

Global Money Notes #24

Sagittarius A*

"Sagittarius A (pronounced "Sagittarius A-Star") is a bright and very compact astronomical radio source at the center of the Milky Way galaxy. It is likely the location of a supermassive black hole, similar to those generally accepted to be at the centers of most, if not all spiral and elliptical galaxies in the universe..."*

Wikipedia

The FOMC should forget about r^* for the moment and focus on Sagittarius A* – the supermassive black hole at the center of global dollar funding markets.

The black hole is the foreign RRP facility, which has seen close to \$100 billion of inflows since the beginning of the year. The driver of these inflows is the curve inversion, and the longer the inversion persists the more inflows will follow.

The trade war is also contributing to the inflows – given the inversion, as foreign central banks weaken their currencies they “buy” the foreign RRP facility and not Treasuries like in the past. Foreign central banks are rate shopping...

...and an uncapped foreign RRP facility is what enables that.

Like the matter that enters a black hole, the reserves that are sterilized by the foreign RRP facility are gone for good – like the reserves “shredded” via taper.

Even if the Fed stopped taper cold on August 1st, taper will effectively continue for as long as an uncapped foreign RRP facility attracts inflows – and given the inversion, we think inflows will continue and eclipse \$200 billion by year-end.

In English, that means that collateral supply between now and year-end will be \$1 trillion – \$800 billion from primary issuance and \$200 billion from sterilization.

We maintain our view that given the inversion, the solution to this supply problem should not be a technical fix through a standing repo facility or asset purchases – if the Fed opens up its balance sheet to collateral supply during an inversion, it will end up monetizing way more Treasuries that it may feel comfortable with.

Furthermore, adding reserves through a standing repo facility or asset purchases while having an uncapped foreign RRP facility sterilizing reserves would be odd.

The Fed overdid the hiking cycle and it priced Treasury supply out of the market – that’s what the FX-hedged yield of Treasuries relative to JGB yields tells us, and what inflows into a foreign RRP facility paying elevated o/n rates tells us.

For that fundamental problem, rate cuts, not technical fixes, are the solution...

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Recent inflows into the Fed's foreign RRP facility have come from official accounts other than Japan's Ministry of Finance (see Figure 1). Regular readers of Global Money Notes know that inflows from Japan's Ministry of Finance drove the growth of the facility in 2015, a period that corresponds to banks cleansing their balance sheets of non-operating deposits and concerns about a shortage of bills complicating the Fed's "maiden" interest rate hike.

Without an official explanation from the Fed, our interpretation of what happened to the usage of the foreign RRP facility in 2015 remains that the Fed, deeply concerned that it won't be able to enforce a floor underneath o/n interest rates as it tries to exit ZIRP, uncapped the facility to help banks shed balance sheet by luring foreign central banks away from banks and into the foreign RRP facility, and to help ease the bill shortage in money markets by luring foreign central banks out of bills and into the foreign RRP facility.

Public data on Japan's reserve holdings tend to suggest that Japan's Ministry of Finance responded the most to these incentives, as the "deposits with foreign central banks/BIS" component of its reserves surged a lot. By 2016 – the eve of the Fed's first rate hike – Japan's Ministry of Finance was the largest account holder of the foreign RRP facility, accounting for one half of the facility's usage and practically all of its inflows during 2015.

The inflows so far this year are a different story...

...for all the new money is coming from accounts other than Japan's Ministry of Finance and for reasons that are very different from those the market had to deal with in 2015.

The problems these days are not balance sheet constraints and a collateral shortage, but intraday liquidity constraints and a [collateral surplus](#) – that is, the safe asset glut.

Because inflows into the facility [sterilize](#) reserves and add collateral to the financial system, they worsen the collateral surplus. But don't blame the foreign central banks placing cash into the facility, for they do what a rational person would do when offered something that has value – take as much of the stuff as they can, while they can.

Foreign central banks are rate shopping...

...and front-end rate shopping shifts into higher gear during yield curve [inversions](#).

In our previous edition, we explained why traditional measures of yield curve inversion, such as the spread between 10-year notes and three-month bills ("3s/10s") is irrelevant, and why inversions should be measured relative to carry traders' actual funding costs. We also showed that the current inversion is the most extreme relative to o/n repo rates, and that historically this is the first time that the curve inverted relative to o/n repo rates.

Now consider that...

...foreign central banks respond to yield curve inversions like most other investors would – sell long-term notes, buy short-term bills – and when given access to a facility that pays a market o/n GC repo rate and returns cash at 8:30 am in unlimited quantities, the response function becomes sell long-term notes, buy the foreign RRP facility, not bills.

Foreign central banks are rotating their FX reserves...

...and the worse the inversion gets the more dollars they'll put at the foreign RRP facility.

It gets even worse...

...as it used to be that when foreign central banks intervened to weaken their currency, they bought dollars which were invested in Treasuries. However, it appears that the recent EM currency weakness sparked by the PBoC's move to nudge the renminbi lower – following President Trump's recent tariff tweet – was orchestrated through interventions where dollars were not invested in solely in Treasuries but also the foreign RRP facility.

