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Fed Funds and the Market for Intraday Liquidity

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Our overnight monitors have been missing a brand new interbank market – a market that trades 10 basis points (bps) above IOR and 5 bps outside the Fed's target range for the o/n fed funds (FF) rate. The new market is a market for intraday liquidity and it exists between U.S. G-SIBs and the FHLB system, and its instrument is interest bearing deposit accounts (IBDAs). Anecdotally, the volume of IBDAs was roughly $15 billion in August, up from nil a year ago.

The genesis of this new market is U.S. G-SIBs' resolution liquidity needs, which prompted the U.S. G-SIBs to start optimizing intraday payment flows so that their intraday liquidity exposures are reduced. Because IBDAs lock up reserves for the entire day, they help reduce banks' intraday liquidity exposures.

IBDAs represent an important milestone in the evolution of the interbank market that exists between FHLBs as lenders and private banks as borrowers.

First, o/n FF trades were driven by arbitraging the IOR rate by foreign banks that had free balance sheet to play with and were not constrained by liquidity.

Next, super-regional and regional banks constrained by end-of-day liquidity started to borrow o/n FF around month-end to boost their spot LCR metrics.

More recently, all major U.S. G-SIBs constrained by intraday liquidity started to borrow via IBDAs to meet resolution liquidity needs – a higher form of LCR.

IBDAs are great, save for the fact that their growth is about to decimate the supply of o/n FF from the FHLBs, precisely at a time when the demand for o/n FF is growing rapidly – more and more banks borrow o/n FF for more diverse reasons which now include arbitraging rates that trade above IOR, settlement needs, and managing to daily and month-end LCR needs.

A growing demand for o/n FF, coupled with the growth of IBDAs that are set to decimate the supply of o/n FF suggests an increase in the daily volatility of the o/n FF rate from here, the potential for o/n FF to spike as much as 50 bps on month-ends and the risk that o/n FF jumps outside the target band one day and then never looks back. The solution here will be a premature end to taper and fixed-price, full allotment o/n repos, not IOR cuts or that the Fed switches to SOFR as the target rate. Regarding the last point, be careful. If the Fed's target rates is also a reference rate, we won't have lots of spreads left to trade.

In recent issues of Global Money Notes, we've highlighted the influence that repo rates can have on the overnight fed funds (FF) rate. In a nutshell, our main points were that in their arbitrage books, the Federal Home Loan Banks (FHLBs) can freely toggle between o/n FF and o/n repos, depending on which one yields better, but in their liquidity books, the FHLBs are captive lenders in the o/n FF market because they need cash back early.[1]

Our working assumption has been that for the foreseeable future, lending volumes in the o/n FF market won't fall below $60 billion, and that volumes above that will depend on where o/n FF trade relative to repos and so where the FHLBs direct their arbitrage flows.

Given this framework for the supply of fed funds, our assumption was that the forces that will determine the o/n FF rate will come from changes on the demand side of the market: a growing number of borrowers, which now include U.S. banks alongside foreign banks, and the rising share of o/n FF trades that are motivated not by arbitraging the IOR rate, but by arbitraging various other o/n rates, settling payments and improving LCR metrics.

In the remainder of this issue of Global Money Notes, we make an important adjustment to the framework that guides our assumption about the supply side of the o/n FF market, and analyze the changing nature of the demand side of the o/n FF market. Combined, the changes we see increase our confidence that the o/n FF rate will trade outside the target band by year-end, and that the volatility of the o/n FF rate will increase from here, with implications for the volatility and slope of the OIS curve and the Fed's room to taper.

Part one describes the growing "IBDA" market, which is cannibalizing the o/n FF market. Part two describes the changing nature of the demand side of the o/n FF market. Finally, part three concludes that a jump risk in the o/n FF rate is a clear and present danger.

Part I – IBDAs and the Market for Intraday Liquidity

Three themes have featured prominently in our recent conversations with the treasurers of the globally systemically important U.S. banks (U.S. G-SIBs). These themes were:

(1) resolution liquidity is the new binding constraint;

(2) banks are looking more closely at intraday liquidity;

(3) and a cryptic observation that "flows are changing".

Resolution liquidity is a complex subject, but for our present purposes, the key point to appreciate about it is that it increases G-SIBs' liquidity requirements, i.e., the quantum of high-quality liquid assets (HQLA) G-SIBs need to hold. Liquidity coverage ratios (LCR) are based on end-of day balance sheet snapshots, but resolution liquidity takes into account intraday liquidity needs as well. Thus, resolution liquidity is why banks are looking more closely at intraday liquidity, i.e. why they've started to optimize their payment flows.

If resolution liquidity is the new binding constraint, then G-SIBs have to make adjustments on the margin such that resolution liquidity needs are met. These adjustments can come either from banks reducing their intraday liquidity exposure, or from banks boosting the amount of HQLA they hold – and more precisely, the amount of reserves they hold, as reserves are the only type of HQLA that provides liquidity throughout the day, i.e. intraday.

As a result of these changes, there is a brand new interbank market developing, where G-SIBs are sourcing reserves in a way that helps reduce their intraday liquidity exposure.

[1] See "From a Leaky Floor to an Escalator…" in Global Money Notes #15 – Monetary Policy with Excess Collateral.

The market is an overnight market between G-SIBs as borrowers and FHLBs as lenders, and the market's instrument of choice are interest-bearing deposit accounts (or "IBDAs").

IBDAs function as interest-bearing checking accounts for the FHLBs and effectively provide round-the-clock liquidity. In the following paragraphs, we explain why IBDAs are superior to o/n FF for everyone involved – for FHLBs as lenders and banks as borrowers.

