

The European repo market at 2018 year-end

An ICMA ERCC briefing note

January 2019

Overview

ICMA's ERCC has analyzed and documented European year-end repo market activity and behaviour since the 2016 'turn',¹ which saw unprecedented market stress and pricing dislocations, particularly in higher grade euro denominated repo.² While a sharp decline in repo market liquidity over year-end is nothing new, as banks shrink balance sheets and look to reduce market exposures, the extreme extent of this over the 2016 turn raised questions around the impacts of regulation and monetary policy on market functioning and the degree to which these were possibly exacerbating volatility. However, analysis seemed to identify a variety of factors in confluence, including market positioning, FX basis, access to central bank lending facilities, as well as regulatory reporting requirements (Basel ratios and national banking levies). In many respects, 2016 year-end was the perfect storm.

The 2017 turn, while still turbulent, was relatively orderly compared with the previous year. Analysis³ suggests that positioning and the FX basis were not such prominent factors, while improvements in the various central bank lending programmes helped to ease some pressures. Furthermore, following the unexpected shock of 2016, the market was better prepared.

The 2018 turn, from the perspective of Euros and Sterling, would seem to have been relatively muted, despite some pressures in Euro GC and specials. More interesting, perhaps, was a sharp spike in USD repo rates over the turn; something that had not been witnessed at recent year-ends.

Euro repo

Market participants report that firms began to focus on year-end funding requirements as early as late October/early November. As in previous years, a lot of attention was paid to the EUR-USD basis swap,⁴ which was implying a deep negative rate discount for euro rates over year-end (reaching -22% at its widest). At this time, the first quotes for the turn started to appear, implying German GC rates around -4.5% to -4.00%, and France GC around -4.00% to -3.50%. A large block of core GC reportedly traded at

¹ The 'turn' refers to the period from the last business-day of the year to the first business-day of the next year. Often this is also referred to more generically as 'the date'.

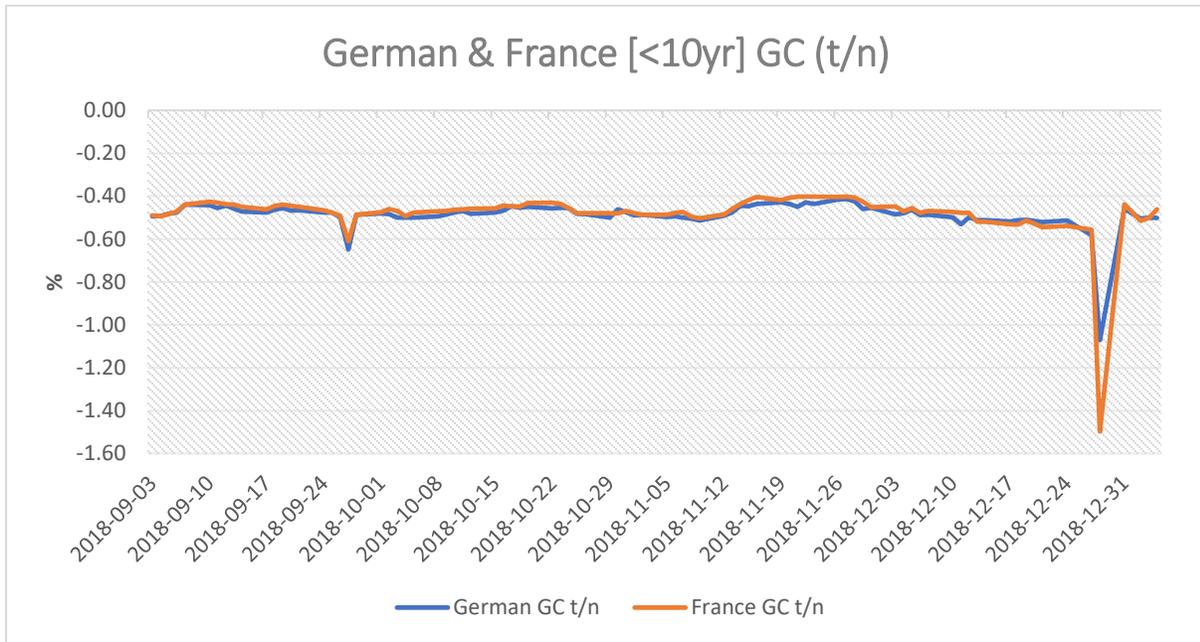
² See: [Closed for business: a post-mortem of the European repo market break-down over the 2016 year-end](#) (February 2017)

³ See: [The European repo market at 2017 year-end](#) (January 2018)

⁴ Interest rate parity theory suggests that the foreign exchange forwards markets will always ensure that the relative LIBOR cost of borrowing in any currency will be the same. However, it can often be cheaper to borrow in one currency through the FX forwards. The currency basis swap reflects this relative disparity. Basis swaps are usually expressed as one currency against the USD, and a negative basis suggests a relative cheapness to borrow in that currency with respect to USD.

