Macro Theme

From QE to QT to "new normal"

Stress in the US repo markets since mid-September tells the Fed that the balance sheet normalisation or Quantitative Tightening (QT) has gone too far, prompting Fed Chair Jerome Powell to announce that excess reserves will be returned to near the early September level and kept there as a new normal. Thereafter, the Fed's balance sheet will grow organically. In this Macro Theme, we take a deep dive into balance sheet details, explain why they are so important, and take a closer look at the market implications.

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What the repo stress is telling the Fed

The Fed lost control of short-term interest rates in mid-September and thus effectively lost its ability to implement monetary policy. Temporary factors play a role, but a more structural question needs to be answered at the October FOMC meeting: What is the appropriate level of excess reserves?

The "new normal"

The Fed has moved from QE to QT to keeping bond holdings constant, but a new normal for excess reserves has not been established. Changes to the Fed's bond holdings have received much more attention than the consequent implications for liquidity, and keeping bond holdings constant is not enough to prevent liquidity shrinkage. This is important to understanding the Fed's October decisions.

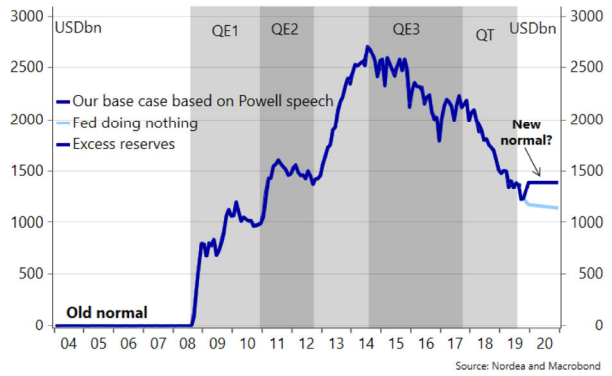
Important decisions ahead

The Fed will address the excess reserve issue at the October FOMC meeting. We expect liquidity injections in November, after which excess reserves should be held constant and the balance sheet should grow "organically". A standing repo facility might be the best long-term solution, but the Fed will likely wait to implement it.

Market implications

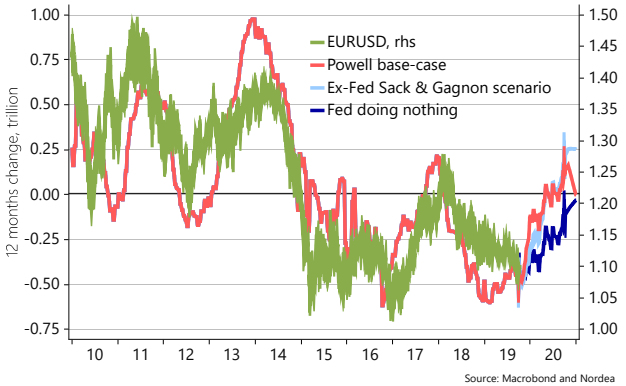
So far, the Fed looks too reactive on USD liquidity for us to really consider this liquidity addition as a big game changer for our pretty bearish market view. The Fed may dance to another liquidity tune, however, if and when the outlook worsens more in Q1 2020.

EXCESS RESERVES TO GET A BOOST AT YEAR-END



Source: Nordea and Macrobond

MORE DOLLAR LIQUIDITY, WEAKER USD



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The Fed lost control of short-term rates

'The day that Fed lost control of its rates.' This was the headline of many news articles when the effective Fed Funds rate (EFFR) spiked 5 bp above the top of the Fed Fund's target range, while the overnight repo rate reached 10%. In effect, monetary policy was unintentionally tightened.

This was partly due to temporary factors...

The repo stress was partly due to temporary factors. The turmoil coincided with large corporate tax payments and a US Treasury auction, which effectively withdrew money from the commercial bank system, thereby triggering a liquidity squeeze. Moreover, the US Treasury was rebuilding its cash account at the Fed after the debt-ceiling deal had been announced, effectively reducing the amount of liquidity left for the banks.