The FHLBs only have access to non-interest bearing accounts at the Fed, which, as their name suggests, earn zero interest irrespective of where the Fed sets its policy rate. That's why the FHLBs have been lending their cash in the o/n FF market in recent years – to earn some interest. These o/n FF trades work well if the borrowing banks' aim is to arbitrage IOR or to window-dress LCR metrics on month-ends. The former trade exploits the fact that the bank – typically a foreign bank – isn't bound by the leverage ratio (SLR) intra-quarter, and also has some ancillary LCR benefits to it.[2] The latter trade exploits the fact that the bank – typically a super-regional or regional, non-GSIB U.S. bank – can satisfy its LCR by boosting its end-of-day reserve balances at the Fed on month-ends.

In an o/n FF trade, a bank borrows funds from the FHLBs with an understanding that the bank will return the funds early next day – as early as 5:30 or 6:00 am New York time. Typically, these trades are renewed by noon, and the liquidity goes back to the banks until early next day, when it is returned again to the FHLBs for a few hours just as before.

Early cash return works if you're running arbitrage or if you are managing to end-of-day liquidity metrics (LCR), but not when your aim is to manage your intraday liquidity needs.

Why?

Because when a bank returns cash to the FHLBs from a maturing o/n FF trade for a few hours, the bank increases its exposure to intraday liquidity for those few hours, and for resolution liquidity, it's your cumulative peak intraday liquidity needs that matters. In English, that means that every minute spent depleting one's reserve account counts, and so banks are incentivized to lock up for the day as much of their reserves as they can.

IBDAs do precisely that. IBDAs are an account that enable the FHLBs to keep their liquidity at U.S. G-SIBs round the clock. Like o/n FF trades, IBDAs give the FHLBs access to liquidity early in the day if they need it, and, if not, the U.S. G-SIB retain access to that liquidity intraday, which, in turn, helps them reduce their intraday liquidity exposure. Of course, the FHLBs' won't draw on their liquidity reserves unless there is a crisis, so the FHLBs typically stay in their IBDAs with U.S. G-SIBs for the entire business day.[3]

Everybody wins.

FHLBs win because operationally, IBDAs are superior to o/n FF trades. That's because when o/n FF trades mature, banks wire reserves from their reserve accounts at the Fed to the FHLBs' checking account at the Fed, where those funds earn zero interest for a few hours until the same banks re-borrow the funds and the FHLBs wire the funds back.

Time is money, and the FHLBs are keen to minimize the time their funds spend earning zero at the Fed – that's why they are keen to get cash out the door everyday by noon. If there was a way to eliminate the time spent earning zero altogether, that's even better. IBDAs do precisely that – earning a return round the clock without the need for FHLBs to wire funds to and from their checking accounts and banks' reserve accounts at the Fed.

[2] Foreign banks initially did the o/n FF - IOR trade for a spread and later they realized that there is an LCR benefit too.

[3] Not to spoil the concept, but banks' intraday liquidity needs typically surge in a crisis and the FHLBs typically tap their liquidity buffers in a crisis, such that IBDAs will be withdrawn precisely when the G-SIBs need them the most. That's something for everyone to think about – GSIBs and the Fed, and the FHLBs and their regulator, the FHFA.

U.S. G-SIBs win too because they have a new source of funding for liquidity purposes, funding that satisfies both end-of-day LCR needs and intra-day resolution liquidity needs.

Importantly, our discussion shows some important milestones in the evolution of the interbank market that exists between the FHLBs and private banks both foreign and U.S. and G-SIB and non-G-SIB. First, o/n FF trades were driven by arbitraging the IOR rate by banks that had free balance sheet to deploy and were not constrained by liquidity. Next, banks constrained by the LCR started to borrow o/n FF to up end-of-day liquidity. More recently, G-SIBs constrained by resolution liquidity needs – a higher form of LCR – started to borrow through IBDAs to boost their intraday liquidity. From arbitrage, i.e. playing with excess liquidity, to boosting end-of day liquidity to boosting intraday liquidity...

…that's a clear pattern and a good way to think about whether reserves are still excess!

IBDAs have been increasing in volume (see Figure 1). IBDAs were practically nonexistent a few years ago, but anecdotally, by August of this year their daily average volume was $15 billion. Given that the cousin of the IBDA market, the o/n FF market, is $50 billion, $15 billion is quite a lot. And now, the important detail of the rate at which IBDAs trade…

…which, anecdotally, is about 8-10 basis points above IOR!

Those spreads shock the underlying assumption of just about everything we though we knew about o/n markets. We've all been looking at our overnight monitors tracking how all o/n rates are drifting higher in the band and how all rates but the o/n GCF repo rate are still within the band and so everything is "kind-of" fine, when in fact the IBDA market – where banks source intraday liquidity on the margin – is trading well outside the band!

Reflect for a moment about the significance of that (see Figure 2)!

The IBDA market trades above IOR by a margin sufficient enough to suggest that intraday liquidity needs are now a growing focus for U.S. G-SIBs. That's partly due to G-SIBs' resolution liquidity needs, but also because Treasury collateral is becoming excess, which is changing payment flows such that intraday liquidity is becoming more valuable.

How?

Because as the Treasury is boosting its cash balances at the Fed and the Fed tapers, whether it's banks or their customers absorbing the additional supply of Treasury collateral, banks are losing reserves – which is the only type of HQLA that provides intraday liquidity. As the system loses intraday liquidity to the Fed's balance sheet taper, banks are trying to re-gain through funding markets some of the intraday liquidity they've lost – in our view, that's what one bank's treasurer probably meant when he noted that "flows are changing".

Mind you, it's not like this particular treasurer is running low on reserves. Far-far from it. But even with ample reserves, he is tapping the IBDA market with gusto to top up his reserve balances for resolution liquidity needs. This brings us to a comment by another bank treasurer on the conflicting goals of the operational and regulatory arms of the Fed:

"The markets folks in New York are cutting IOR because they want us to lend our reserves, and the regulatory folks in D.C. are incentivizing us to top up and hold on to our reserves."

