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#liquiditysqueeze #virus

Thinking Macro

New crisis, new solutions: Liquidity support is not enough

- **The COVID-19 outbreak, and the public sector response to it, has kicked off panic-driven demand for precautionary cash balances. This has led to strains in a number of markets, including those for short-term funding, US Treasuries and agency mortgage-backed securities.**
- **The Fed's provision of abundant liquidity, large-scale asset purchases, and willingness to provide term access to the discount window, among other items, should help unclog dealer balance sheets. The Fed is using its balance sheet to grow the financial sector's capacity to intermediate.**
- **We believe there are additional measures that could be taken on the regulatory front that would ease the distribution of liquidity. The most important of these would be a loosening in capital requirements through the leverage ratio and a reduction in risk-weighted assets for household and business loans. The Fed took a step in this direction with the MMLF; more can be done.**
- **We also worry liquidity support is not enough. Solving the GFC required the Fed and public sector to take risk in the form of preferred capital injections into the banking sector and the Treasury's placing Fannie Mae and Freddie Mac into conservatorship. Liquidity support was necessary, but public sector risk-taking proved necessary and sufficient. Again, the MMLF took an important step in this direction by eliminating recourse to the banks. We believe this is an important lens to evaluate future programs.**
- **One potential solution could be granting the Fed temporary emergency authority to purchase a wider array of municipal securities (currently, it can only purchase securities with six months remaining maturity). In addition, it could be granted emergency authority to purchase investment grade corporate debt and loans.**
- **A second solution is fiscal support to households in the form of direct payments, tax rebates, or payroll tax deductions and direct assistance and loan guarantees to virus-affected industries such as airlines. This appears to be in the offing. We think this fiscal package could amount to $850bn-$1.2trn when all is said and done.**
- **Yet more may be needed. The banking sector could be used to aggregate losses, which can then be made whole by the public sector. This could come in the form of mass government-financed forbearance on credit cards, mortgages, and small business loans, among others, for the period of the economic lockdown; this would be facilitated by banks, but ultimately paid for by the government.**

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This time is different

Fragility within the financial sector, in particular, the non-bank financial sector, was at the nexus of the global financial crisis (GFC). In response, the Fed followed "Bagehot's dictum" of lending early, freely, to solvent firms, against good collateral, and at penalty rates.[1,2] The Fed went beyond its normal lending practices and extended its support to commercial banks, broker dealers, and other nonbank financial institutions.

Looking back, the toolkit that the Fed employed was what was needed to support the financial sector, though arriving at that package took fits and starts, failures and successes. What was important was the Fed's commitment to its role as lender of last resort and perseverance in finding solutions that ultimately worked to quell panic-driven demands for liquidity and their potentially adverse consequences for the economy. And, ultimately, it required the US Federal government to take credit risk in the form of preferred capital injections into the banking sector, including to banks that said they did not need it, and placing Fannie Mae and Freddie Mac into conservatorship, effectively taking all the mortgage credit risk in the country onto the balance sheet of the government.

COVID-19 has kicked off a panic-driven rush for liquidity

The COVID-19 outbreak, and the public sector response to it, has kicked off panic-driven demand for precautionary cash balances. In recent weeks, banks, dealers, corporate treasurers and other investors have begun to hoard liquidity. In addition, a very large number of firms – and not just in virus-stressed industries – have begun to draw on their bank lines as their access to funding markets ebbs and they face the prospect of a sharp decline in top lines. Some firms considered to be less exposed to the economic effects of the virus have also drawn on their lines for precautionary purposes. While we do not believe that these draws will themselves overly burden bank capital positions (see *Revolver Draws and the Effect on Banks and Corporate Spreads*, March 19, 2020), we think they will weigh on the capacity of the banking system to step in with new credit provision. Ratings downgrades will likely further reduce balance sheet capacity. We expect agencies to be quicker at downgrading companies that experience significant reductions in cash flows; this has begun in energy and retail already. Balances in institutional government-only money funds have surged, while assets have fled prime funds that invest in short-term unsecured bank credit.

Significant strains have appeared in financial markets

These moves have created a number of interrelated strains in funding markets. Term repo rates have spiked to 100bp over OIS on very thin activity. Commercial paper markets have come under severe pressure, with rates trading 80-100bp above OIS. As prime money funds lose balances, their managers have turned very cautious, shortening their investment horizons and allowing their maturing commercial paper to roll off while shifting into repo and Treasuries. As a result, daily commercial paper issuance has fallen, and the portion of the market that is issued with a maturity of 1-4 days has risen above 70%.

