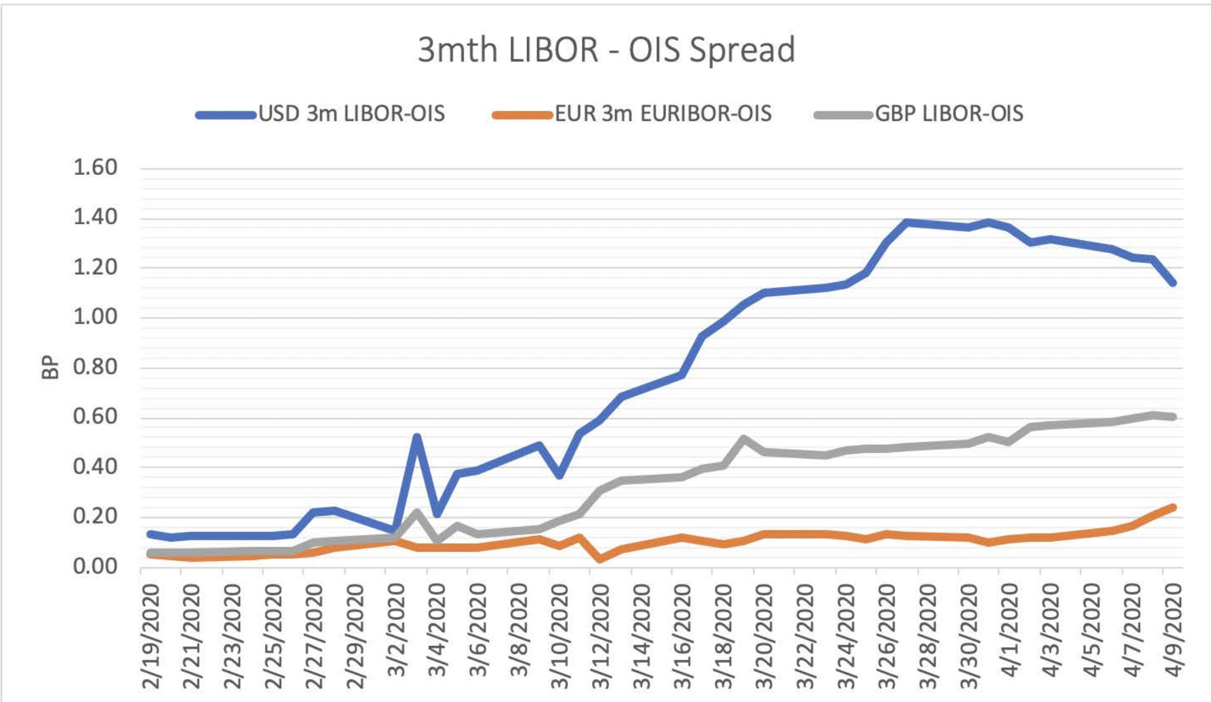
Figure 7: Cross-currency basis swaps (3mth vs 3mth)



Source: ICMA analysis using Bloomberg data

While market participants note that USD funding has been ample for high grade assets, including Treasuries, Agencies, and MBS, there has been a significant spread divergence with respect to riskier assets, in particular REITs (Real Estate Investment Trusts) which have come under intense pressure. The funding stresses for lower quality assets is proxied by the Libor-OIS (overnight index swap rate) spread (see Figure 8), where the USD money market has come under the most pressure of the major markets. However, this is also attributed to the pressure on banks' funding abilities due to credit lines being drawn-on by corporates as the commercial paper market dried up. The launch of the Fed's Commercial Paper Funding Facility (CPFF) on April 14 is expected to relieve some of this stress.

Figure 8: Libor-OIS spreads



Source: ICMA analysis using Bloomberg data

Conclusion

The European repo market has functioned relatively well through the COVID-19 crisis so far, although this is in the face of a number of constraints, not least on banks' capacity to intermediate at a time of heightened demand, and which again highlights the dependence of market functioning on central bank intervention. The market disruption has also thrown out a number of technical and operational challenges, including collateral bottlenecks, increased settlement fails, and challenges managing intraday liquidity and collateral.

While we appear to be through the worst of the turbulence, it will be important to remain vigilant in monitoring how the market continues to perform, and how it fulfills it multiple roles in underpinning the smooth function of the financial markets.

Reference data used in this report

RepoFunds Rate

RepoFunds Rate ("RFR") is a series of daily euro repo benchmarks comprising RFR Euro, RFR Austria, RFR Belgium, RFR Finland, RFR France, RFR Germany, RFR Italy, RFR Netherlands, RFR Portugal and RFR Spain. The benchmarks are calculated from trades executed on either the BrokerTec or the MTS electronic platforms. All eligible repo trades are centrally cleared and RepoFunds Rate is calculated and published by CME Group Benchmark Administration.

BrokerTec German GC

The data used reflects the daily traded volumes and weighted average rates for German Government General Collateral (sub-10 year), executed in the overnight and tom-next buckets on the BrokerTec electronic platform.

MTS Italian GC

The data used reflects the daily traded volumes and weighted average rates for Italian Government General Collateral (sub-10 year), executed in the tom-next bucket on the MTS Repo electronic platform.

BrokerTec Term DBV

Delivery-By-Value (DBV) is a Euroclear UK and Ireland collateral product that allows firms to borrow cash on a fully collateralised and secure basis. The trades are collateralised from a basket of UK Gilts.

SONIA

Sterling Overnight Index Average (SONIA) is the effective overnight interest rate paid by banks for unsecured transactions in the British sterling market. It is used for overnight funding for trades that occur in off-hours and represents the depth of overnight business in the marketplace.

SOFR

The Secured Overnight Financing Rate (SOFR) is a broad measure of the cost of borrowing cash overnight collateralized by US Treasury securities. The SOFR includes all trades in the Broad General Collateral Rate plus bilateral Treasury repurchase agreement (repo) transactions cleared through the Delivery-versus-Payment (DVP) service offered by the Fixed Income Clearing Corporation (FICC), which is filtered to remove a portion of transactions considered "specials".

GCF

The DTCC General Collateral Finance (GCF) Repo Index is comprised of the weighted average of the interest rates paid each day on overnight transactions involving GCF Repos, which are based on two basic types of U.S. government securities: (i) U.S. Treasury < 30 year maturity; (ii) Fannie Mae & Freddie Mac Fixed Rate MBS.

Fed Funds Effective Rate

The federal funds market consists of domestic unsecured borrowings in U.S. dollars by depository institutions from other depository institutions and certain other entities, primarily government-sponsored enterprises. The effective federal funds rate (EFFR) is calculated as a volume-weighted median of overnight federal funds transactions reported in the FR 2420 Report of Selected Money Market Rates.

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