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N° 027 // June 14, 2021

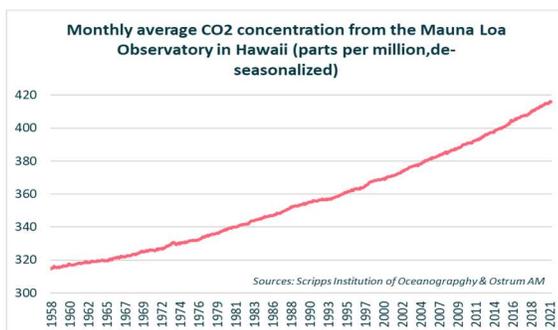
## ● Topic of the week: The Fed’s plumbing business

- The repo market is an essential part of the short-term interest rate complex, with implications on FX swap markets. The repo market conditions are key to ensure smooth government deficit funding.
- Extensive use of the Fed’s reverse repo facility does not equate monetary tightening.
- A standing repo facility would help backstop the US bond market during tapering.

## ● Market review: The fear of emptiness

- ECB status quo, PEPP pace unchanged in 3Q
- Markets ignore 5% US CPI inflation
- Yields rally strongly amid flatter curves
- Upbeat tone in high yield and equity markets

## Chart of the week



In May 2021, CO2 concentration reached an all-time high of 419.13 particles per million, or 415.67 particles per million in seasonally adjusted data.

If global CO2 emissions fell in 2020 with the pandemic (-5.8% according to the international energy agency), this was not sufficient to allow a drop in the concentration of CO2 in the atmosphere. It continued to increase to reach a new record in May 2020 then another in May 2021. Creepy!

## ● Figure of the week

# 3.2

Source: OECD

3.2 Million, the difference between job openings and job creation in April in the USA. The record high during the previous cycle was a pale 1.7 million. There are undoubtedly pressures on the labor market.



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• **Topic of the week**

# The Fed's plumbing business

Oftentimes, the Fed's policy narrative about employment and price stability goals is no more than a side show. Many policy decisions aim first and foremost at a smooth functioning of financial markets, chief among them the USD repo market. Tweaks to current open market policies may be needed to backstop the US Treasury bond market and the US dollar swap market as policymakers get ready to taper.

## The USD repo market: essential plumbing

The repo market is an essential part of the financial market complex. Its importance has grown considerably since the 2008 financial crisis. Before, unsecured interbank lending was the primary channel to distribute liquidity through the financial system. However, tighter regulation in the wake of the systemic banking crisis and scandals related to unsecured rate (e.g. LIBOR) fixing vastly expanded the size of the repo market. In essence, the loss of confidence in the efficacy of unsecured interbank lending has prompted greater reliance on Central Banks around the world to be the main source of liquidity and more widespread use of secured forms of lending, including general collateral repo.

A repurchase agreement or repo is essentially a short-term collateralized loan. One financial firm sells securities to a second institution and agrees to purchase back those assets for a predetermined price by a certain date, typically overnight. The difference between the original price and the second higher (respectively lower) price is the positive (negative) "interest" paid on that loan. It's also known as "the repo rate".

The size of the USD repo market frequently tops a trillion dollars. There are several interest rate references depending on the counterparties involved in repo trading. In contrast, the Fed Funds market only represents a few tens of billion dollars of daily unsecured bank loans. The Fed Funds market is about ten times smaller now than during the heady days prior to the Great Financial Crisis. That said, there exist other overnight bank fundings representing unsecured lending involving non-US institutions. The

Overnight Bank Funding Rate (OBFR) is determined by transactions on a slightly deeper market than the Fed Funds. OBF lending is about 4.5x the size of the Fed Funds market currently.