...and partly more fundamental: liquidity was getting scarce due to the Fed's QT

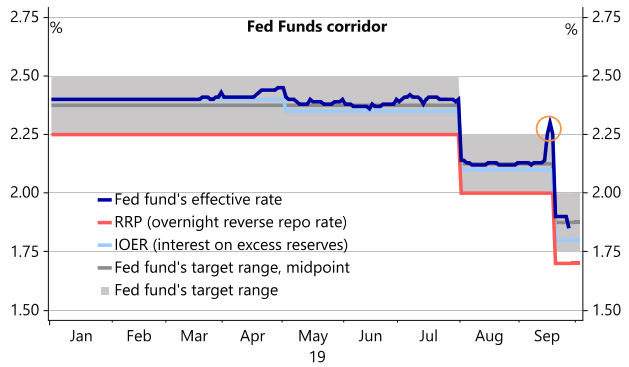
However, there are more fundamental issues at play as well. Liquidity was getting scarce because of the Fed's balance sheet normalisation, and excess liquidity had probably dropped below levels sufficient to effectively implement monetary policy. Fed Chair Powell seemed to acknowledge this in his speech on Tuesday, where he said that excess reserves might be returned to their early-September level or a bit above and kept there as a "new normal".

Key question for the Oct FOMC meeting: what is the appropriate level of excess reserves?

Two major questions need to be addressed at the October FOMC meeting, according to Powell: 1) Why wasn't the New York Fed, which is responsible for the Fed's open market operations, on top of the situation, as the tax payments and Treasury auction were known in advance; and more importantly 2) What steps will the Fed take in order to secure a more efficient and effective monetary policy implementation; ie **what is the appropriate level of excess reserves?**

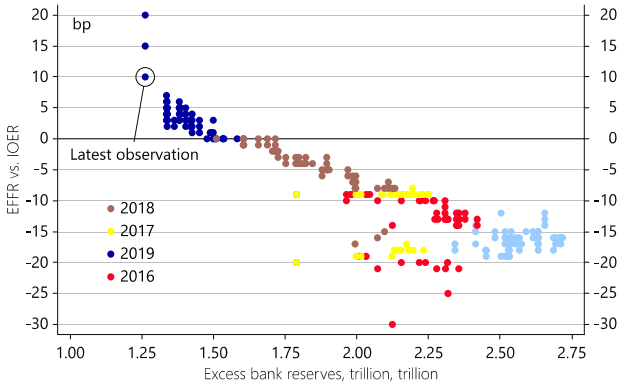
In this Macro Theme, we take a look at the Fed's balance sheet in a wider perspective and try to give our answer to this question. At the end of the report, we also outline what we believe the market implications might be.

CHART 1: EFFR OUTSIDE ITS CORRIDOR



Source: Nordea and Macrobond

CHART 2: LESS EXCESS RESERVES => HIGHER RATES



The "new normal"

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The asset side: From QE to QT to "new normal"

The Fed expanded its balance sheet as a response to the financial crisis

When the Global Financial crisis hit, the Fed initiated a large-scale asset purchase programme known as **Quantitative Easing (QE)**, where primarily Treasuries, mortgage-backed securities (MBS) and agency debt were added to the balance sheet (see chart below). The QE programme was meant to stimulate the economy via three channels:

QE predominantly works through three channels

- by buying bonds, prices would increase, and yields be lower - i.e. looser financial conditions
- by buying bonds, the monetary base would increase, thereby injecting liquidity into the banking system
- by buying government bonds (ie "safe" assets), investors would be pushed out on the risk curve, leading to higher asset prices and thereby boosting household wealth and improve corporate balance sheets

From QE to QT

Eventually, the QE programme (among other things) helped the economy to recover, and the Fed decided to reverse the process by shrinking its balance sheet. **Quantitative Tightening (QT)** was born and for the first time in many decades, the monetary base was set to substantially decline. A process, which former Fed chair Janet Yellen famously described would be "like watching paint dry". In practice, the Fed would allow maturing bonds to run off the balance sheet without re-investing the repaid principal.