Foreign central banks are trying to keep the relative competitiveness of their currencies...
...and if the trade war worsens they may put more dollars in the foreign RRP facility.

Liberty Street, we have a problem.

An uncapped foreign RRP facility during a curve inversion is counterproductive...

...because inflows into the facility sterilize reserves and inject collateral into the system – on top of the \$800 billion that Treasury is scheduled to issue between now and year-end.

An uncapped foreign RRP facility during a curve inversion means...

...that foreign central banks have a preference to reverse in collateral from the Fed, as opposed buy collateral outright at auctions – that won't help primary dealer inventories.¹

An uncapped foreign RRP facility when banks are at their intraday liquidity limits means...

...that every penny that flows into the facility makes it harder for banks to fund dealers, whose inventories are growing partly due to the foreign RRP facility. Yes, this is circular...

...economists would refer to the above dynamics as pro-cyclical: more collateral supply, higher repo rates, more inflows into the foreign RRP facility, even more collateral supply.

Like Sagittarius-A*, an uncapped foreign RRP facility gorges on the matter – reserves – it sucks in, and the more reserves it sucks in, the worse the collateral supply will get; as we have stressed previously, now is not the time for an uncapped foreign RRP facility.

Yes, foreign central banks have “*preferences to maintain robust dollar liquidity buffers*” (see [here](#)), but those liquidity needs arise when local currencies need to be defended, not when local currencies are proactively being weakened by foreign central banks.

Like it has done with banks, the Fed should politely suggest to foreign central banks to see what share of the balance they keep in the facility is there for genuine liquidity needs – we have a strong suspicion that it is significantly less than the total usage of the facility.

We have heard two arguments as to why the Fed won't cap the foreign RRP facility or change the pricing of it. These were:

- (1) other central banks don't cap their equivalent facilities either;
- (2) equivalent facilities also pay rates better than local bill yields;

Indeed, Figure 2 shows that the deposit facilities for foreign central banks have been rising elsewhere as well, so we see why the optics of the Fed capping the facility would be bad.

That said, the Fed's facility paying a rate better than local bill yields is logically indefensible, even if the Bank of Japan and the European Central Bank do the same. Here is why...

Given a global financial system that's short dollars – the negative cross-currency basis – the question is always where to get the marginal dollars to “feed” the system's demand.

STIR traders remember well that a persistent problem in recent years has been that those with dollars to lend couldn't always lend dollars in the FX swap market as bill shortages in Japan and Europe meant deeply negative reinvestment yields, which have weighed heavily on the spread over U.S. Treasury bills one could earn on the dollar leg of the transaction.²

¹ We care about inventories because the funding needs associated with these inventories are driving the rotation in bank HQLA portfolios away from reserves into repos. That rotation has a limit beyond which funding stresses emerge.

² In an FX swap transaction, the lender of dollars receives yen or euro as collateral. The FX swap trade has two parts: the dollar lending leg and the collateral reinvestment leg. The sum of the two has to be better than Treasury bill yields.

To encourage the lending of more dollars in the FX swap market, the BoJ and the ECB have been working hard to make bills more available in their respective financial systems, and uncapped deposit facilities for foreign central banks paying better than local bill yields were a key part of that strategy – as foreign central banks gradually rotated out of bills and into these facilities, the pressure on local bill yields abated, FX swap implied yields for the lenders of dollars improved and dollars flowed easier across the financial system.

But the Fed should not be doing the same thing...

...for if it does, it's causing dollar funding markets' equivalent of the "paradox of thrift".

The simple idea behind the paradox of thrift is that everyone can't save at the same time, for reasons well understood. In the case of central banks' facilities for other central banks, the idea is that every central bank cannot pull funds away from local collateral markets at the same time. If the global financial system's problem is a shortage of U.S. dollars, it makes sense for foreign central banks to pull funds away from their local bill markets to help improve the reinvestment returns of dollar lenders and hence ease the flow of dollars, but it makes no sense for the Fed to do the same – if it does, it hurts the flow of dollars.

Here is how...

If the Fed offers a rate above Treasury bill yields on an uncapped the foreign RRP facility, it will attract inflows. Inflows sterilize reserves and increase collateral supply on the margin – instead of buying Treasury bills at auctions, the facility incentivizes foreign central banks to deposit cash at the Fed. These dynamics put an upward pressure on local bill yields, and higher local bill yields reduce the allure lending dollars in the FX swap market – the flow of dollars suffers and the Fed is pushing against the efforts of other central banks.³

If the Fed doesn't change the pricing of the foreign RRP facility, we have a problem.

In our [previous edition](#), we highlighted the risks of severe funding market pressures as the Treasury goes ahead with the issuance of \$800 billion Treasuries into a curve inversion.

We have also noted that the U.S., as a net borrower and current account deficit country, has a funding problem on the margin, as after taking hedging costs into account, Treasuries aren't attractive for foreign private accounts on a global relative value basis.

We have shown above that these problems extend to foreign official accounts as well – given the curve inversion and an uncapped foreign RRP facility, foreign central banks are incentivized to reverse Treasuries in from the Fed and not to buy them outright at auctions.