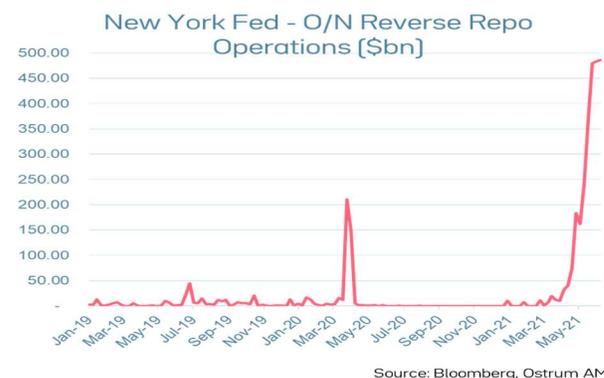


General collateral repo rates typically settle below their unsecured lending rate equivalent. The spread can be indicative of collateral scarcity. It is indeed frequent that so-called 'specials', benchmark bonds for repo traders, trade at negative rates for this reason. Currently market conditions are such that tri-party repo rates hover around 0.01% with Fed Funds and OBFR 5 to 6bp above.

## RRP use does not mean Fed tightening

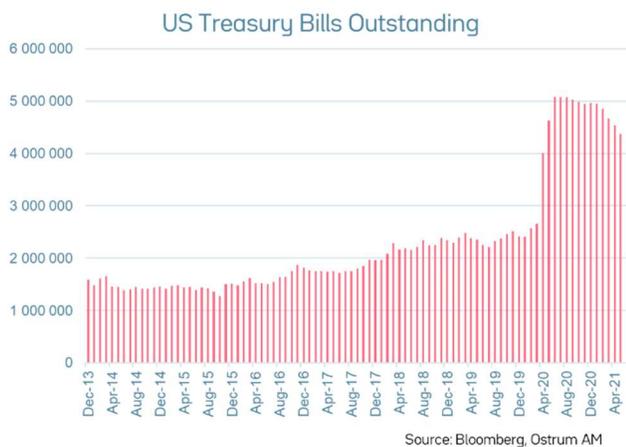
**RRP use now at \$ 486 billion**

Exponential usage of the Fed's reverse repo facility (RRP) has made headlines in recent weeks. In a reverse repo transaction, the New York Fed sells a security to an eligible counterparty with a promise to repurchase the bond at a predetermined price. The New York Fed sources Treasury securities from System Open Market Account holdings (i.e. the Fed's portfolio) and thus drains liquidity from the financial system. RRP use represents Fed borrowing overnight dollar liquidity. As at June 7<sup>th</sup>, the Fed's reverse repo operations totaled \$ 486 billion. Fed borrowing is up from virtually zero in mid-March.



The root cause for the latest sharp increase in the recourse to the reserve repo facility is a supply and demand imbalance. Like all things economics, supply and demand... The Federal Reserve's quantitative easing policy (or POMO for permanent open market operations in Fed parlance) currently supplies liquidity to the tune of 120 billion dollars a month. In implementing quantitative easing purchases, the Fed buys securities from the banks by issuing 'money' in the form of bank reserves. The Fed credits bank reserve accounts, which are a liability to the central bank.

Fiscal policy also played a role in the outsized increase in bank liquidity holdings. The Biden Administration managed to craft a bill worth \$1.9 trillion in March including \$1,400 checks to US individuals. Income transfers and other federal outlays were funded by drawing down cash held in the Treasury General Account at the Fed. The use of Treasury cash holdings resulted in a decline of T-bills outstanding. The bill market shrank by around 700 billion from its peak in spring last year.



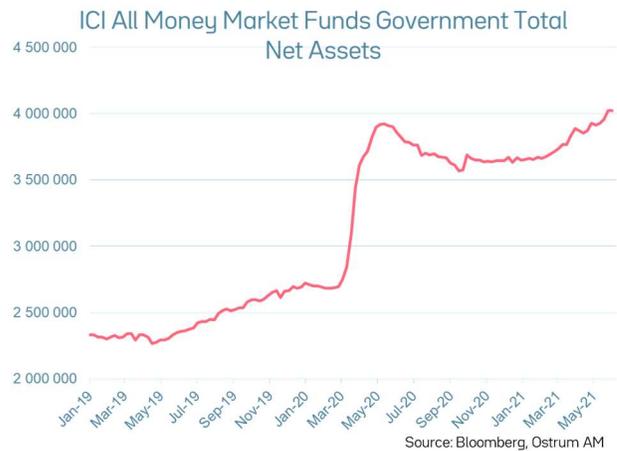
The federal government handouts only resulted in a shift in the structure of Fed liabilities which did not affect the overall size of the balance sheet of the central bank. It is important to note that the Fed does not initiate the transaction. This does not represent active liquidity withdrawal from the Fed.