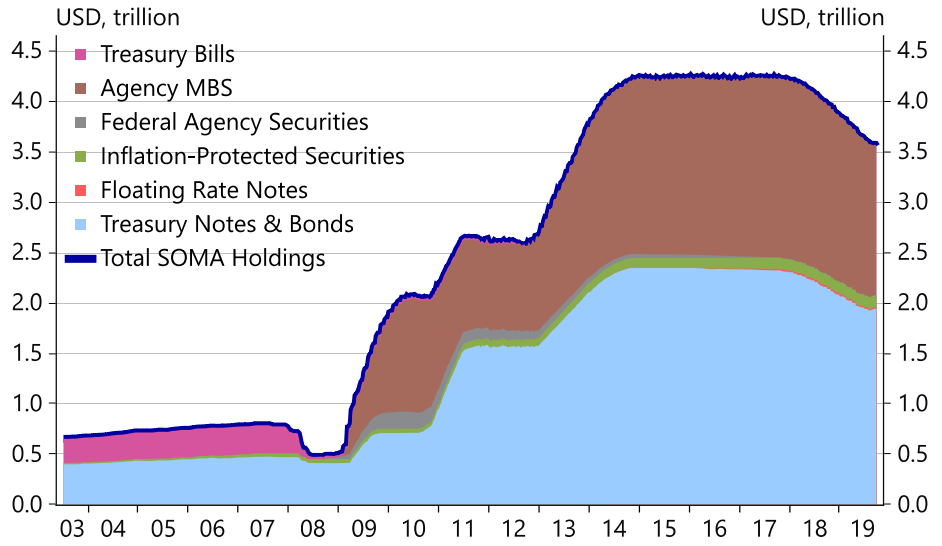
QT was moved forward in July

Fast-forwarding to March 2019, however, the FOMC decided to end QT by ultimo September, meaning that **the level of System Open Market Account (SOMA) securities would be held roughly constant**. That guidance was slightly adjusted at the July FOMC meeting, so the reduction of securities would cease on 1 August.

At present, the Fed's balance sheet is being held constant

So that is where we are now (at least until the October FOMC meeting): Total assets are being held constant. Technically speaking, however, not everything is constant. The composition of the asset side is still slightly adjusting as principal payments on MBS and agency debt are reinvested into Treasuries up to a maximum of USD 20bn per month. And if the reinvestments are above that threshold, principal payments on agency securities are reinvested into agency MBS. This is due to the Fed's goal of "simplifying" its balance sheet by primarily holding Treasuries in the long-run.

COMPOSITION OF THE FED'S TOTAL ASSETS



Source: Nordea and Macrobond

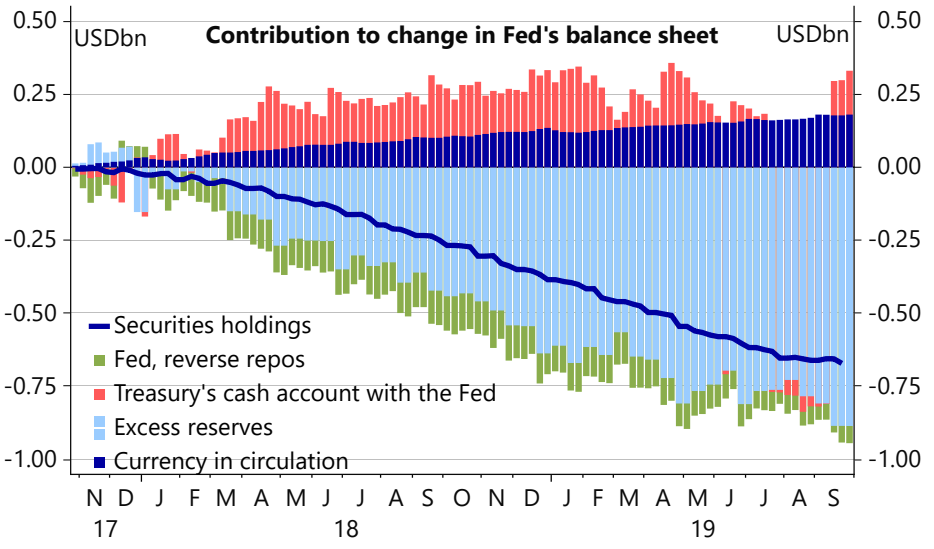
The Fed's assets – its bond holdings – get the attention, but the liabilities are just as important

The liability side: Excess reserves "run the world"

The asset side of Fed's balance sheet has received by far the most attention since the Financial Crisis – partly because the Fed's actions/communication has been more directly linked to it and partly because the effects on financial markets and the economy are probably easier to observe. However, over the past year or so it has become increasingly clear to us that the liability side matters just as much, if not more.

Excess reserves "run the world", and that is what Jerome Powell has (at least to some extent) finally admitted.