That the Fed is tapering its balance sheet precisely when banks are starting to hoard reserves for resolution liquidity purposes is unfortunate, and is one reason why attempts to flatten the distribution of reserves across the system by cutting the IOR rate won't work.

In a recent speech, Simon Potter, the manager of the System Open Market Account, noted the following (the underlines are our emphases):

"At this point, I see no evidence that we are at, or close to, the "steep" portion of the demand curve [for reserves]. Let's run through some places where evidence of such a

possibility might be found. To begin with, if we were closing in on the "steep" part, I might have expected to see more above-IOR lending in the unsecured overnight markets, as at least some banks each day found themselves short of reserves and had to borrow them from another bank. In fact, the amount of such above-IOR lending remains fairly low as a share of the overnight bank funding market […]. I might also have expected to see shifts in bank payments behavior — for example, more daylight overdrafts or more effort by banks to "optimize" their payment flows — but I have not seen this either."

As market participants, our judgements are only as good as the scope of our surveys, our monitors and our contacts. Respectfully, the FR2420 survey does not capture the fast-growing IBDA market, which is currently the frontier of o/n funding markets – that's where the marginal trades are and where price action is saying important things…

…that there is a now fast-growing interbank market for intraday liquidity where funds trade 10 bps above IOR and that banks have started to optimize their payments flows.

In addition, at a recent conference on money markets at Columbia University, one presenter argued that one sign of reserves scarcity will be an increase in the fraction of payments (or "Fedwire values settled") that are made late in the day (see Figure 3).

To that, we would respectfully submit the following observation: in a world without Basel III and all sorts of intra-day and end-of day liquidity needs, reserves scarcity may indeed show up as an increase in the fraction of payments made late in the day; but in a world bound by Basel III, resolution liquidity and intraday liquidity needs, it is questionable whether banks will ever again let their reserve balances fall so low that they'll be incentivized to make payments late in the day. Waiting for reserves scarcity to show up in the deciles of Fedwire values settled throughout the day may not be the place to look…

…the size of IBDA volumes and the spreads that IBDAs pay over IOR is the place to look!

As a superior investment to o/n FF, the IBDA market presents a real threat to the depth of the o/n FF market. Our prior assumption that o/n FF cannot go below $60 billion is now stale – growth in the IBDA market can seriously decimate o/n FF volumes from here.

In fact, the volume of o/n FF trades is currently at a post Basel III low (see Figure 4) – volumes are now below $60 billion, and will soon fall below $50 billion and then less as IBDAs continue to grow. The main determinant of FHLBs unsecured lending is the size of their liquidity book. Going forward, those liquidity books will hold more IBDAs than o/n FF.

Over time, as taper progresses and as foreign banks' intermediate holding companies (IHCs) will be required to manage to resolution liquidity targets like U.S. G-SIBs, we expect the market for intraday liquidity to grow and for IBDAs to crowd out most of the o/n FF market. O/n FF trades had their time while liquidity was excess and while banks managed to end-of day liquidity (LCR). Those days are over. IBDAs are the next big thing.

We are not saying that o/n FF volumes will crash to zero: due to the intraday liquidity that IBDAs provide, they are more expensive than o/n FF. There will be some banks that will continue to manage for end-of-day liquidity and these banks will continue to bid for o/n FF.

But the problem is that from the perspective of the FHLBs, IBDAs are superior to o/n FF – they yield better and are more user-friendly – and so FHLBs liquidity portfolios will gradually rotate away from o/n FF and toward IBDAs, which will make life tougher for all those who wish to bid for o/n FF. And the list of banks who wish to borrow o/n FF is growing and the reason why these banks borrow o/n FF is getting more and more diverse.

We next discuss changes in the demand side of the o/n FF market, and why these changes, together with the growth of the IBDA market will soon push the o/n FF rate outside the Fed's target band, and why further cuts to IOR are unlikely to fix that.

Part II – Fed Funds Beyond Arbitrage

Just as the supply of o/n FF is bound to shrink due to the growth of the IBDA market, the demand for o/n FF is growing rapidly. There are more and more borrowers in the o/n FF market, who are borrowing for more diverse reasons which now span arbitrage, settlement needs, the currency matching of HLQA portfolios and improving LCR metrics.

Until March of this year, the dominant borrowers in the o/n FF market were foreign banks that played the o/n FF - IOR arbitrage game. The o/n FF rate was stable except for month-ends, when banks turned off arbitrage. These dynamics drove the month-end dips in the o/n FF rate and the quarter-end dips in o/n FF volumes (see Figures 5 and 6).

But by March of this year, the o/n FF market's dynamics have changed.

The month-end dips in the o/n FF rate disappeared, and so did the quarter-end dips in o/n FF volumes. Importantly, o/n FF volumes started to spike on both month-ends and quarter-ends. The spikes at the end of August and September of this year were small, but the size of spikes is less important than their meaning: that the o/n FF market is no longer about arbitrage. If it were, o/n FF volumes would fall, not increase on month-ends.

Currently, some $55 billion of o/n FF transactions trade right at IOR, which make it abundantly clear that o/n FF borrows are no longer motivated by arbitraging o/n FF - IOR. To the best of our knowledge, there are four motivations across foreign and U.S. banks, G-SIBs and non-G-SIBs that drive demand for o/n FF today. These motivations are:

(1) Foreign banks borrowing o/n FF occasionally to be able to make payments.

(2) Foreign banks borrowing o/n FF daily in order to currency match their LCR.

(3) U.S. banks borrowing o/n FF around month-ends to boost their LCRs.

(4) Banks borrowing o/n FF opportunistically to arbitrage o/n GC and other rates.