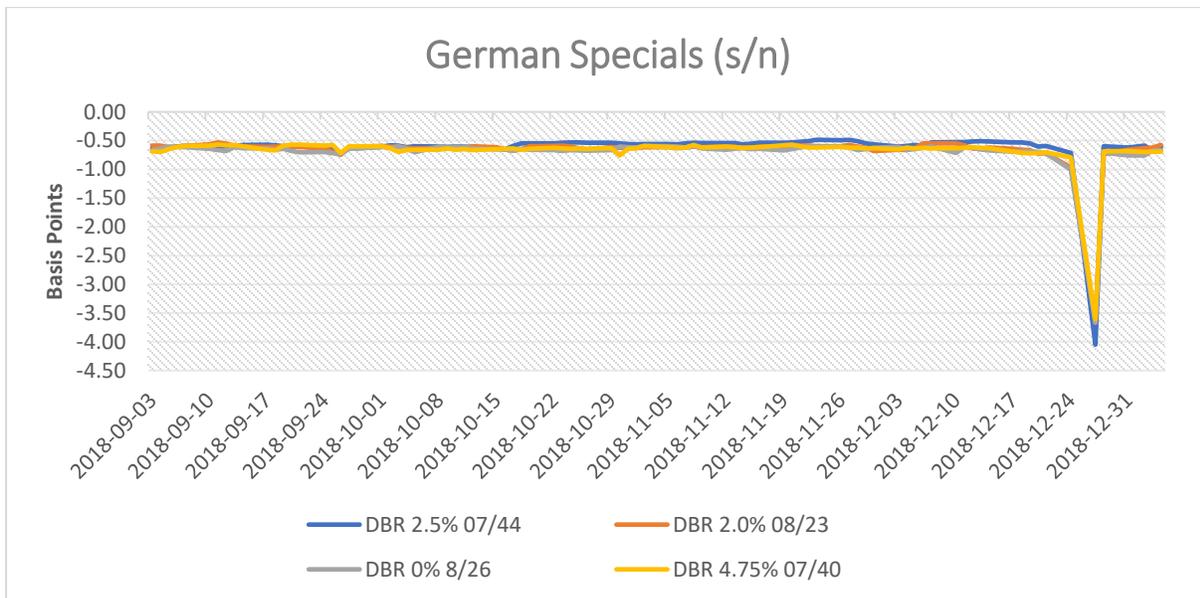
-4.25%, and this proved to be the ‘low’ as bids subsequently began to get hit higher. A steady cheapening in the FX basis (see Figure 8) seemed to support this easing.

Figure 1: Germany and France General Collateral (sub 10 year, tom-next)