**The RRP is a 'leaky' floor on rates**

The Fed's reverse repo facility (RRP) can be seen as an asset class for banks, money market funds and government-sponsored enterprises with surplus cash. For eligible participants, the RRP is hence an alternative to third-party repo, Treasury bills and other low-risk liquid products.

The RRP is a piece of financial plumbing at the front-end of the term structure. RRP use entails liquidity draining from the financial system, as the Fed borrows liquidity from counterparties at 0% interest rate at present. This facility should thus provide a floor on market interest rates. Yet

Treasury bill rates have been negative up to 6-month maturities although rates have started to head north again. Banks can opt for IoER (receiving 0.1% interest) whilst MMF can lend at zero interest rate and get their hands-on US Treasury collateral. Furthermore, the recent large inflows in government money market funds had to be invested somewhere. The shrinking T-bill market left money market fund managers with few options other than the Fed's reverse repo offering 0% return.



The floor is somewhat leaky since not all counterparties are eligible to the facility. Market access issues persist even as the Fed loosened requirements to access the RRP facility (so that smaller counterparties can participate) and raised counterparty limits to 80 billion dollars from 30 billion dollars. Despite looser requirements, it appears that large money market funds still bump up against the daily 80 billion exposure limit.

Through April and May, a modest amount of trading in overnight repo markets occurred at negative rates, although this development appeared to reflect technical factors. This could prompt the Fed to adjust administered rates possibly at the upcoming June FOMC meeting. Raising the interest rate on RRP would contribute to increase money market rates.

**Tapering and the case for a standing repo facility**

Despite Jerome Powell's denial at the press conference following the April FOMC, the minutes of this Fed meeting had 'tapering' written all over them. The key question for the Fed is to be able to safeguard the financial system from the impact of a slowdown in liquidity provisioning as economic growth and inflation recover from the pandemic.

The Fed is reviewing the potential benefits of launching a permanent repo facility to ensure a smooth functioning of financial markets. In this regard, it proves quite helpful to review tensions dating back to September 2019 and March

last year. The September 2019 repo spike made clear that the ample reserve regime does not prevent market disruptions. At the time, the non-financial private sector sold US Treasuries to meet corporate tax payments. Heavy selling had to be absorbed by banks and primary amid bearish market conditions. Market intermediaries use the repo market to finance their bond purchases. Hence, even when bank reserves are abundant, the distribution of reserves across the banking system can be uneven and cause abrupt interest rate increases. Excess liquidity does not always ward off against the risk of market disruptions.

A standing repo facility may be helpful to forestall funding strains. However, the key issue relates to the concentration of repo net lending among a few top banking institutions. The largest banks hold a disproportionate market share in the US repo and Fed Funds market. The table below shows a snapshot of banks' Fed Funds and repo lending as at March 31<sup>st</sup>. The combined size of the Fed Funds (56 billion) and Repo markets (931 billion) was 987 billion at the end of March 2021. JP Morgan's net lending position represents just about a quarter of the total market value. Market equilibrium thus hinges on the liquidity position of only a few players. Should a large net lender face short-term liquidity needs, market imbalances could swiftly arise, as was indeed the case in September 2019.

Banking Institutions - Largest market participants	Liabilities \$mn: Purchased Fed Funds and Repos	Assets \$mn : Sold Fed Funds and Reverse Repos	Net FF and Repo Assets
JPMORGAN CHASE & CO	215 209	456 919	241 710
BANK OF AMERICA CORP	170 323	304 058	133 735
CITIGROUP INC	199 525	294 712	95 187
HSBC HOLDINGS PLC	1849.354	35746.061	33 897
WELLS FARGO & CO	46 362	63 282	16 920
US BANCORP	2 207	377	1 830
TRUIST FINANCIAL CORP	1 300	1 745	445

Source: Bloomberg, company filings, as of March 31, 2021

The repo market size was \$ 931 billion at the end of March 2021, Fed Funds \$ 56 billion.