First, more and more foreign banks occasionally borrow in the o/n FF market to settle large-scale outflows in U.S. dollars. Foreign banks settle their dollar payments from their reserve accounts at the Fed, and sometimes the amount of reserves they have isn't sufficient to cover their payments. In these instances, funds have to be raised on the margin either by repoing bonds (HQLA) or by borrowing reserves in the o/n FF market. We know of at least one foreign bank that had to close on a $20 billion deal but had only $18 billion in reserves at the Fed on settlement day and had to borrow the rest by tapping the o/n FF market. In a regime where the U.S. Treasury is sitting on roughly $350 billion of reserves at the Fed, the banking system has $350 billion less in reserves and so banks are more prone to tap o/n funding markets on the margin to be able to make payments. If we look at the FHLBs' disclosures about the domicile of the foreign banks that borrow in the o/n FF market, over the past four quarters, we have seen banks from Austria, Singapore, Belgium and even Chile enter the o/n FF market as borrowers. It seems to us that Chilean banks are mostly likely not in the o/n FF market to arbitrage the IOR rate – rather they are in the market to get dollars to cover outflows, which they had to do less of until Treasury sterilized $350 billion of reserves. Sterilization has real funding impacts!

Importantly, if more and more foreign banks' presence in the o/n FF market is driven mostly by U.S. dollar payment needs, then the o/n FF rate can trade above the IOR rate.

Second, about two years ago, the foreign banks that did the o/n FF - IOR arbitrage daily have started to book their o/n FF borrows as official sector deposits to improve their LCR. The bid for o/n FF from these banks became marginally stronger on January 1st, 2018, as all European banks now have to currency-match their HQLA portfolios with outflows. Thus, foreign banks' bid in the o/n FF market today has less to do with arbing IOR and more with managing LCRs daily, and dynamically currency matching HQLA with outflows.

Like in the previous case, if more and more foreign banks' presence in the o/n FF market is driven by daily LCR management needs, then the o/n FF rate can trade above IOR.

Third, super-regional and regional U.S. banks have learned about how foreign banks are booking o/n FF trades as official sector deposits to improve LCRs and now do the same on month-ends. The foreign and U.S. super-regional and regional bid for o/n FF on month-ends explains why the dips in the o/n FF rates are gone and why o/n FF volumes now exhibit baby-spikes on month-ends. The FHLBs' unsecured lending to U.S. banks is bound by the same ratings-based constraints that govern their lending to foreign banks – lend only to AA or A-rated banks, but nothing worse. Figure 7 below shows the universe of U.S. banks (all non-G-SIBs) that are highly-rated enough to be able to borrow from the FHLBs in the o/n FF market. Currently, only six of these regional banks actively borrow in the o/n FF market. As the other banks learn about the LCR benefits of o/n FF trades – and your correspondent is traveling to see all of them to spread the word – the bid for o/n FF will increase, pulling the o/n FF rate higher and higher especially on month-ends.

Like in the previous examples, if more and more banks' presence in the o/n FF market is driven by managing to month-end LCR needs, then the o/n FF rate can trade above IOR.

Fourth, in the previous issue of Global Money Notes, we highlighted that custodian banks opportunistically tap the o/n FF market to fund imbalances in their sponsored repo books. We would add to that that the same custodian banks and most larger foreign banks can also tap the o/n FF market to lend into the tomorrow-next (or t/n) FX forwards market.[4] In recent months, o/n GC repos and t/n FX forwards (particularly the €/$ and $/¥ pairs) have been trading at spreads of around 5 bps and 15 bps over the IOR rate, respectively.

One final time, if more and more banks presence in the o/n FF market is driven by arbitraging rates that structurally trade above IOR, then o/n FF can also trade above IOR.

IOR is no longer relevant for where the o/n FF rate trades. With the o/n FF rate at IOR, the era of IOR serving as a magnet, metaphysically levitating the o/n FF rate is now over. We are now in a regime where the drivers of where the o/n FF rate trades relative to IOR include banks' dollar payment needs, LCR needs, and market making in o/n GC repos and t/n FX forwards, and how fast IBDAs are pulling funding away from these needs.

Thus, we have a new set of "magnets" to the o/n FF rate:

(1) IBDAs and intra-day liquidity needs crowding out the supply of o/n FF daily.

(2) Occasional bids for o/n FF to cover dollar payment needs.

(3) Daily bids for o/n FF to dynamically currency match LCRs.

(4) Month-end bids for o/n FF to window-dress LCRs.

(5) Opportunistic bids for o/n FF to fund market making.

Liberty Street, we have a problem!

The first four of these drivers of o/n FF are price-agnostic – where IOR is set is irrelevant. U.S. G-SIBs have to pass resolution liquidity and they'll pay for IBDAs above IOR for that; foreign banks have to meet their dollar outflows and they'll pay above IOR to meet them; regionals have to meet their LCR on month-ends and will pay above IOR to meet them; and custodians and foreign banks don't care if they have to pay above IOR for o/n FF if the rates they are arbitraging – o/n GC and t/n FX forwards – trade measurably above IOR.

[4] Tomorrow-next (t/n) is a short-term FX transaction where a currency is bought and sold over two separate days, those being tomorrow (one business day) and the following day (two business days) from today – the spot date. It is the most liquid point of the FX forward market, much like the o/n point is the most liquid point of the repo market.

Conclusions – A "M-o/n-etary" Whack-a-Mole

There are four implications of our analysis for the volatility and slope of the OIS curve.

First, now that the o/n FF rate trades on top of IOR, whatever arbitrage o/n FF trades will fund from here will involve market rates, not administered rates – and that's important. The IOR rate is a stable rate and for as long as the bulk of borrows in the o/n FF market was motivated by arbitraging IOR, the stability of the rate being arbitraged bled through to the rate that was being used to fund arbitrage. The next rates in the hierarchy to arbitrage – o/n GC repo and t/n FX forwards – are market rates, not administered rates and so are inherently more volatile than IOR, and their volatility will bleed through to the o/n FF rate.