With foreign investors – both official and private – not incentivized to buy U.S. Treasuries on the margin, given collateral supply between now and year-end, dealer inventories will continue to grow over the coming months, and this ongoing inventory accumulation will stress banks' ability to fund dealers in the o/n GC repo market (see Figures 3 and 4).

J.P. Morgan can no longer serve as the system's lender of next-to-last resort...

...which should be of concern as well. As the most liquid G-SIB of the banking system, J.P. Morgan used to underwrite past waves of bill supply and it used to lend into past quarter-end and year-end turns. But it spent all its excess cash on buying Treasuries and funding primary dealers inventories, as have all other major G-SIBs (see Figures 5 and 6).

³ Another way of looking at the distortions caused by the foreign RRP facility is that it reduces the incentives of foreign central banks to lend in the FX swap market directly. Instead of lending their dollars in the FX swap market and thereby helping the flow of dollars globally, foreign central banks put their reserves at the Fed and so withdraw dollars from circulation. In other words, inflows to the foreign RRP facility sterilize dollars and hurt global dollar liquidity.

Who will absorb the wave of issuance between now and year-end?

If our previous edition made you worried about funding markets, our current edition should add to your list of worries for we just identified another source of collateral supply – the foreign RRP facility – which can potentially add \$100 to \$200 billion of supply on top of the \$800 billion that's coming from primary issuance. The picture isn't pretty...

...and the longer the foreign RRP facility stays uncapped, the uglier things can get.

The funding pressures we are forecasting include o/n GC repo rates drifting outside the Fed's target band, pulling the o/n fed funds target rate with it by early October. These pressures will bleed through to implied yields in front-end FX forwards and as these pressures persist they will bleed through to term cross-currency bases and Libor-OIS.

But on October 1st the market will also start to price for the year-end calendar turn, and these turns routinely push foreign investors FX hedging cost at least 50 bps higher – and when that happens the inversion relative to hedging costs will deepen (see Figure 7), dealer inventories will worsen and the associated funding pressures will push o/n rates further outside the Fed's target band as we've described in detail [here](#), [here](#) and [here](#).

More and more market participants assume that the solution to the “collateral tsunami” is a technical response from the Fed – either a standing repo facility or asset purchases.

We would argue that the worse the inversion gets, the more careful the Fed should be about opening up its balance sheet through these measures – if the Fed commits to reversing in collateral through a standing repo facility or buying Treasuries outright [during an inversion](#), it may end up monetizing more collateral than it feels comfortable with – and monetizing record deficits is likely not what this FOMC wants to be remembered for.

Inflows into the foreign RRP facility are a case in point.

Just as an inversion is forcing foreign central banks to latch on to the Fed for [collateral](#), an inversion would force primary dealers and banks to latch on to the Fed for [reserves](#), as weak demand for Treasuries from ultimate investors drives growing dealer inventories.

The optics of what we just described are odd...

...as they imply the [conflicted](#) existence of two uncapped facilities: a foreign RRP facility that sterilizes reserves and adds to collateral supply and a standing repo facility or an asset purchase facility built to add reserves and absorb collateral. That makes no sense...

...it has to be one or the other.

If the standing o/n repo facility or an asset purchase facility (or “mini-OEs”) are the future, an uncapped foreign RRP facility must be the past.

Whether the Fed provides a technical fix with or without an uncapped foreign RRP facility, we don't think a technical fix is the right solution for the problems caused by the inversion.

All this brings us back to the rationale for more rate cuts – a series of rate cuts (see [here](#)).

Figure 8 shows the slope of the core G7 curves as measured by 3s/10s spreads – the Japanese, French and German curves are flat, but the Treasury curve is inverted. Figure 9 shows the global relative value landscape from the Japanese perspective – relative to hedging costs, the Treasury curve is deeply inverted and French and German curves are “only” moderately inverted. Relative to either Treasuries, OATs or bunds, JGBs are now the global high yield option – when curves invert, flat is the new steep.

That puts the Fed's target range for o/n rates into an uncomfortable perspective...

It cannot be that the country that has to issue the most has the least attractive curve, and it cannot be that a country that runs twin deficits doesn't have foreign portfolio investors – private or official – as marginal buyers of its rapidly growing stock of government debt.

It appears that the Fed, by hiking too much, priced the coming wave of Treasury supply out of the market – that's what the FX-hedged yield of Treasuries relative to JGBs tell us, and what inflows into an uncapped foreign RRP facility paying eye-popping rates tells us.

Figure 10 does not suggest that the Fed is pricing the front-end correctly, does it?

It follows that if the Fed priced supply out of the market, it should be extra careful with quantitative fixes to the collateral supply problem and should consider rate cuts instead...

...rate cuts that are aggressive enough to re-steepen the curve so that dealer inventories can clear – cuts deep enough to incent real-money investors to lend long, not short and foreign investors to buy Treasuries on an FX hedged basis on scale again (see [here](#)).

The rates market feels fragile...

...for collateral supply has been and will be absorbed by primary dealers on the margin, and dealers have been and will be funded o/n by a handful of large banks on the margin.

In English, that means that the Treasury is funding the federal deficits o/n on the margin.