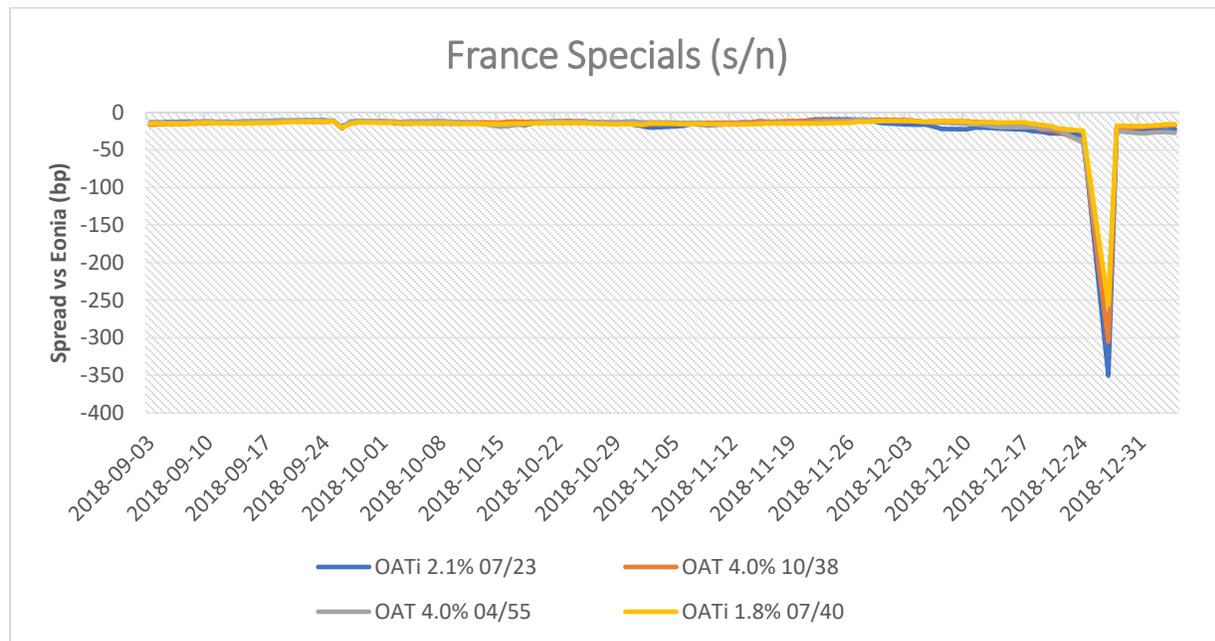
Source: Source: Nex Data Services Ltd (BrokerTec Repo)

Figure 2: German specials



Source: Source: Nex Data Services Ltd (BrokerTec Repo)

Figure 3: France specials



Source: Source: Nex Data Services Ltd (BrokerTec Repo)

Core GC was priced between -4% and -3% going into the Christmas holiday period. On December 27 (the 'spot' date for year-end) active German specials traded in a -4%/-3.5% range (see Figure 2), while French specials printed as tight as 300/350bp through EONIA.⁵ On December 28, however, the most liquid date for turn GC,⁶ rates began to cheapen significantly, with GC bids (and even some 'tom-next' specifics) being hit all the way up to -0.50% by mid-afternoon (albeit in thin volume at this point). The weighted average rate on Brokertec on December 28 was -1.07% for German GC and -1.50% for French GC.

On December 31 itself, overnight rates had completely normalized for core GC and specials, with trades printing around the -0.50% level.

Non-core markets

Non-core repo rates were also relatively uneventful over year-end. Spain GC remained more or less unchanged over the date (around -0.40%) with the exception of trades cleared through LCH Ltd, where it tightened slightly due to greater netting capabilities against German repo. However, volume was light.

Meanwhile, Italian GC cheapened by around 10-12bp (see Figure 4) from normal levels, in stark contrast to all other Euro repo markets. Reasons for this are attributed to a lack of netting opportunities,

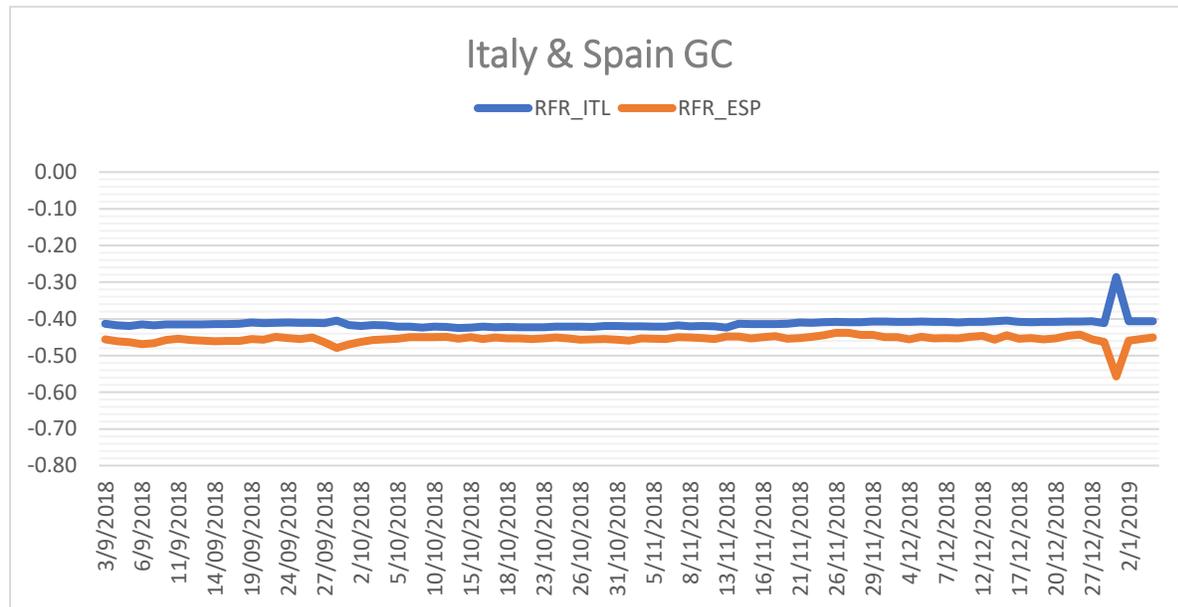
⁵ French specifics generally trade on a floating rather than fixed basis.