That's one reason why the daily volatility of o/n FF will increase from here.

Second, given that more foreign banks are tapping the o/n FF market occasionally to settle payments and to dynamically currency match their LCR daily, there will be days when o/n FF will be more volatile than what the arbitrage relationship above would imply.

Volatility will thus increase, but some business days will be more volatile than others.

Third, given that more regional and super-regional banks are bidding for o/n FF around month-ends for LCR, the month-end volatility of the o/n FF rate will get super-charged. These dynamics are already in train, but to date, the increase in regional banks' bid for o/n FF on month-ends was more-or less offset by less bid for o/n FF by those banks that turn off arbitrage on month-ends. But that's changing. Regionals' bids for o/n FF is now driving spikes on month-ends and they are now competing with U.S. G-SIBs' IBDAs.

Volatility on month-ends will thus be worse than volatility on regular days.

Fourth, given that custodian banks and foreign banks can use the o/n FF market to fund imbalances in their repo and FX forward books, quarter-end dislocations in those markets will bleed through to the o/n FF rate with force – especially if the typical funding leg of these arbitrage trades, the o/n tri-party repo rate, trades well above the o/n FF rate.

Volatility on quarter-ends will thus be far worse than volatility on month-ends.

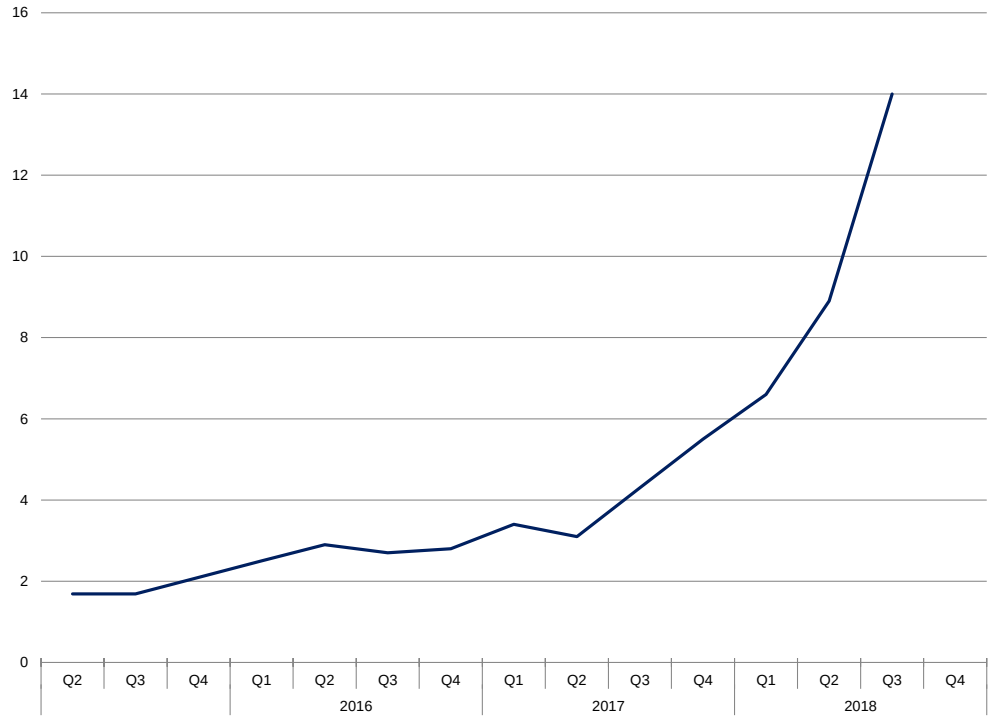
The degree of month-end volatility can be big – very big. To imagine how big, think of the quarter-end spikes in the o/n GCF® repo rate at their worse and then some, which can mean spreads of at least 50 bps over IOR and rates above the discount window rate. Figure 8 shows that such prints for the o/n GCF® rate were not uncommon in the past, during periods where the frontier of o/n markets was foreign-owned dealers figuring out how to net down their balance sheet for SLR compliance. The frontier today is regional U.S. banks figuring our that they can use o/n FF to meet month-end LCR compliance. Compliance is compliance and whether your binding constraint is the SLR or the LCR, you are price insensitive: you pay whatever to comply or there's regulatory scrutiny to pay.

We must add that while U.S. G-SIBs lending in the o/n GCF® market to foreign dealers is an SLR and LCR neutral HQLA "transmutation" trade – basically lending reserves and reversing in collateral – U.S. G-SIBs lending in the o/n FF market is neither SLR or LCR neutral. O/n FF trades are unsecured interbank trades that are not considered HQLA, and that means that its quarter-end spikes can easily eclipse the worst o/n GCF® spikes!

Finally, there is a distinct risk that as IBDAs decimate the depth of the o/n FF market, bids from the banks that are in the o/n FF market to settle outflows and currency-match their LCRs will cause a jump in the o/n FF rate to the lower of where IBDAs trade, where o/n GC repos trade or where implied yields in t/n FX forwards trade. In English, there is a risk that o/n FF trades within the band today, but then jumps outside tomorrow and never looks back. We're not sure that further cuts to IOR will solve any of that, and we are quite sure that markets have not priced for any of that – so buckle your seat belts.