How the Fed will respond to these problems is uncertain.

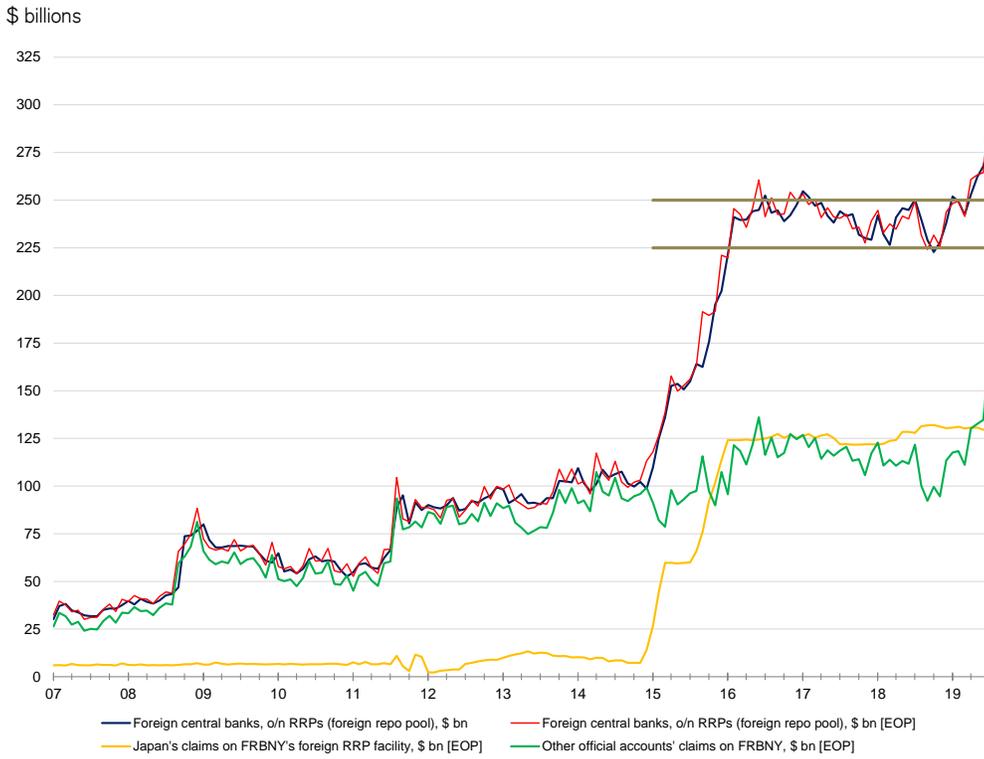
Technical measures from the Fed will likely lead to a large monetization of Treasuries – which, depending on your perspective, will be an “MMT” dream or nightmare come true.

Fundamental measures like rate cuts are what we need, in our view, but whether the Fed will deliver them is far from certain. Maybe we'll get a little bit of this and a little bit of that.

But one thing is for sure...

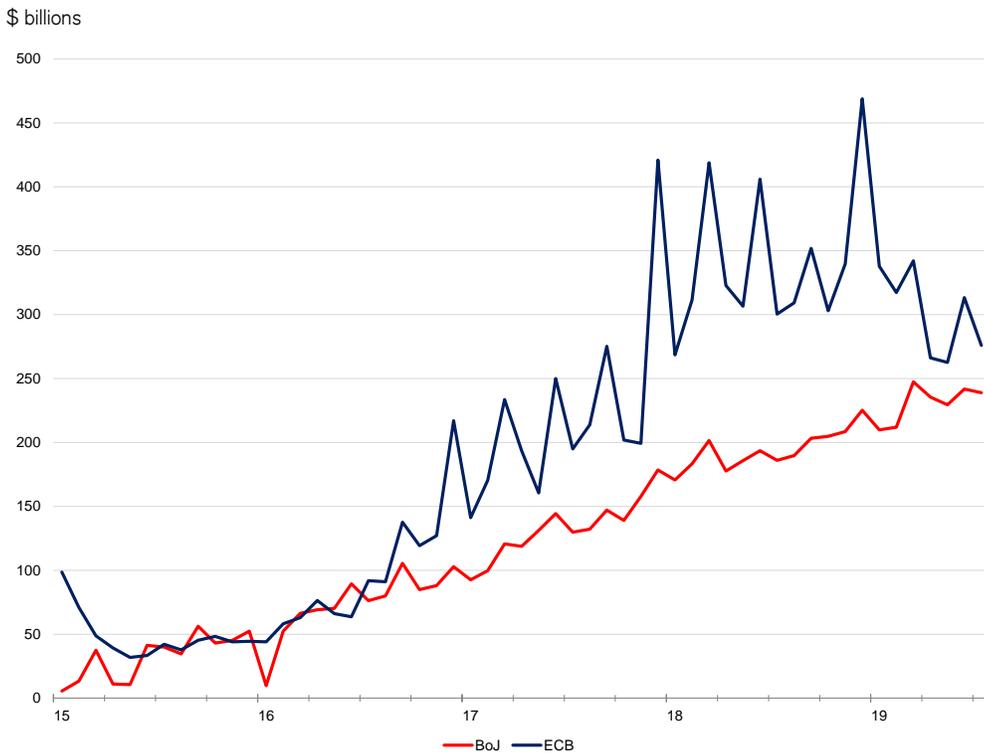
...this weekend's Jackson Hole meeting will likely be the most significant in a decade, with Chair Powell's speech potentially as important as [that](#) speech by Chair Bernanke.