⁶ Euro GC tends to trade most actively on a 'tom-next' (ie T+1) basis, while specials liquidity tends to be on spot (T+2)

continued credit concerns over holding Italian debt, and reduced funding capacity among international banks.

It is reported, however, that some 'semi-core' GC (such as Austria and Belgium), as well as periphery specials (such as Portugal and Ireland) did become very expensive over year-end, although this is attributed to few (and largely localized) liquidity providers and limited supply.

Figure 4: Italy and Spain GC⁷



Source: Repo Funds Rate

PSPP lending facilities

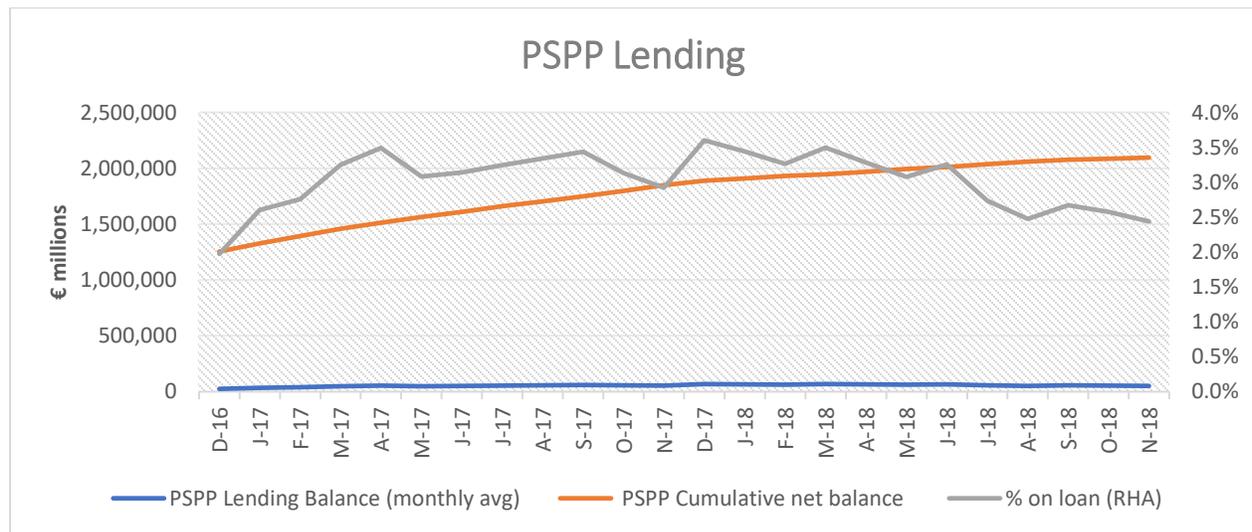
Market participants report that the various NCB lending programmes for securities held under the ECB's Public Sector Purchase Programme (PSPP) continue to function well (lack of accessibility or too punitive terms were cited as an issue at 2016 year-end). As with 2017, this seems to have helped alleviate some pressure with respect to specials over year-end. It has even been suggested that perhaps the lending programmes are actually functioning too well, particularly between reporting dates, and may be having an overall dampening effect on the Euro specials market.

⁷ The Repo Funds Rate (RFR) is a daily euro repo index calculated from trades executed on the BrokerTec and MTS electronic platforms. All eligible repo trades are centrally cleared and RFR Euro is calculated and published by Nex Data Services Limited. RFR Euro is calculated with repo trades that use sovereign government bonds issued by any country in the Eurozone.