EXCESS RESERVES' "NEGATIVE" CONTRIBUTION TO THE LIABILITY SIDE



Source: Nordea Markets and Macrobond

The liability side of Fed's balance sheet consist of **four main components** (see chart below for illustration):

Key items of the Fed's liabilities

- Federal reserve notes (more commonly known as currency in circulation)
- Bank reserves compromised of both required and excess reserves
- Deposits in the Treasury General account (TGA, i.e. the Treasury's account at the Fed)
- Reverse repos with foreign official accounts (more commonly known as the foreign repo pool)

In addition, the liability side has three minor posts: reverse repos with private counterparties, other deposits, and all other liabilities and capital.

From QE to QT is likely from printing money to "unprinting" money

All four main items are important drivers of USD liquidity in the money market and commercial banking system, with the most important being bank reserves. Why? When the Fed bought bonds in the **QE world**, it paid with newly printed money. In the opposite **QT world** (excluding the scenario of outright selling assets), the Fed receives repayment of principals of its bond holdings, effectively removing dollars from the system and reducing excess reserves. Metaphorically speaking, the Fed is "unprinting" money.

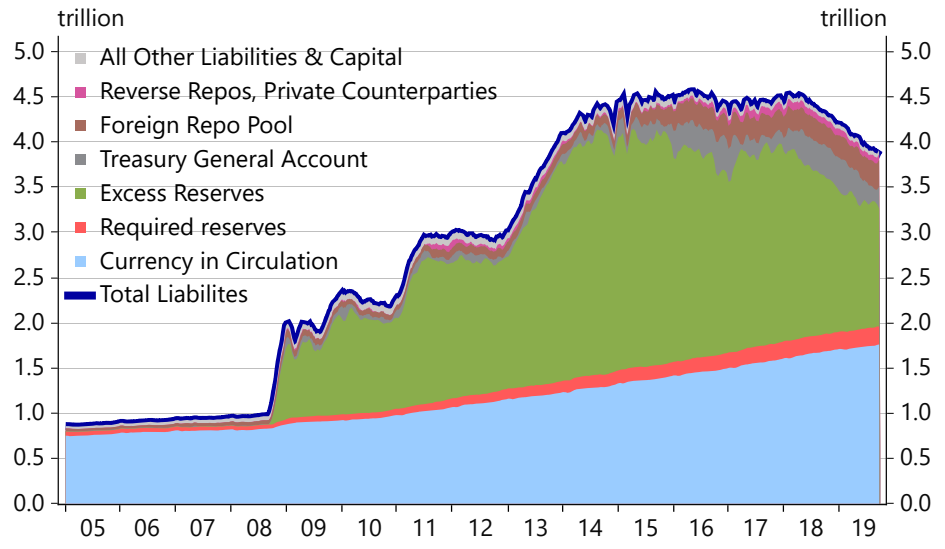
Bank reserves are needed as required, for regulatory purposes and as liquidity buffers

Bank reserves are held as required reserves and for regulatory purposes. They also serve as liquidity buffers in times of distress. **And that is where a lot of people tend to get confused, because aren't there billions in excess reserves in the system to support liquidity? Well, no. Not true excess reserves**. Most of what is labelled "Excess Reserves" (the green pile in the chart below) is actually part of regulatory requirements. For example, the Basel III framework stipulates significant liquidity requirements via the so-called Liquidity Coverage Ratio, ie requirements, which are not included in the old definition of "Required Reserves". **The term "Excess Reserves" (as it is used in relation to the balance sheet) is therefore somewhat misleading**

Excess reserves are shrinking when the balance sheet is being kept constant

Furthermore, one could be tempted to think that excess reserves would stay at the same level when the balance sheet (as of now) is meant to stay at the same level. That is, however, not the case. The only thing that is kept at the same level is the overall liability/asset level, while excess reserves shrink when the other three main components of the Fed's liabilities - currency in circulation, TGA and the foreign repo pool - increase, and these components are indeed increasing.

COMPOSITION OF THE FED'S LIABILITY SIDE



Source: Nordea and Macrobond

Demand for physical currency is increasing and Treasury is rebuilding its cash balance

For example, the **demand for physical currencies** (currency in circulation) increases as the economy grows, while the **US Treasury's cash account** at the Fed is highly variable and influenced by seasonality and one-off factors (for example, the TGA was declining in the run-up to the debt ceiling deadline and increasing when corporates paid taxes in September).