Funding strains can arise from developments abroad. In March 2020, the temporary Foreign and International Monetary Authorities (FIMA) Repo Facility was established to discourage foreign institutions from selling US Treasuries to obtain dollars in the context of a global greenback shortage. When the pandemic crisis hit, home bias and risk aversion had caused dollar funding conditions to tighten. Dollars are always needed to settle global trade deals. This is of utmost importance as the US makes the most of its exorbitant privilege of being the issuer of the global reserve currency running unheard-of twin deficits. In sum, limiting the propensity for foreign official institutions to execute large sales of US Treasury bonds in a stress environment is helpful to avoid stress transmission into domestic financial markets.

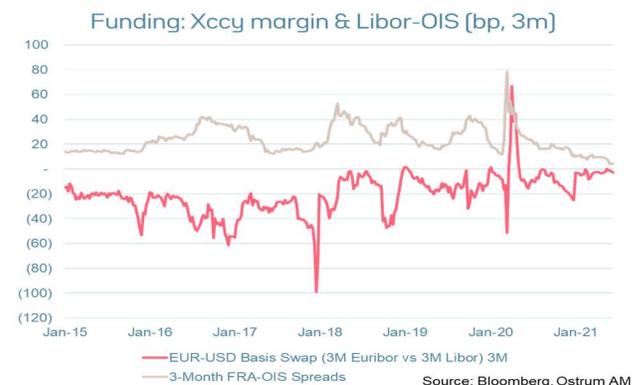
Like any Fed backstop, moral hazard can be an issue for policymakers. Standing repo facilities have potential drawbacks, including less transparency regarding monetary policy stance and the risk of enticing excess bank borrowing.

### Impact on the FX swap market

It should be obvious from the FIMA facility example that the short-term rate complex includes foreign exchange operations. By mid-July, more reserves will have to be absorbed due to the debt ceiling suspension ending in late July. While a lot of that cash will go to the Fed's overnight RRP facility, some excess cash will chase higher yields in the FX swap market.

The low end of the interest rate complex is reinforced at zero with the (however leaky) overnight RRP facility, but the top end appears somewhat squeezed. This could be a sign of excess dollar supply (or equivalently a lack of demand for the greenback).

The cross-currency basis measures relative demand for one currency. Dollar leverage, for instance non-resident private USD borrowing to fund asset purchases, tends to push cross-currency margins tighter. Conversely USD deleveraging, adds a premium to prevailing USD rates.



In 2015-2016, the deeply negative cross-currency basis reflected an excess demand for dollars. Currently, it may be that the Federal Reserve and the Treasury are pumping reserves into the financial system faster than the ECB (and other central banks) is doing QE. In addition, FX-hedged Treasury bond buyers may be unwilling to unhedge their US duration exposure as fiscal dominance reinforces the positive correlation between the US dollar FX value and changes in US Treasury bond yields.

As cash at the margin chases higher yields in the FX swap market, cross-currency bases may rise into positive territory as the debt ceiling deadline nears (August 1<sup>st</sup>). In addition, Libor-OIS bases may tighten further towards 0bp or even turn slightly negative.

## Conclusion

Fed monetary policy is more often than not a matter of financial plumbing. Policymakers conduct open market operations aimed at smoothing out liquidity conditions in the repo market even if the mandated macroeconomic objectives would command a different stance.

Developments in the real economy and fiscal policy measures may alter liquidity conditions across money markets, which the Fed helps correct with appropriate tools. The reverse repo facility, used heavily since mid-March, is

one such tool. Likewise, the much-anticipated Fed decision to taper asset purchases will come after a heavy dose of forward guidance and the likely implementation of backstop facilities to ensure that collateral continues to flow, and liquidity provisioning remains adequate.

Furthermore, the design of facilities (counterparty limits, frequency of operations...) must consider the structure of the market to avoid disruptive outcomes.