Managing year-end

Despite the last-minute easing of market pressure and normalization of rates in the Euro repo market, market participants point out that this cheapening is very much ‘after the fact’ from the perspective of most trading activity, with many trades being executed in advance of the turn (often well in advance), and therefore at significantly ‘non-normal’ levels. Firms are not able to wait until the very last moment to manage their year-end financing and collateral management needs given the asymmetrical risks of there being insufficient market capacity available, particularly as banks look to reduce balance sheet and risk (pointing to 2016 year-end as a case in point).

Figure 5: PSPP lending balances

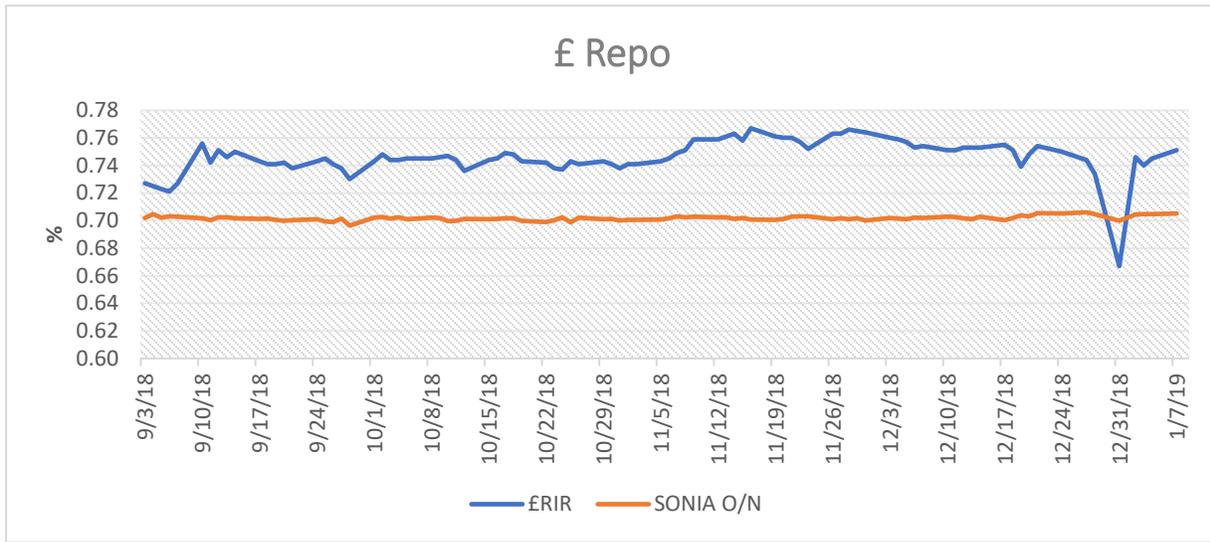


Source: ECB

Sterling repo

Gilt GC (and specials) remained relatively unaffected in short-dates, tightening only slightly over the date (see Figure 6). However, market participants report that term rates were more impacted, widening from around SONIA+20bp to SONIA+40bp across the curve. Some, though not all, have attributed this to UK bank ‘ring-fencing’ which came into force from January 1 2019, and has so far continued into 2019. However, others note that aggressive spread widening was also witnessed in shorter-dates (sub-one month).