Demand from dollar liquidity from foreign central banks is increasing

The foreign repo pool, which is used by foreign central banks, governments and institutions as a means to support operational liquidity, has been surging since December 2014 when the Fed eased limitation regulation. Furthermore, the foreign repo pool has been increasing as foreign central banks wanted bigger dollar liquidity buffers and lately also as they wanted to go very short on the curve for investment purposes (higher incentive due to a flat / inverted yield curve).

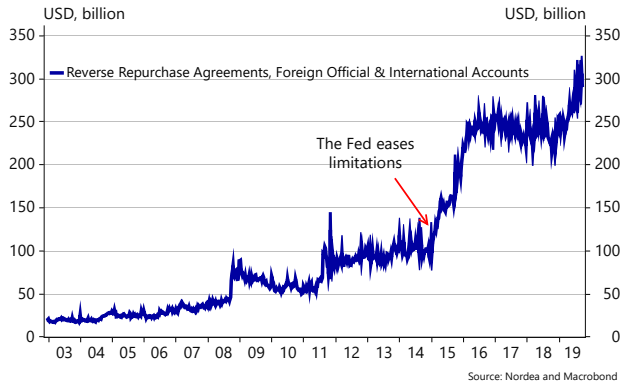
Thus, excess reserves shrink with a constant balance sheet

Basically, when the three above-described liability components (non-reserves) increase for structural or temporary reasons and total liabilities are "locked" by the FOMC for monetary policy reasons, **it must be offset by a decrease in bank reserves.**

Effectively, this is a form of "passive" or "soft" QT.

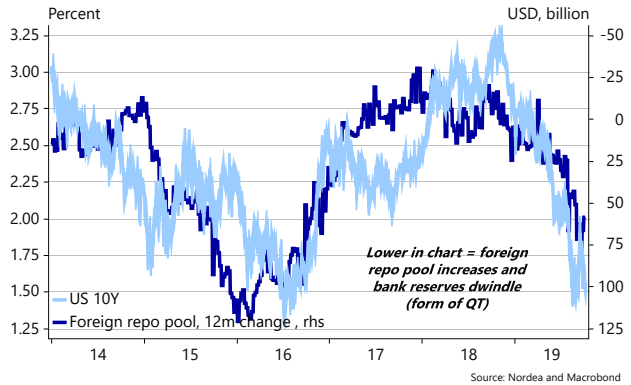
And this is where we come to the core of the discussion. How much of a decline in excess reserves can the system take before dollar liquidity becomes to scarce? And by which tools should the Fed increase the reserves? This is what the FOMC needs to assess at the October meeting.

THE FOREIGN REPO POOL...



Source: Nordea and Macrobond

...IS CLOSELY LINKED THE YIELD CURVE



Source: Nordea and Macrobond

Important decisions ahead

The Fed will address the excess reserve issue at the October FOMC meeting. We expect liquidity injections in November, after which excess reserves should be held constant and the balance sheet should be growing "organically". A standing repo facility might be the best long-term solution, but the Fed will likely wait to implement it.

Why Powell is screaming "NOT QE"

The Fed will buy T-bills to increase excess reserves...

Chair Powell said in his speech on Tuesday that **the Fed will buy T-bills** to increase excess reserves in response to tightening USD liquidity. In turn, other weapons in its liquidity "toolbox" will not be used at this point.

The Fed's toolbox include:

- Cutting the IOER to the lower end of the Fed Funds corridor
- Temporary overnight repo operations
- Capping the foreign repo pool
- A standing repo facility.

These options have not been deemed appropriate at this point, probably because they are too short-sighted (1, 2 and 3), too politically controversial (3) or not ready to be implemented yet (4). Instead, the Fed will increase excess reserves to the early-September level or a bit more, and keep them there.