The demand for liquidity is also impairing the Treasury, agency MBS, and TIPS markets. For the past several days, each of these has traded in ways that have led many market participants, including ourselves, to pronounce them as broken. Whether it was the nominal

[1] See Paul Tucker, 2009, *The repertoire of official sector interventions in the financial system: Last resort lending, market-making, and capital*, Remarks at the Bank of Japan 2009 International Conference on the Financial System and Monetary Policy Implementation, Bank of Japan, Tokyo, May 27-28, p. 5.

[2] See Brian Madigan, 2009, *Bagehot's dictum in practice: Formulating and implementing policies to combat the financial crisis*, Remarks at the Federal Reserve Bank of Kansas City's annual Economic Symposium, Jackson Hole, Wyoming.

bond basis (see *Broken*, 12 March 2020) or the unusually wide spread between on- and off-the-run Treasuries, or the sharp collapse in inflation break-evens across the curve and the concurrent rise in real rates (to levels that cannot, in our view, be explained by economics alone), long-established relationships within and across normally high-functioning ultra-liquid markets have been collapsing.

Dealers have become reluctant to make markets and are widening bid-ask spreads. We think there are several factors that are impairing the ability of dealers to act in their market-making capacities. One is the volatility in Treasury prices, which naturally causes dealers to widen their bid-ask spreads. A second is that dealer balance sheets are already crowded: they are not only long Treasuries themselves, but are being asked to absorb assets from investors seeking to raise cash. In addition to the desire to hoard liquidity, some of these sales are likely tied to losses in other markets. In many cases these assets may be low risk, but price action is impaired by poor liquidity. One obvious example is MBS, where pressure on mortgage REITS (which typically have leveraged MBS positions) has led to adverse price action and more selling; this pressures balance sheets although the quality of the underlying assets remains strong. Quarter-end may also be an issue; this is a period over which dealers typically shrink their balance sheets, which normally makes them less willing to buy Treasuries and act as intermediaries in the repo market. This illiquidity has been particularly acute in the market for vintage Treasuries, as well as TIPS.

A final issue is social distancing. As more market makers work from home or alternative sites, systems issues and more constrained communications across sectors and/or asset classes are likely reducing the capacity for risk transfer. As important is what is missing from this list: poor positioning at dealers (meaning high levels of inventory with adverse price action). We believe a benefit of the post-crisis regulatory regime is that the dealer community was likely positioned well – the issue is not losses *per se*, but a limited capacity to intermediate, even for low risk assets.

As mentioned above, agency MBS have sharply underperformed Treasuries, with the production coupon (FN 2.5s) lagging Treasury hedges by well over a point. This is especially notable since the Fed's QE announcement on Sunday night – which signalled that the Fed would buy all net agency MBS issuance for 2020 – still failed to stem agency MBS underperformance. It seems that investors are liquidating as rapidly as they can, and whatever they can. An indiscriminate rush for the exits could cause other dominoes to fall. As an example, major agency mortgage REIT equities fell as much as 40% in a recent trading day, before recovering somewhat.

The Fed has rolled out the GFC playbook

Thus far, the Fed and other central banks have rolled out the parts of the GFC playbook that were effective at supporting liquidity and market functioning. The Federal Reserve fired what we thought of as its liquidity bazooka (see *Fed steps in with liquidity bazooka, QE*, 17 March 2020), providing term funding to banks and primary dealers through large-scale open market operations against Treasury collateral. Since then, they have lengthened discount window funding and unveiled programs such as the Primary Dealer Credit Facility (PDCF), the Commercial Paper Funding Facility (CPFF), and the Money Market Mutual Fund Liquidity Facility (MMLF) and reduced the cost of its FX swap lines with major central banks.[3] Finally, the Fed restarted its QE program, with \$500bn and \$200bn in new purchases of US Treasuries and agency MBS, respectively

[3] See *Fed reopens Primary Dealer Facility (PDCF)*, 18 March 2020; *Fed restarts the Commercial Paper Funding Facility (CPFF)*, 17 March 2020; *The Fed steps up in a Sunday night surprise*, 16 March 2020; and *Money Market Liquidity Facility*, 19 March 2020.