Figure 1: Sagittarius-A*



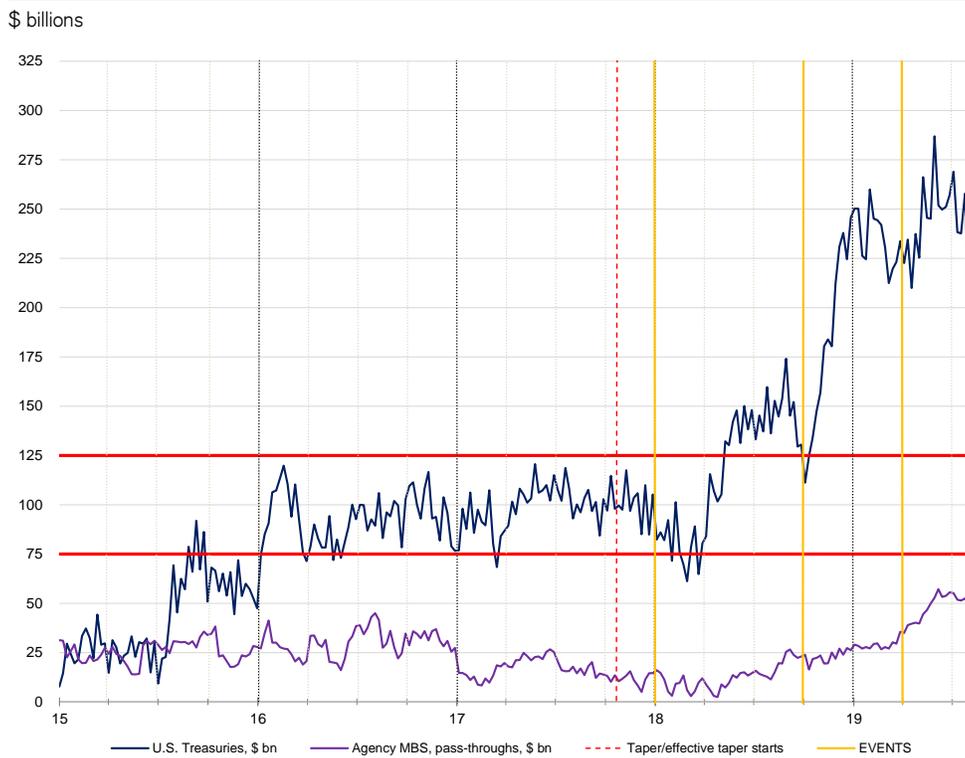
Source: Federal Reserve, Ministry of Finance, Credit Suisse

Figure 2: Foreign Central Banks' Deposits at the ECB and the BoJ



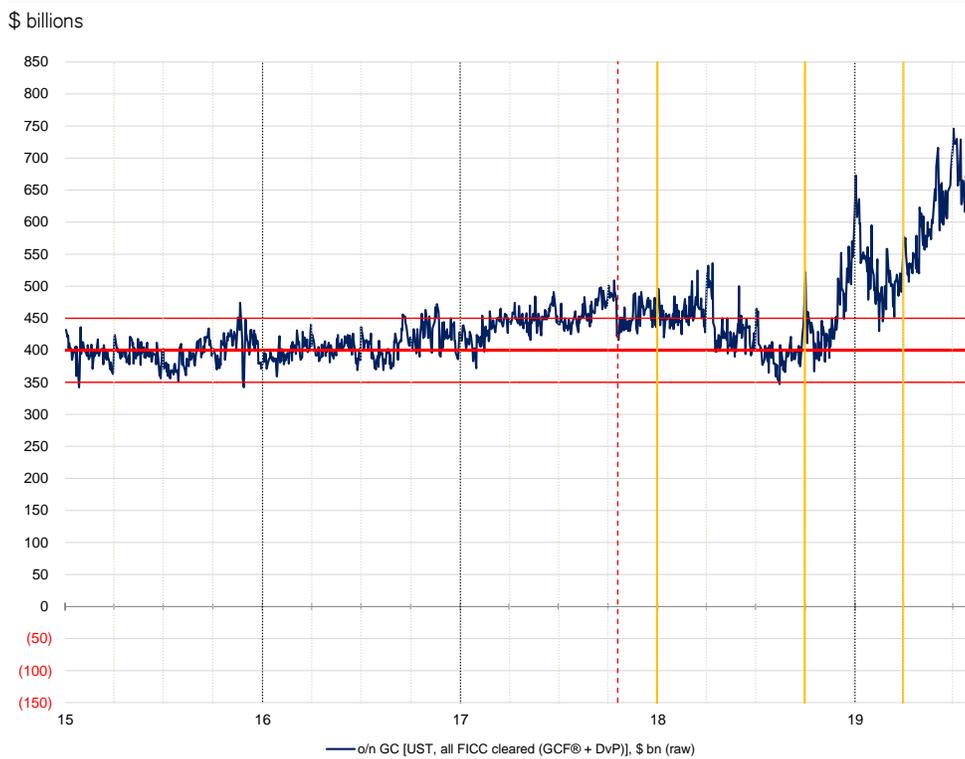
Source: European Central Bank, Bank of Japan, Credit Suisse