...which is also the simplest way

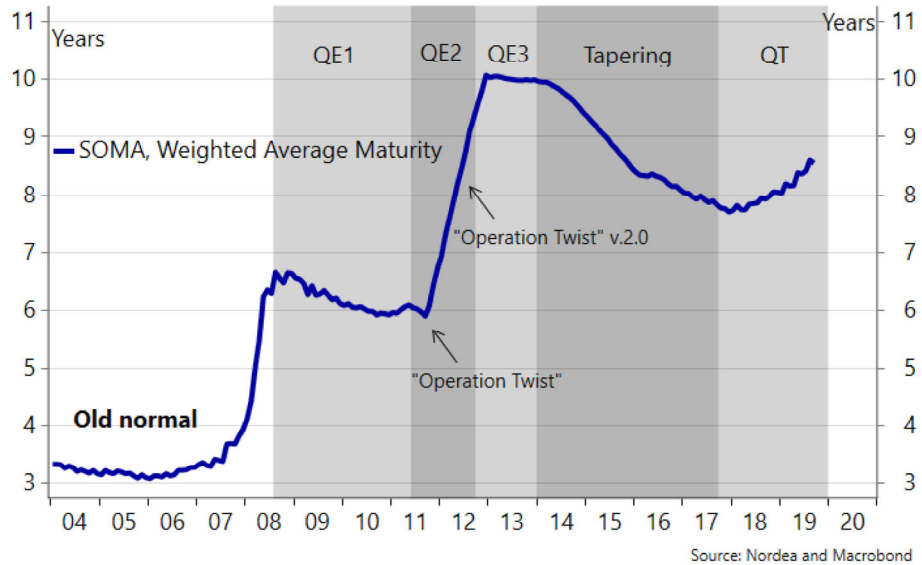
The simplest way to increase excess reserves is to buy T-bills. This is easy to implement and provides flexibility. **The disadvantage is that it requires delicate communication from Powell to the markets**, as it may be seen as a restart of the QE programme. That's why Powell repeatedly stopped the Q&A session on Tuesday to emphasise that the main idea is to increase liquidity and not ease monetary policy, ie it is not QE.

The use of T-bills instead of longer-maturity bonds, linking the narrative to "organic growth" of the balance sheet and the likely small-scale purchases (see discussion below), supports that view. QE is probably the first option for easing monetary policy when policy rates are at zero, but rather unlikely as long as policy rates can still be cut.

This is really "the end of soft QT"

Yes, one could argue that it is a very "soft form of QE", but a more appropriate term would be the **"end of soft QT"**, since excess reserves will no longer shrink.

DURING PERIODS OF QE, THE FED WENT MUCH LONGER OUT ON THE CURVE



Source: Nordea and Macrobond

Winter liquidity is coming

According to Powell, the appropriate excess reserves level is close to the level seen in early September

Turning to the target of what the FOMC might deem a sustainable excess reserve level, Powell hinted at the Q&A session on Tuesday that excess reserves will be "at or a bit above levels seen in early September". **When reaching that level, excess reserves should thereafter be held constant, while non-reserves (and thereby the total balance sheet) should grow "organically"**. As described earlier, most of the "organic growth" would stem from the demand for currencies in circulation over time, although for example the TGA should also be structurally higher, as the Fed wants to rebuild its "crisis account".

A liquidity injection is coming at the beginning of November

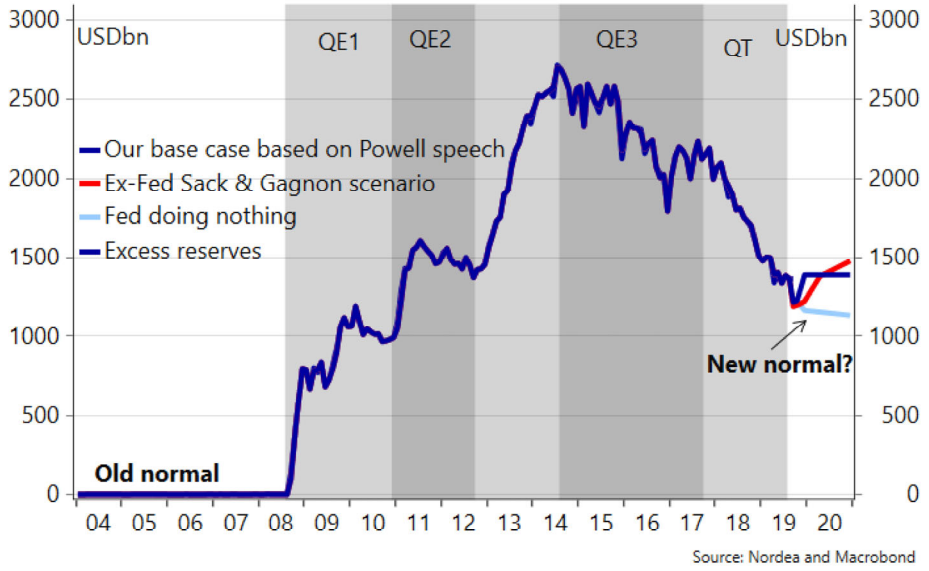
If we take Powell at face value, he intends to bring back excess reserves to early September levels around USD 1,350bn. That would take a liquidity injection of around USD 110-115bn. This could be done swiftly starting from 1 November.