Figure 1: The Market for Intraday Liquidity is Growing

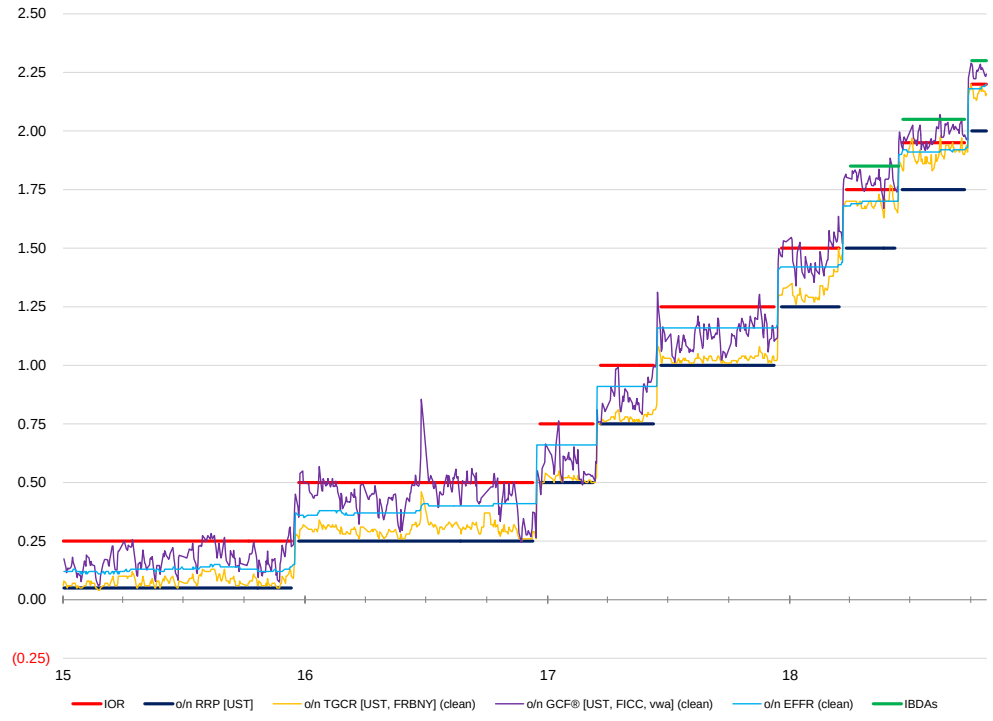
Interest-bearing deposit accounts (IBDAs) offered by U.S. G-SIBs to FHLBs