Figure 3: Dealer Inventories are Rising



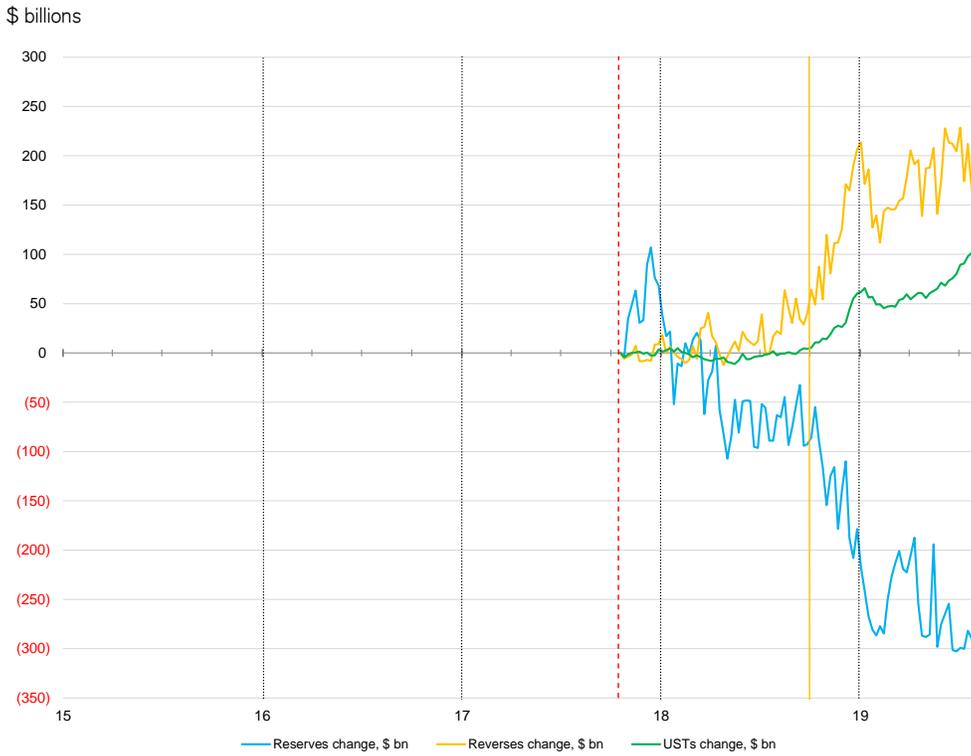
Source: Federal Reserve, Credit Suisse

Figure 4: Dealer Funding Needs are Rising



Source: Federal Reserve, Credit Suisse

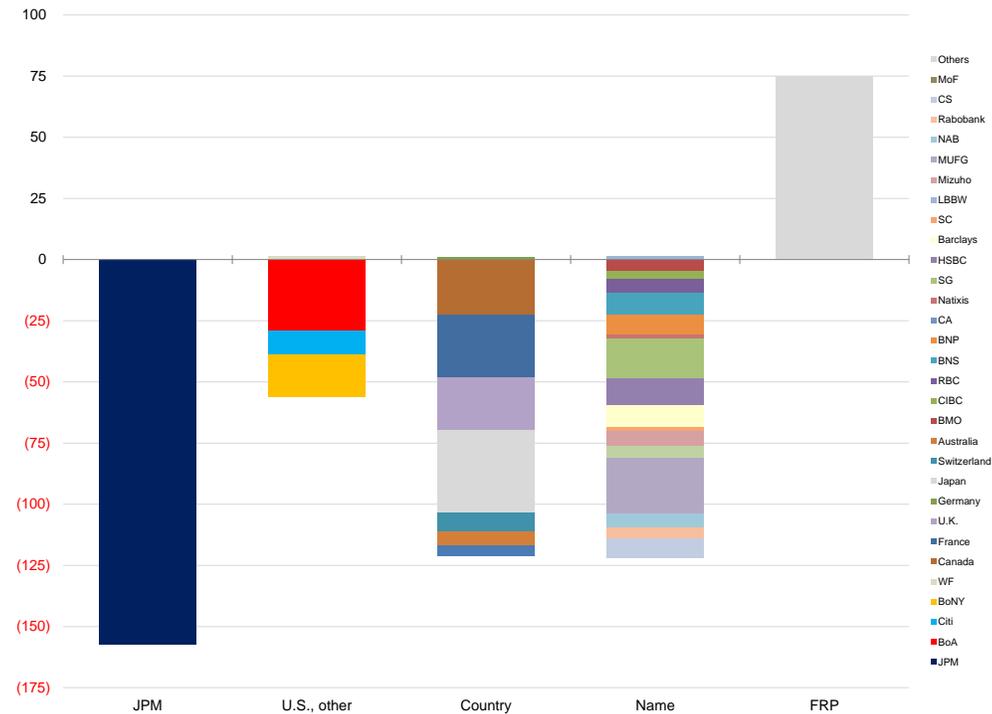
Figure 5: Bank HQLA Portfolios are Funding Dealers