The balance sheet will grow "organically" from 2020 onwards

After that, the Fed will keep excess reserves constant and allow the balance sheet to grow **"organically".** Growing "organically" means that the Fed will buy T-bills whenever the economy needs more currency and if the Treasury wants to increase its cash account even further.

This is less "bullish" than more optimistic projections (such as the scenario from ex-Fed officials Sack and Gagnon with USD 250bn in T-bill purchases before "organic growth"), but nonetheless it could work to stabilise risk appetite in 2020 (see more under the market implications section).

EXCESS RESERVE SCENARIOS



Source: Nordea and Macrobond

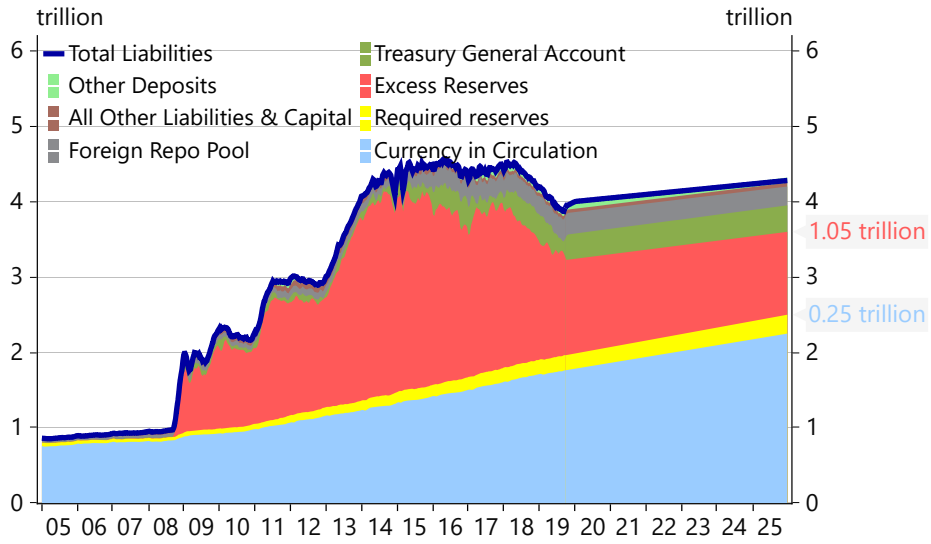
Our base case is higher than the median in the latest Primary Dealer Survey

In comparison with the latest Primary Dealer Survey and the Market Participant Survey from 3 September – on which the Fed focuses a lot on and which Powell also mentioned on Tuesday – our base-case target of USD 1,350bn in excess reserves appears slightly on the high side.

The survey's median projection for bank reserves (ie excess reserves + required reserves) is USD 1,300bn in the long run (defined as 2025). Subtracting the "required reserves" – the current level of roughly USD 200bn plus the "organic growth" trend projection – of around USD 250bn gives USD 1,050bn in excess reserves.

Bottom line, if we are right, excess reserves will be around USD 300bn higher than the latest surveys indicate. We believe this corresponds well with Powell's comments that the Fed wants a "substantial buffer" on top of what may be deemed by some market participants a "liquidity pain threshold". Moreover, the repo stress may increase the perception of primary dealers about the appropriate level of reserves.

PROJECTED FED LIABILITIES IN LATEST PRIMARY DEALER SURVEY



Source: NY Fed, Nordea and Macrobond

Standing repo facility

There could be a better long-term solution – an SRF

The use of T-bills to improve the liquidity situation is a comfortable solution. Open market operations were the way to implement monetary policy before the QE era. However, there is no telling that USD 1,350bn is, in fact, enough in times of stress. We could end up in a similar liquidity squeeze situation in the next couple of years, because the required level of excess reserves is underestimated.

A solution to this could be a **standing repo facility (SRF).** This is an option the Fed has talked about for a while and which we believe it will implement at some point.