Figure 6: Sterling repo

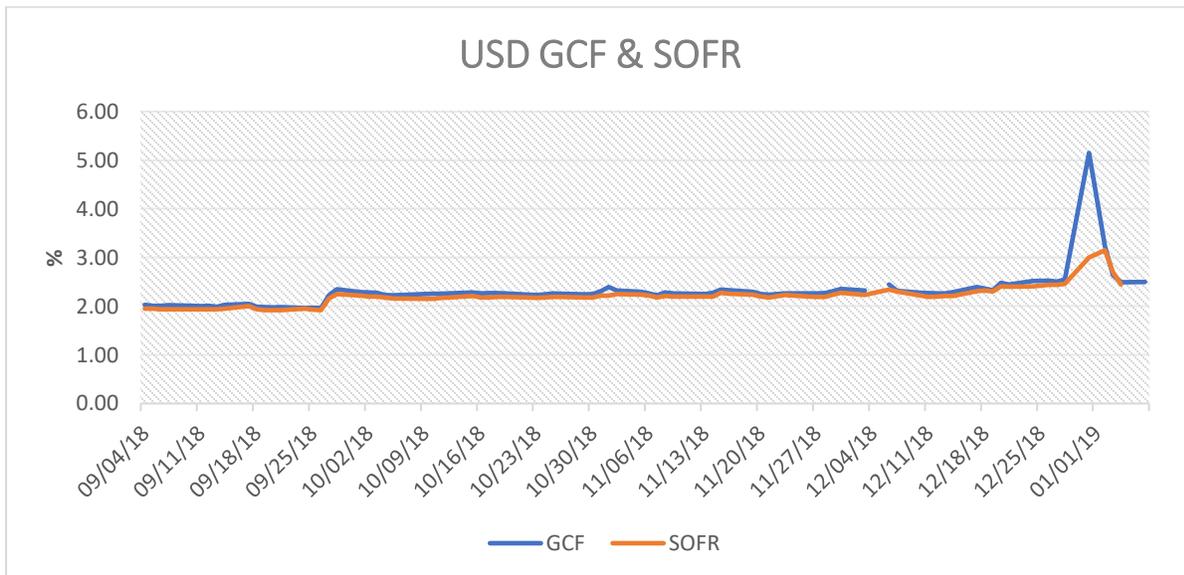


Source: Bloomberg

USD repo

The story of 2018 year-end is very much what happened in the US market, where repo rates unexpectedly spiked aggressively. On December 31 US treasury GC squeezed higher from around 2% to a high print of 7.25%, while the GCF⁸ rate jumped to 5.15% from 2.55% on December 28 (see Figure 7).

Figure 7: USD repo



Source: Bloomberg

⁸ The DTCC GCF Repo Index is the weighted average of the interest rates paid each day for the 3 most traded CUSIPs of General Collateral Finance Repurchase Agreements (GCF Repos).

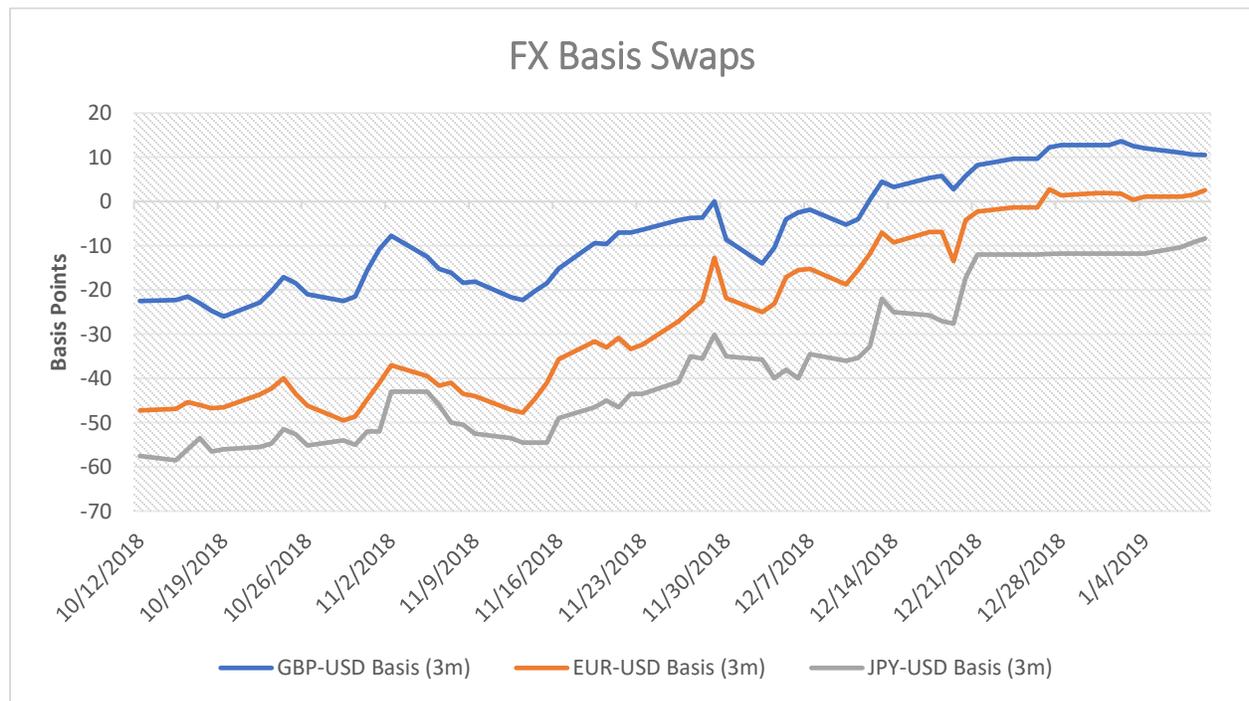
There seems to be a number of contributing factors to this unprecedented move in US repo rates.