Source: Federal Reserve, Credit Suisse

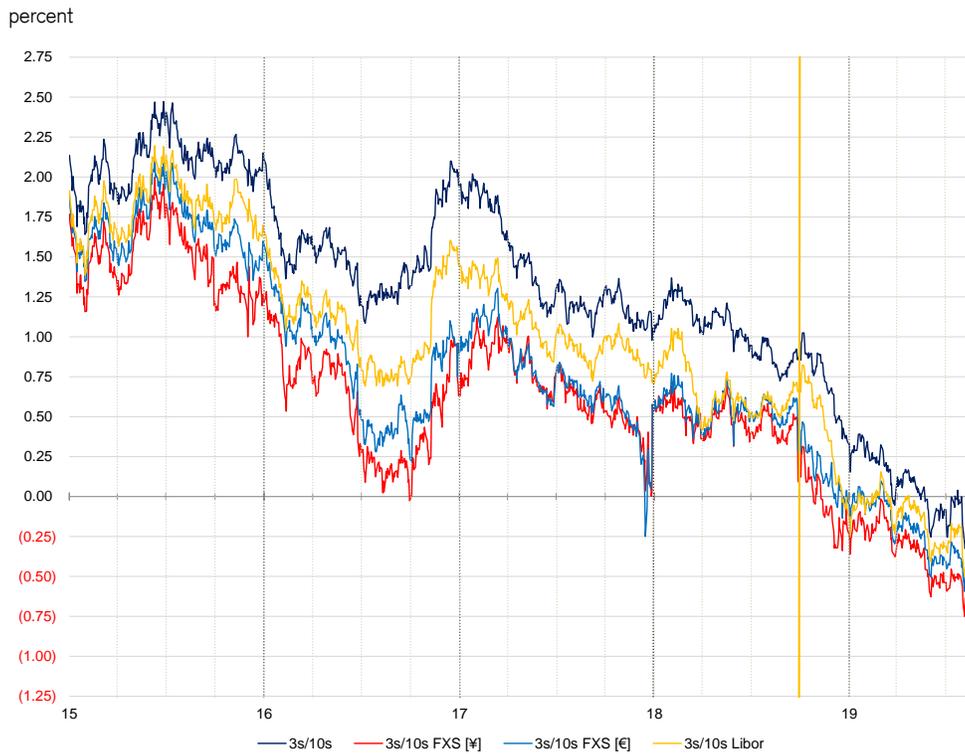
Figure 6: Lender of Next-to-Last Resort No More

change in reserve/foreign RRP (FRP) balances between 2018Q2 and 2019Q2, \$ billions



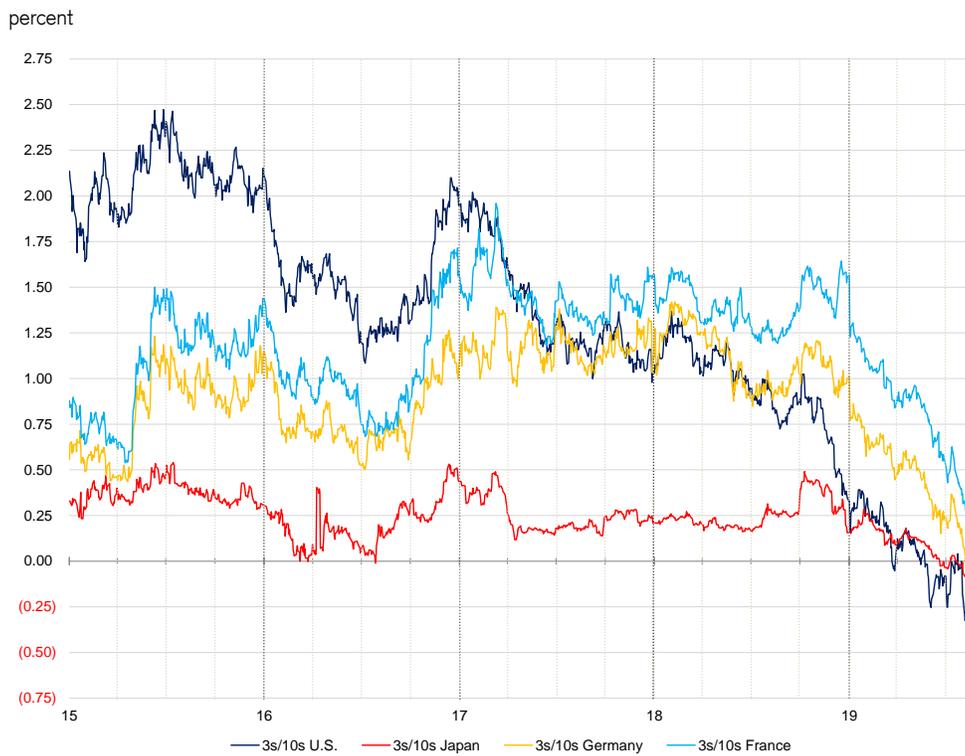
Source: Call reports, Federal Reserve, Credit Suisse