Source: Office of Finance, Credit Suisse

Figure 2: The Price of Intraday Liquidity is Outside the Fed's Target Band

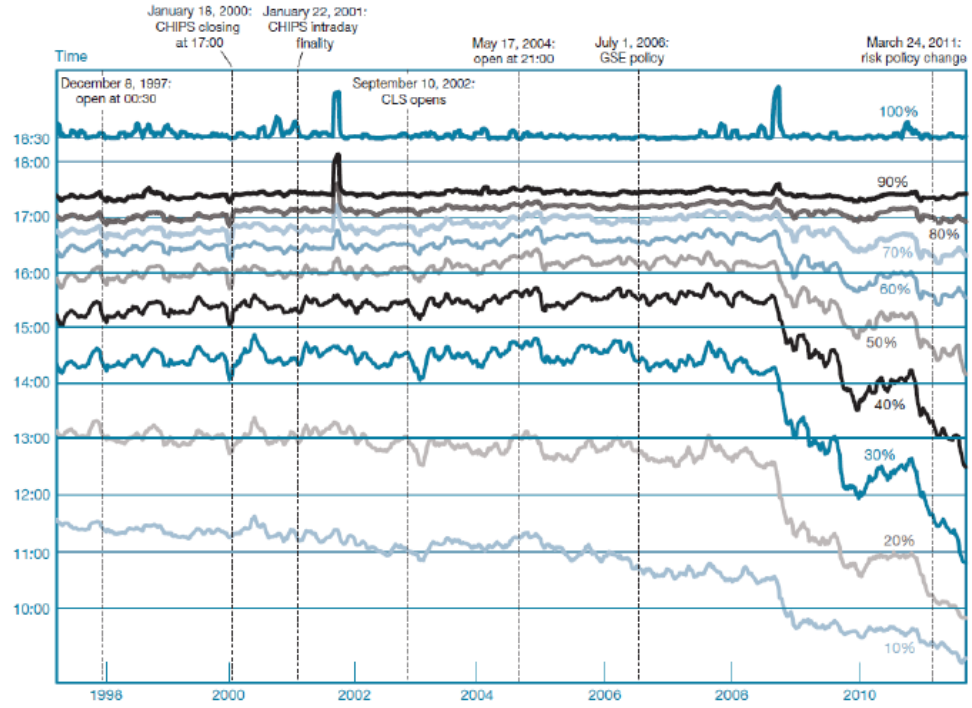
percent



Source: the BLOOMBERG PROFESSIONAL™ service, Office of Finance, Credit Suisse

Figure 3: Under Basel III Banks Won't Ever Throttle Payments Late in the Day

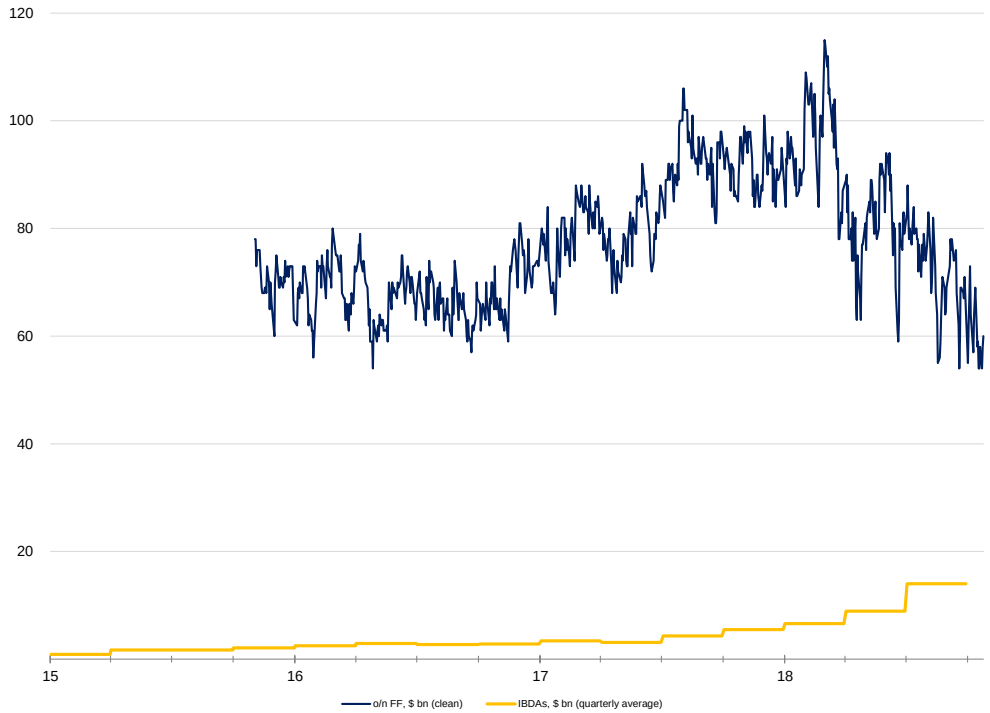
Deciles of Fedwire values settled throughout the payment day, deciles of Fedwire value time distribution



Source: FRBNY

Figure 4: IBDAs Will Cannibalize Fed Funds Fast

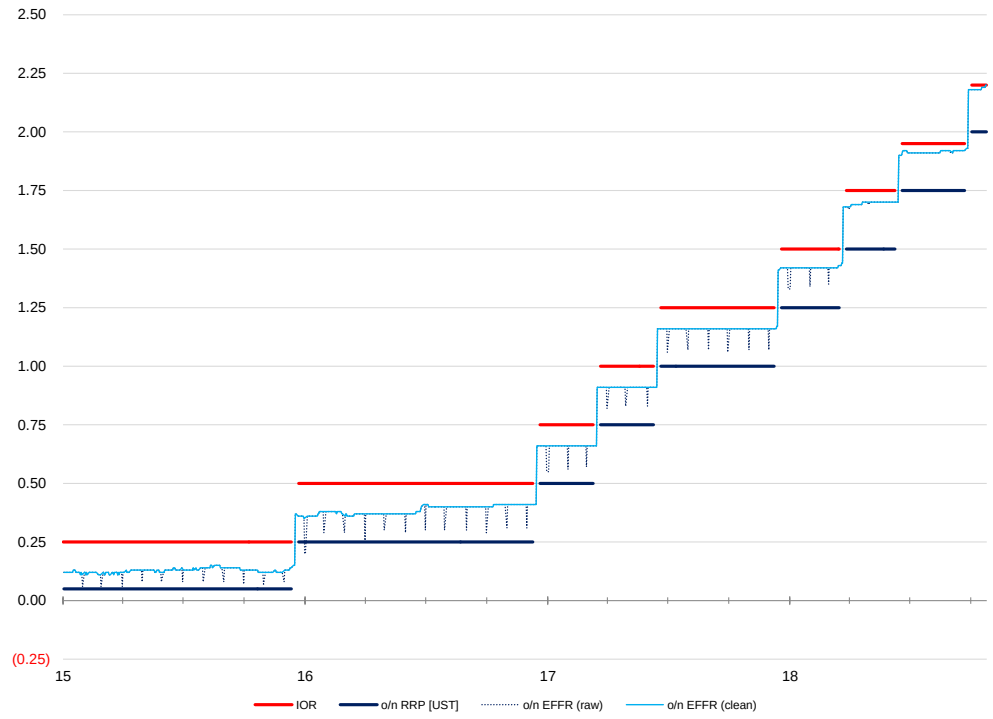
$ billion



Source: the BLOOMBERG PROFESSIONAL™ service, Office of Finance, Credit Suisse

Figure 5: o/n FF Demand is No Longer Driven by Arbitrage (1)

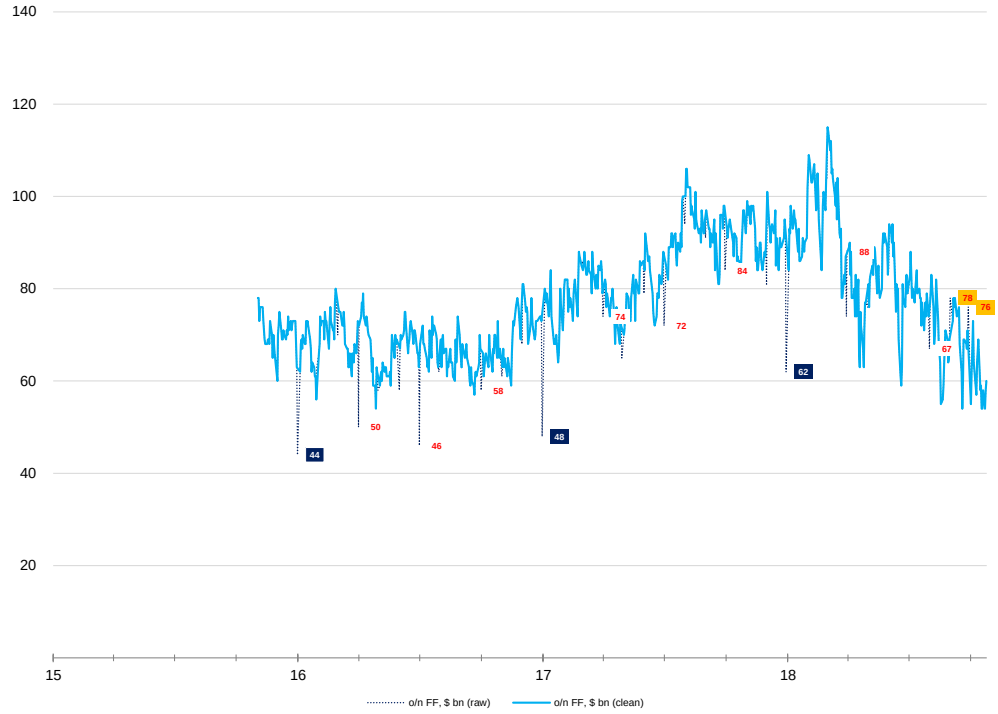
percent



Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse

Figure 6: o/n FF Demand is No Longer Driven by Arbitrage (2)