**Axel Botte**

- **Market review**

## The fear of emptiness

### ECB status quo and low volatility propel risky assets.

An "invisible sculpture", representing the spirit of the artist and materialized by a certificate of ownership, sold for \$ 18k this week. It is tempting to see in this the futility of money creation. The excess liquidity drives this nonsense in line with the development of cryptocurrencies or non-fungible tokens. The Fed's choice to ignore the inflation surge is also symptomatic of the endogeneity of monetary policy. Central banks engaged in quantitative policies no longer have the power to go against expectations of market participants, for whom interpreting the next Fed action rather than the underlying fundamentals may actually be the only game in town. The financial system may no longer be rooted in economic fundamentals.

The economic improvement in Europe is now recognized by the ECB which sees the economic risks balancing out. Yet it does not seem to require any monetary adjustment at this juncture. The ECB's GDP growth forecast for 2021 was raised to 4.6%. Inflation will reach 1.9% this year, but the ECB forecasts a relapse to 1.4% in 2023. The pace of PEPP purchases will be maintained in the third quarter. The acceleration of purchases is calibrated to allow full use of the € 1.850 billion envelope by March 2022. The ECB begins its strategic review this week. The conclusions expected by the end of the year will coincide with the scheduled end of the PEPP. Expectations for an increase in the APP to replace the PEPP next March are widespread.

In the United States, market attention will turn to the FOMC this week. Inflation is accelerating, but market participants' belief is that the Fed will not react to it. However, the CPI came out at 5% in May. Excluding volatile items, inflation stood at 3.8%. The reopening of the economy is reflected in a sharp increase in prices linked to transport in particular (automobile, air, etc.). The key issue is the more lasting impact of the cost of raw materials, labor shortages and pressures on housing prices. The housing contribution will increase significantly over the 12-18 month horizon. There is an unprecedented gap between the number of job openings (9.3 million) and labor supply. A status quo similar to the ECB's action is the most likely FOMC outcome. In case of a policy surprise, a reduction in support for the mortgage market as mentioned recently by Robert Kaplan (a non-voting member of the FOMC this year) is possible as housing inflation becomes problematic. Speculative investment now prices out families from housing markets. Technical adjustments are possible in order to reduce the collateral shortage evident since mid-March.

In financial markets, the prospect of maintaining an

accommodative monetary policy through the summer encourages risk-taking and discourages short positions in US rates. Hedge funds continue to accumulate long positions on the T-note and unwind steepening positions. The 10-year US reacted only briefly to upside surprise in the CPI before plunging back to its weekly low of 1.43%. The breakeven inflation rates are also under pressure despite a late bounce on Friday. The flattening of the yield curve also ensured success at the 10- and 30-year bond auctions. The US 30-year yield (-8bp over 5 days) is now trading around 2.15%. In the euro area, the ECB's inaction is rekindling interest in sovereign debt. Bimonthly PEPP data shows an increase in the average duration purchased on government bonds. The Bund yield plunged back to -0.27% in the wake of the T-note. Swap spreads widened. Italian BTP is trading at 101bp. The 10-year Italian bond syndication drew demand worth 65 billion euros. Greece also smoothly managed to raise 2.5 billion at 10 years' maturity even as asset swap spreads narrowed to 82bp. Ireland bond auctions were met with similar strong demand. Excess liquidity still needs to be invested as initial EU issues loom to finance the NextGen EU program. These bond deals will begin with a 10-year bond syndication but the target maturity for this program will be close to 15 years on average. The EU will be the main issuer of supranational euro debt in the second half of the year.

Accommodative monetary policy tends to reduce volatility and foster carry strategies. IG euro credit spreads are stable around 85bp vs. Bund. The spread levels are similar in the US dollar credit market. The ECB is very active on the primary market. Almost 50% of ECB bond buying in May were made in primary market. This adds to the scarcity of investment opportunities on intermediate maturities for fund managers. Market spreads are also quite tight in the 1-3 year segment. High yield is benefiting from the favorable environment for risky assets. Spreads narrowed to 290bp against risk-free benchmarks.