Firstly, market participants cite a general reduction in balance sheet capacity of US banks as they managed their liabilities in light of the G-SIB capital surcharge requirements.⁹ However, participants also report that it is difficult to attribute the spike entirely to this, since banks will manage their balance sheets in different ways, across a variety of businesses and trading books.

Secondly, US banks are reported to have been holding a record amount of US Treasuries following heavy issuance into year-end, putting more pressure on balance sheets. This was further compounded by an increase in relative value trading in the US markets from global leveraged funds (as European relative value opportunities diminished).

Finally, it would seem as if the market was short dollars, prompting an unexpected scramble for USD funding. Again, this is reflected in the cheapening of the FX basis swap (see Figure 8), in particular for JPY. Borrowing JGBs versus funding in USDs (by means of a collateral and FX swap) has been a longstanding arbitrage in the repo and securities lending markets, due to the favourable basis swap. However, as this trade has become crowded, and as the basis swap normalized, this left a large part of the market long US treasury collateral and short dollars, putting more pressure on repo levels into year-end.

Figure 8: FX Basis swaps (3mths vs 3mths)



Source: Bloomberg

⁹ Large US banks are subject to a G-SIB capital surcharge on short-term wholesale funding. The methodology is complex, but balance sheet liabilities at year-end, in particular FX and repo positions, are a critical factor in determining banks' G-SIB score.

Fails

A good barometer of market stress is often the settlement fails rate, particularly where there is a shortage of available collateral. While it is difficult to obtain reliable data on settlement fails across the various (I)CSDs, anecdotal evidence at least provides a qualitative indicator.

Participants suggest that 2018 year-end did see a noticeable spike in settlement fails for securities settling on European (I)CSDs. However, it is difficult to discern the extent to which this is caused by a genuine unavailability of collateral and how much is the result of a very low interest rate environment.¹⁰ While settlement efficiency levels in the European bond markets are generally good at normal times (despite a negative rate environment), fails do seem to increase over year-end. While this may not necessarily be intentional, a negative rate environment does reduce the economic incentive to make timely delivery. This raises the question of whether an effective market incentive, such as the TMPG Fails Charge in the US, would be helpful in Europe.¹¹

Conclusion

Compared with the previous two year-ends, 2018 was relatively uneventful. Core Euro GC and specials did come at a premium leading up to the turn but then cheapened significantly into year-end itself. Meanwhile, non-core GC saw scarcely an impact, with only some specials becoming difficult to find. The short-date Gilt repo market tightened slightly, however term spreads widened notably, seemingly caused by the introduction of UK bank ring-fencing. The US treasury repo market, however, was the real surprise, with an unexpected scramble for cash sending rates notably higher.

While the markets, for the most part, were fairly orderly, it is clear that a number of year-end pressures and risks persist. Banks still face pressures to reduce balance sheet, and so their intermediation capacity, in order to comply with a number of entity or jurisdictional specific reporting obligations, including Basel ratios (primarily Leverage Ratio),¹² national bank levies, and the G-SIB capital surcharge. Positioning is also an exacerbating factor, both in terms of bonds/collateral and FX – which is highlighted by the spike in USD rates.

However, since 2016 it would seem as if the market has become more aware of these risks and better prepared in terms of managing its year-end financing and collateral requirements. Locking-in funding early, however, comes at a premium. But, while the extreme levels and dislocations of the 2016 turn have not been repeated since, there is still plenty of quantitative and qualitative evidence to suggest that year-end pressures persist, and that access to repo and lending markets for many firms is impaired.

¹⁰ Ordinarily, failing to settle a trade creates a cost to the seller/lender, who has to fund the failing position (even though they no longer own it), and a benefit to the purchaser/borrower, who can reinvest their cash elsewhere. However, this natural incentive for settlement discipline breaks down when market rates are very low, and particularly when they are negative.