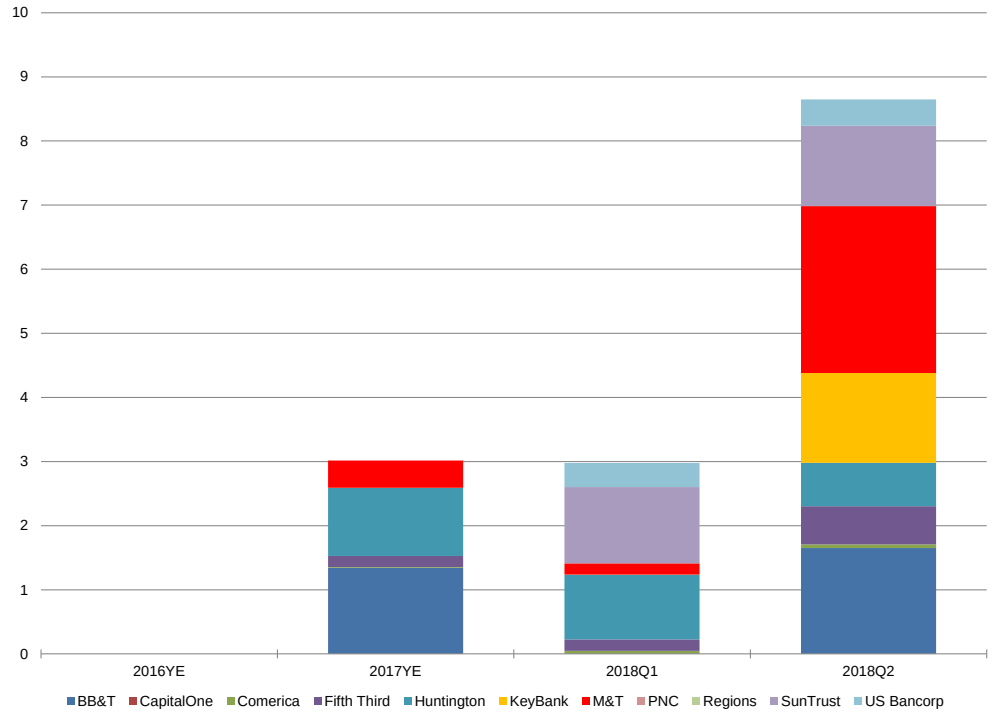
$ billions; dark blue numbers denote year-end dips, red numbers denote month-end dips; orange denotes spikes



Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse

Figure 7: More and More U.S. Are Waking Up to the LCR Benefits of o/n FF

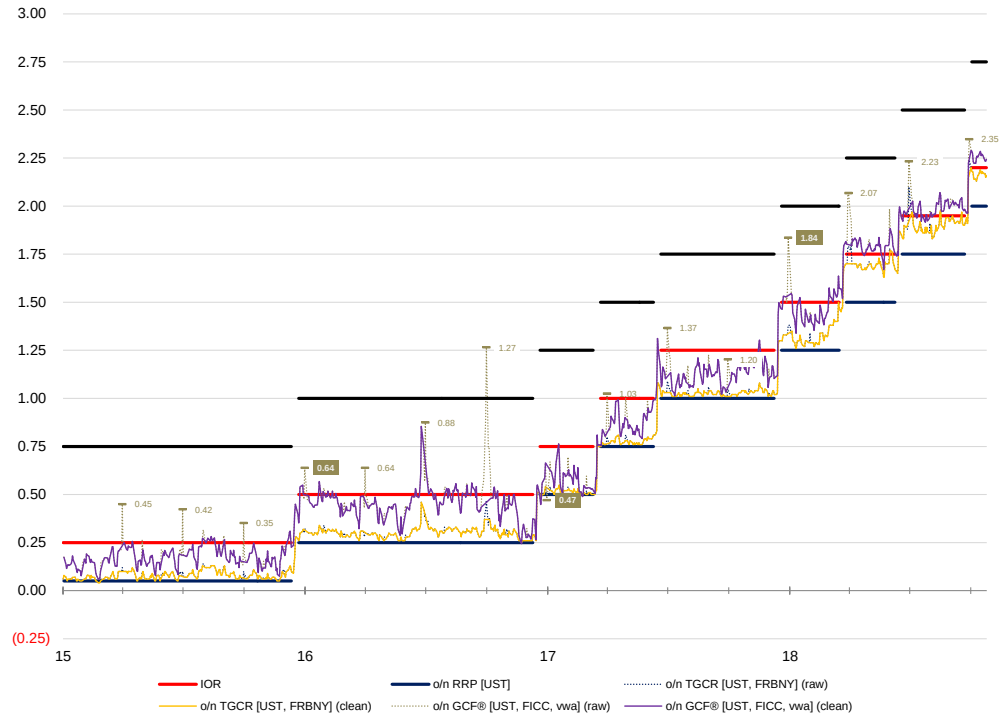
U.S. regional and super-regional banks' borrowing in the o/n FF market, $ billion



Source: Credit Suisse

Figure 8: o/n FF Spikes Can Be as Bad as o/n GCF® Spikes Once Were

percent



Source: the BLOOMBERG PROFESSIONAL™ service, Credit Suisse

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