An SRF offers more flexibility and decreases the demand for excess reserves

By introducing a standing fixed-rate facility, counterparties can repo "high-quality liquid assets" (ie primarily Treasuries) at times of distress to get liquidity. And by setting the rate slightly above the upper end of the Fed Fund target range, market players would not have the incentive to use the facility unless they had no other options. However, the standing repo facility would cap short-term interest rates. In effect, banks would not fear holding Treasuries instead of reserves, which in turn should lead to a **decline in demand for reserves while also fulfilling the need for the Fed to estimate an ample bank reserve level.**

However, the Fed will likely take its time to implement it

In the past, however, the FOMC has been very careful when introducing new monetary policy tools (read: it has taken a long time to implement). In the June FOMC minutes, several members also said that they need to "carefully evaluate possible unintended consequences, including moral hazard or a more volatile balance sheet", while also stressing "the importance of evaluating whether other tools or initiatives could better achieve the desired goals".

One way to prevent hedge funds from turning the Fed into a gearing machine would be to introduce substantial haircuts on a standing repo facility.

Overall, we therefore believe the Fed will introduce an SRF at some point, but we believe this is still some way off.

Market implications: Mo' money, mo' party

The market reaction was fairly muted after Powell's promises to again increase USD liquidity to levels slightly above those seen in early September, perhaps owing to the lack of details. Taken at face value, **a balance sheet increase ought to be positive for risky assets**, but how positive is clearly more debatable with this kind of liquidity addition compared to an outright QE programme – and the debate will likely continue over the coming months.

When USD liquidity has increased, we have usually seen the following play out in the market space:

- A weaker USD

- Better risk appetite (good news for equities seen in isolation)

- Higher long bond yields

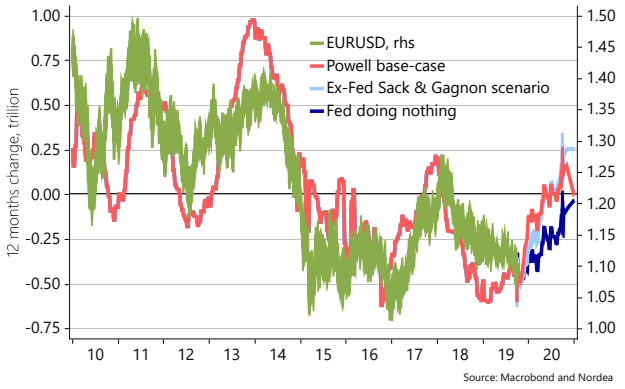
- Tighter spreads

If Powell only delivers USD 110-115bn worth of liquidity by year-end, and from there on only choses to replace the otherwise shrinking liquidity from the various endogenous factors, then one could have hoped for a more bullish USD liquidity signal. It is likely not enough to change the trends in the near term, as weak key figures and geopolitical uncertainty may likely work to keep the USD strong, rates low and risk appetite wobbly (Nordea View: The hunt for Red October). **The USD liquidity story is hence more of a 2020 story, in our view.**

However, risk/reward favours bets on (even) more liquidity than the Powell base case (QE-4 shouldn't be ruled out either) during the first half of 2020. Ex Fed officials Sack and Gagnon suggested a liquidity addition in the USD 250-300bn range from a "better safe than sorry" standpoint. So far, the Fed looks too reactive on USD liquidity for us to really consider this liquidity addition a big gamechanger for our pretty bearish market view. But the Fed may dance to another tune, once/if the outlook worsens more into Q1 2020. **Weaker (in Q4) before better sentiment remains our base case.**

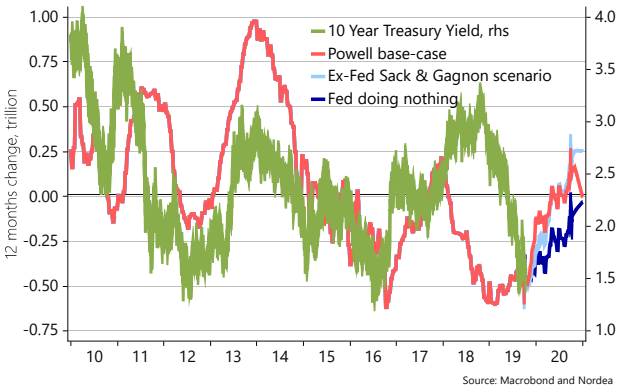
We cover the topic of USD liquidity extensively week after week in our FX weekly.

MORE DOLLAR LIQUIDITY, WEAKER DOLLAR



Source: Macrobond and Nordea

MORE DOLLAR LIQUIDITY, STEEPER CURVES AND HIGHER LONG BOND YIELDS



Source: Macrobond and Nordea

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