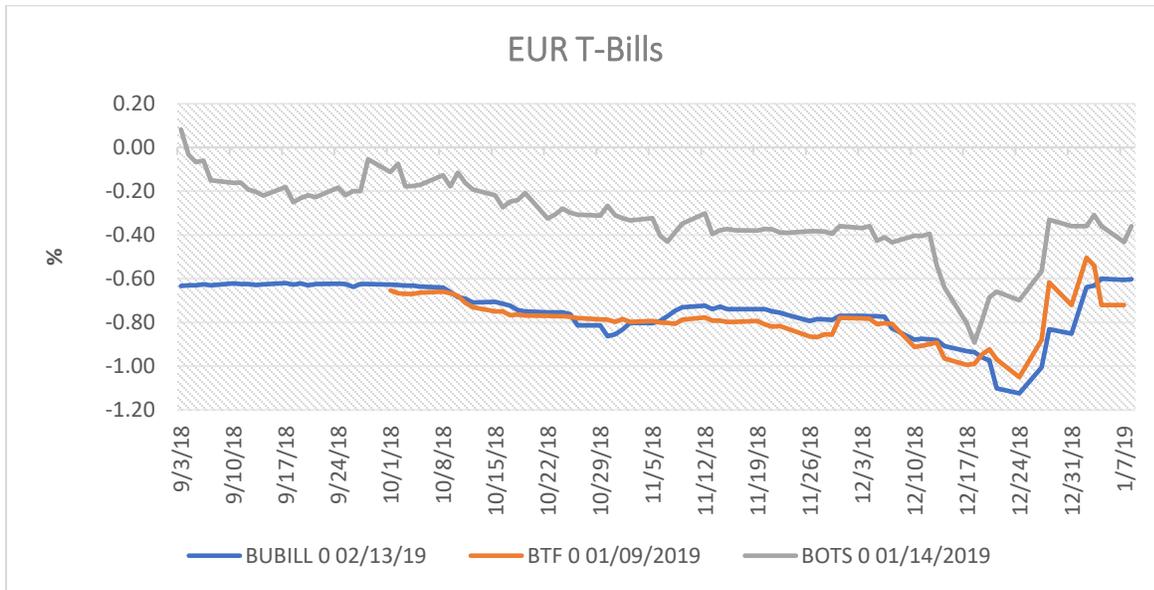
¹¹ Participants note that CSD-Regulation will introduce settlement discipline measures from September 2020, but that this is poorly designed and likely to create more problems than it solves.

¹² The BCBS is currently conducting a [consultation](#) on Leverage Ratio reporting in light of the fact that different jurisdictions impose different reporting requirements (daily averaging vs month-end averaging). However, it is not clear what the market impacts could be were all banks to move to daily averaging.

A good barometer for this is T-bill yields, as buy-side firms who cannot source collateral through the repo market are forced into the short-dated bond and bill markets (see Figure 9).

As the US repo rate spike reminds us, the problems flagged by the 2016 turn have not necessarily gone away, they just manifest themselves in not entirely predictable ways.

Figure 9: Euro T-bill yields



Source: Bloomberg

Acronyms:

bp	Basis Point (100 th of a %)
BOT	Buoni Ordinari del Tesoro (Italian T-bill)
BTF	Bons du Trésor (French T-bill)
BUBILL	Unverzinsliche Schatzanweisungen (German T-bill)
DTCC	The Depository Trust and Clearing Corporation
ECB	European Central Bank
EONIA	European Overnight Index Average
ERCC	European Repo and Collateral Council
GC	General Collateral
GCF	General Collateral Finance
G-SIB	Global Systematically Important Bank
ICMA	International Capital Market Association
LIBOR	London Interbank Offered Rate
NCB	National Central Bank
OAT	Obligations Assimilables du Trésor (French government bond)
OATi	Inflation-linked OAT
O/N	Overnight-Next
PSPP	Public Sector Purchase Programme
QE	Quantitative Easing
RFR	Repo Funds Rate
S/N	Spot-Next
SOFR	Secured Overnight Funding Rate
SONIA	Sterling Overnight Index Average
T/N	Tom-Next
TMPG	Treasury Market Practices Group
UST	US Treasury

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