In this regard, the Fed is following Bagehot's dictum. Providing a near-unlimited source of liquidity can help avert financial market meltdowns from fire sales of assets, improve the ability of financial institutions to transact in capital markets, and enable commercial banks and primary dealers to continue lending. The Fed's provision of abundant liquidity, large-scale asset purchases, and willingness to provide term access to the discount window should help. But there is tremendous demand for liquidity, and the tapping of precautionary lines and other demand for credit has rapidly consumed banks' and dealers' available balance sheet capacity. This has made it more difficult and costly for banks and primary dealers to perform their market-making functions. Backstopping a fragile financial sector is not the primary goal right now; using the Fed's balance sheet to grow the financial sector's balance sheet capacity is.

Regulatory forbearance to speed the distribution of liquidity and capital

In addition to the steps the Fed has taken to date, we believe there are additional measures that could be taken on the regulatory front that would easy the distribution of liquidity. The most important of these would be a loosening in capital requirements through the leverage ratio and risk-weighted assets (RWAs).

- **Leverage ratio.** Bank balance sheets are congested with paper from clients that are deleveraging their positions and hoarding liquidity. In its statements and communication, The Fed has said it believes banks are well capitalized and have sufficient liquidity (particularly after the steps the Fed has already taken in this area). Our conjecture is it needs to do more than provide "encouragement" and moral support to banks that are already using their robust capital and liquidity buffers to extend credit to business and households. By temporarily loosening the leverage ratio – not just for the largest banks, but also for smaller institutions not subject to the supplemental leverage ratio (SLR) or that are subject to lower requirements – the Fed could match moral support with action.

- **Risk-weighted assets.** In addition to the piling up of securities on their balance sheets coming from deleveraging clients, there has been an increase in risk-weighted assets. RWAs depend on the credit rating of the counterparty and weaker counterparties, particularly those under the most stress and who are the most in need of funding from the Fed's credit and liquidity facilities, and "cost" the banking system more. Banks also face counterparty concentration limits. Such counterparties that need large quantities of cheap funding could overwhelm the system's ability to provide support. As firms draw on their backstop funding facilities, it has put (unplanned) pressure on RWAs. Our conjecture here is the Fed could lower RWAs on business and consumer loans and/or expand counterparty concentration limits.

The Fed took a step in this direction with the creation of the MMLF. The *term sheet* indicates the Federal Reserve Board, OCC, and FDIC will act to fully neutralize the effect of a depository institution holding company's or depository institution's participation in the facility for purposes of regulatory capital requirements, including risk-based capital and leverage requirements.

When liquidity support is not enough

History provides us with a reasonable guide about what is necessary to support the financial sector in times of stress. Given the evolution of the financial system in previous decades, the Fed went beyond its normal commercial bank counterparties during the GFC to extend liquidity support to nonbank financial institutions. While this was a big step (and one that came with tremendous scrutiny at a later date), there was solid rationale for doing so in a time of crisis. The lines between deposit and non-deposit taking institutions had blurred over time, their interconnectedness was high, and the Fed could lend to these institutions while leaving the allocation of credit from these institutions to the broader economy to market mechanisms. A key point here is that lending to institutions without a banking charter should not be routine or regular, but, to use the language of the Fed's charter, should happen only during "unusual and exigent circumstances."

The problem, as we see it today, is that the COVID-19 outbreak threatens the livelihood of numerous households and businesses. While many businesses have ties to the banking system and capital markets, many smaller enterprises may not. Here we note, based on the employment data from ADP, that about 25% of the US private sector workforce is at companies that employ 49 or fewer workers. About 21mn workers are in firms with only 1-19 employees. These small enterprises are likely to face the most difficulty from prolonged mitigation efforts.

The Fed is clearly trying to act through the financial system in support of households and business. We question whether this will work. As we noted previously, solving the GFC required the public sector to take risk in the form of preferred capital injections into the banking sector and the Treasury's placing Fannie Mae and Freddie Mac into conservatorship. Liquidity support was necessary, but public sector risk-taking proved necessary and sufficient. While helpful on the margins, programs such as the primary dealer credit facility, and even the CPFF (given that it is limited to A1/P1 borrowers), do not entail a meaningful amount of risk-taking – certainly nothing on the order of the risk involved with preferred bank stock at the height of the GFC.