Figure 7: The Inversion Will Get Worse on October 1st



Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse

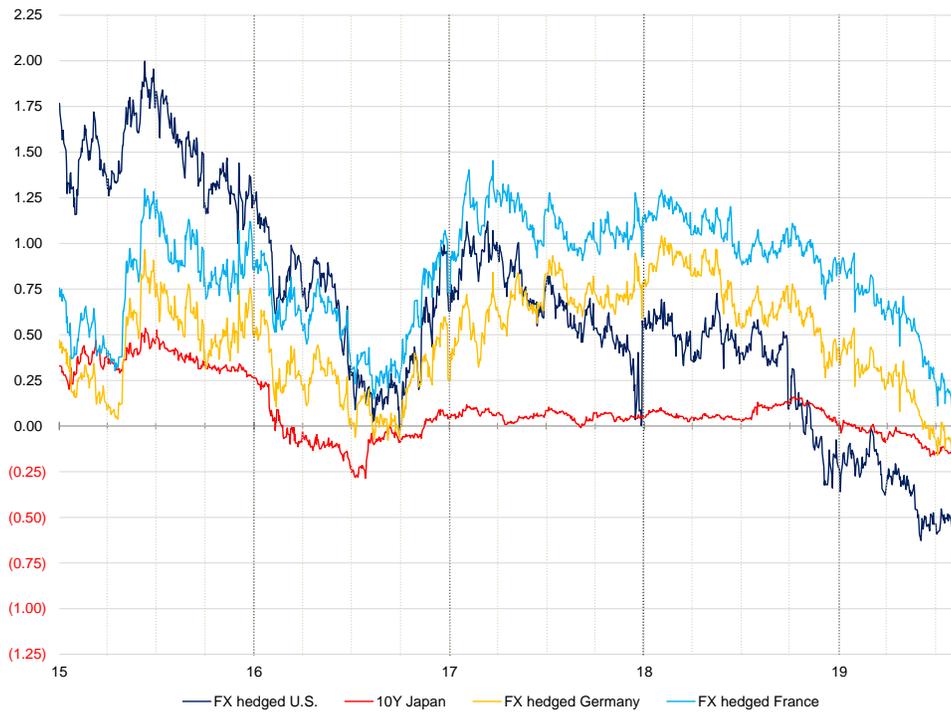
Figure 8: Flat is the New Steep



Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse

Figure 9: Priced Out

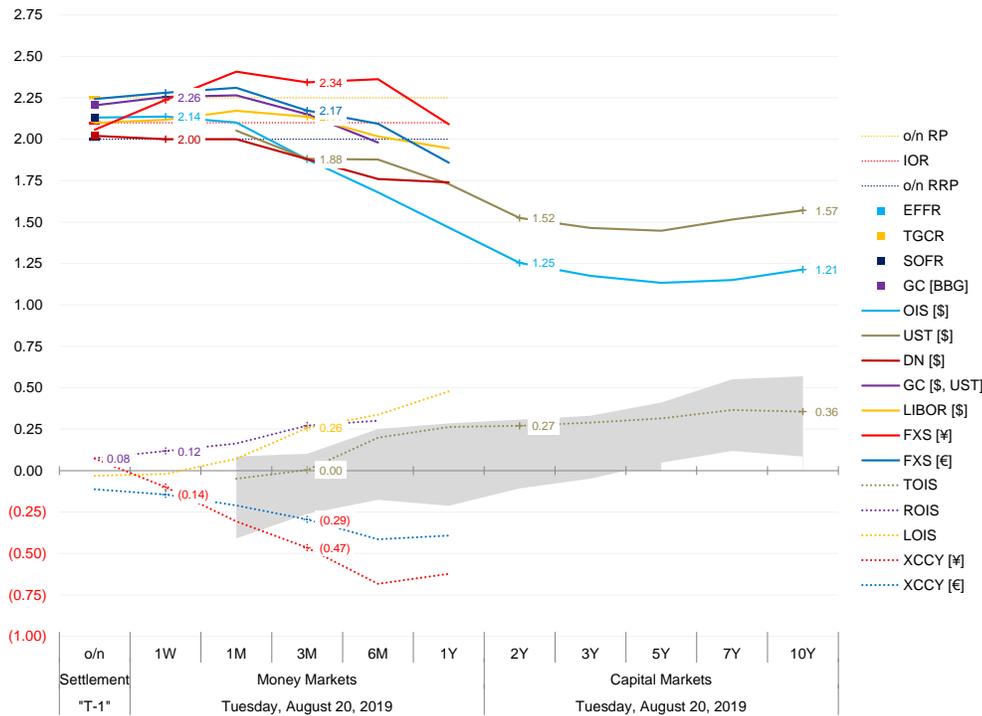
10-year sovereign debt hedged back to yen on a rolling three-month basis, percent



Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse

Figure 10: We Need a Fundamental Fix, Not Technical Solutions

percent



Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse

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