The weekly drop in bond yields raises stock valuations. In the absence of microeconomic news, the Nasdaq climbed 1.5% thanks to its high sensitivity to long-term rates. The long-duration growth theme, represented by pharmaceuticals, real estate or technology is outperforming. Conversely, cyclicals, including chemicals, ebb like banks penalized by the flattening of the yield curve. Corporate communication points to very strong earnings releases in the second quarter and an increase in annual guidance. Equity market performances follow earnings trends. Flows into European equity funds clearly support indices offset IPOs. Institutional portfolios also adjust holdings as semi-annual closings near.

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Global strategist

## ● Main market indicators

<b>G4 Government Bonds</b>	14-Jun-21	-1wk (bp)	-1m (bp)	YTD (bp)
EUR Bunds 2y	-0.68 %	-2	-3	+2
EUR Bunds 10y	-0.27%	-7	-14	+30
EUR Bunds 2s10s	41 bp	-5	-11	+28
USD Treasuries 2y	0.15 %	-1	+0	+3
USD Treasuries 10y	1.46 %	-11	-17	+55
USD Treasuries 2s10s	131 bp	-10	-17	+52
GBP Gilt 10y	0.71 %	-9	-14	+52
JPY JGB 10y	0.04 %	-4	-5	+2
<b>€ Sovereign Spreads (10y)</b>	14-Jun-21	-1wk (bp)	-1m (bp)	YTD (bp)
France	37 bp	+0	-2	+14
Italy	103 bp	-9	-18	-9
Spain	63 bp	-4	-8	+2
<b>Inflation Break-evens (10y)</b>	14-Jun-21	-1wk (bp)	-1m (bp)	YTD (bp)
EUR OATi (9y)	140 bp	+1	-2	-
USD TIPS	234 bp	-6	-20	+36
GBP Gilt Index-Linked	354 bp	-8	+0	+54
<b>EUR Credit Indices</b>	14-Jun-21	-1wk (bp)	-1m (bp)	YTD (bp)
EUR Corporate Credit OAS	83 bp	-2	-1	-9
EUR Agencies OAS	40 bp	+0	+2	-1
EUR Securitized - Covered OAS	33 bp	+0	+4	+0
EUR Pan-European High Yield OAS	287 bp	-7	-13	-71
<b>EUR/USD CDS Indices 5y</b>	14-Jun-21	-1wk (bp)	-1m (bp)	YTD (bp)
iTraxx IG	47 bp	-2	-4	-1
iTraxx Crossover	231 bp	-13	-23	-10
CDX IG	48 bp	-2	-3	-2
CDX High Yield	276 bp	-8	-14	-18
<b>Emerging Markets</b>	14-Jun-21	-1wk (bp)	-1m (bp)	YTD (bp)
JPM EMBI Global Div. Spread	330 bp	-3	-4	-22
<b>Currencies</b>	14-Jun-21	-1wk (%)	-1m (%)	YTD (%)
EUR/USD	\$1.211	-0.7	-0.26	-0.94
GBP/USD	\$1.408	-0.68	-0.1	+3.16
USD/JPY	¥109.69	-0.37	-0.31	-5.83
<b>Commodity Futures</b>	14-Jun-21	-1wk (\$)	-1m (\$)	YTD (\$)
Crude Brent	\$73.4	\$1.9	\$5.0	\$22.1
Gold	\$ 1 857.6	-\$37.6	\$14.2	-\$36.8
<b>Equity Market Indices</b>	14-Jun-21	-1wk (%)	-1m (%)	YTD (%)
S&P 500	4 247	0.41	1.76	13.08
EuroStoxx 50	4 142	1.08	3.10	16.59
CAC 40	6 631	1.34	3.86	19.45
Nikkei 225	29 162	0.49	3.84	6.26
Shanghai Composite	3 590	-0.06	2.85	3.36
VIX - Implied Volatility Index	16.07	-2.13	-14.57	-29.36

Source: Bloomberg, Ostrum Asset Management

## Additional notes

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Final version dated 14/06/2021

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