The MMLF announced yesterday does take an important step in this direction, by explicitly eliminating recourse to the banks. This means the facility imposes neither risk nor capital/ balance sheet burdens on the banking system. We believe this lens is important when assessing the potential efficacy of new programs; to the extent that they represent risk transfer as well as liquidity relief, we believe they will be more effective.

Unfortunately, given the centrality of the real economy in the COVID-19 outbreak, versus the financial sector during the GFC, a direct analogue to the TARP preferred stock injections in the current situation does not really exist. Although the MMLF helps, it is likely most useful for larger entities. Yes, one potential path to increase the ability of the banking system to provide credit to households and business would be to have the Treasury give banks temporary capital to make such loans. We think that entirely impractical at present. It does not seem that banks have either a capital or funding issue after the reforms post GFC; they are simply unwilling to lend in this climate. In addition, there are obvious, and we believe insurmountable problems with the government's taking preferred stock positions in small businesses. Besides the enormous logistical hurdles, there may not be sufficient equity value in many (very) small businesses to warrant public sector involvement. If so, then the challenge is how to tackle the economic losses posed by the virus into the financial system in a way that they can be offset by governments.

Direct fiscal support for households and business

One option is likely to be embedded in the phase three fiscal legislation (see *COVID-19 and fiscal stimulus: Waiting for phase three*, 18 March 2020). As it stands, fiscal policymakers appear to be working on two fronts: to provide support to households in the form of direct payments, tax rebates, or payroll tax deductions and to provide direct assistance and loan guarantees to virus-affected industries such as airlines. We think this fiscal package could amount to \$850bn-\$1.2trn when all is said and done. Time is of the essence; liquidity conditions can deteriorate faster than legislators can legislate.

Increased purchase authority for municipals, corporate debt, and loans

We suggest the Fed's ability to purchase assets could be expanded on two fronts. At present, it can provide only limited support to state and local governments. Under section 14(b)(1) of the Federal Reserve Act, the Fed has the authority to buy or sell "bills, notes, revenue bonds, and warrants with a maturity of date of purchase not exceeding six months issued in anticipation of the collection of taxes or in anticipation of the receipt of assured revenues by any State, county, district, political subdivision, or municipality in the continental United States, including irrigation, drainage, and reclamation projects." Functioning in the municipal bond market is suffering for similar reasons as the markets for Treasury and agency MBS. In addition, investors may be fearful that any contraction in activity due to COVID-19 mitigation strategies will lead to a sharp drop-off in tax revenues. We suggest the Fed could be granted temporary authority on an emergency basis to purchase a wider array of municipal debt.

The Fed has no express authority to purchase corporate bonds, bank loans, mortgages, and credit card receivables. Nor does it have the ability to purchase equities. As *suggested* recently by former Fed Chairs Bernanke and Yellen, the Fed's ability in this area could be expanded. Like for municipal bonds, the Fed could be granted temporary authority on an emergency basis to purchase investment grade corporate bonds and bank loans of equivalent rating.

More will almost certainly be needed

Alternatively, the banking sector can be used to aggregate losses, which can be made whole by the Federal government. This could look like mass government-financed forbearance on credit cards, mortgages, and small business loans, among others, for the period of the economic lockdown; facilitated by banks, but ultimately paid for by the government. Banks themselves have entered this period well capitalized, but the scale of the relief required would be far too large to be absorbed by any entity other than the federal government. We see a major difference between this approach and TARP. In the latter, the very act of TARP injections restored confidence in the system and reduced the realized losses associated with the program. In what we suggest above, the losses are realized immediately and "paid" for over time with an eventual recovery of the economic engine of the country. There is little hope that merely announcing such a program would limit its costs. We believe those will be defined instead by the duration that mitigation policies are in effect and the time it takes to restart economic life once these policies are ended. And we are very aware that this is not an overarching solution; for example, many of the smaller businesses in the country do not deal with banks, but often with non-bank financial lenders instead.

Inevitably, a program like this would raise concerns about moral hazard and abuse of such massive government involvement in the economy. But these are unprecedented times and they call for unprecedented solutions. And it could hopefully reduce the need for ever-expanding liquidity programs and other market interventions, because at least the end-game resolution would be understood. This itself could remove uncertainty that is weighing on market functionality and cushion the economy somewhat.

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