Necessary Dimensions of a Holistic Review of the Meltdown of U.S. Bond Markets in March

Pat Parkinson | October 07, 2020

In March U.S. bond markets became highly dysfunctional. The liquidity of the markets for U.S. Treasury securities, usually the most liquid in the world, deteriorated significantly.[1] Liquidity in U.S. corporate bond markets, which is limited in the best of circumstances, also declined noticeably, especially liquidity for investment-grade bonds.[2] Market functioning was restored only by massive interventions by the Federal Reserve, including purchases of Treasury securities of unprecedented magnitude and emergency liquidity facilities, backstopped by capital from the U.S. Treasury, that supported purchases of investment-grade corporate bonds and certain types of state and municipal debt.

Policymakers in both the U.S. and abroad are studying the developments in March and seeking to identify ways to make the financial system more resilient. In particular, the Financial Stability Board has committed to conducting a "holistic" review of the March market turmoil.[3] However, the FSB's review to date seems less than holistic, in that it focuses heavily on the nonbank financial institution (NBFI) sector. While selling pressures by nonbank financial institutions likely were an important source of the March disruptions, a review focused on NBFIs would not be a holistic review. For one thing, selling pressures in bond markets in March clearly were not limited to sales by NBFIs. Indeed, Federal Reserve Vice Chairman Quarles himself has acknowledged the importance of selling pressures from foreign central banks in the U.S. Treasury markets:[4]

> Sales by foreign central banks were a significant source—I think we would say right now that it was a more significant source than the unwinding of leveraged hedge fund positions.

Most importantly, a holistic review of the events in March must also examine and seek to understand why securities dealers were not able to absorb those selling pressures. And the policy reforms that accompany a comprehensive review should include recommendations for enhancing the capacity of dealers to provide liquidity to markets under stress.

This note will argue that the March events (and other disruptions to U.S. Treasury markets in recent years) stemmed from a fundamental structural problem with the U.S. financial system. In recent years the rapid growth of the U.S. Treasury and other U.S. bond markets has far outstripped dealers' capacity to supply liquidity to those

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[1] Michael Fleming. "Treasury Market Liquidity and the Federal Reserve during the COVID-19 Pandemic." Federal Reserve Bank of New York, Liberty Street Economics, May 29, 2020.

[2] J. Nellie Liang, "Corporate Bond Market Dysfunction During COVID-19 and Lessons from the Fed's Response." Brookings Institution, Hutchins Working Paper #69, October 1, 2020.

[3] Financial Stability Board. "COVID-19 Pandemic: Financial Stability Implications and Policy Measures Taken. Report to the G20 Finance Ministers and Governors, July 15, 2020.

[4] Craig Torres, Bloomberg, "Quarles Says Central Banks Played Role in US Treasuries Strains," July 29, 2020. As further evidence of the importance of sales by foreign central banks, one of the measures taken by the Federal Reserve to ease the strains was the creation of a special facility that provided repo financing for Treasuries held by foreign official institutions.

markets. Intermediation continues to be concentrated in less than a dozen dealers, all of which are affiliated with banks, and elements of the post-GFC regulatory framework have strongly discouraged those dealers from allocating capital to intermediation. For U.S. capital markets to remain liquid under stress, even the relatively mild stress experienced in September 2019, much less the severe stress of March 2020, those elements of the post-GFC regime need to be modified. Even then, given the enormous size of the U.S. bond markets, it is unrealistic and unwise to expect so few dealers to fully meet demands for market liquidity arising from significant financial or economic shocks, much less the unprecedented economic shock caused by COVID-19. Policymakers need to come to grips with this reality and take steps to encourage other dealers to allocate more capital to bond market intermediation. If they do not, market liquidity will continue to depend on regular interventions by the Federal Reserve, which, however necessary in the short term, are fueling growth in the bond markets and risk politicizing the central bank.

Narratives of the bond market disruptions in March typically acknowledge that "balance sheet pressures" on bank-affiliated securities dealers were also an important part of the story. This includes narratives that the Federal Reserve itself has provided.

> [I]n March, constraints on dealers' intermediation capacity, including internal risk-management practices and regulatory constraints on the bank holding companies under which many dealers operate, were cited as possible reasons for deteriorating illiquidity in even usually liquid markets.[5]

> [F]acing balance sheet constraints and internal risk limits amid the elevated volatility, dealers had to cut back on intermediation.[6]

Previous BPI posts have identified certain regulatory constraints that we believe are impairing the ability of bank-affiliated dealers to provide liquidity to the Treasury markets and other bank-intermediated markets under stress and could be loosened without threatening bank safety and soundness.[7] Those posts identified and called for a reevaluation of those elements of the bank regulatory framework put in place since the Great Financial Crisis, especially the Supplementary Leverage Ratio and the Enhanced Supplementary Ratio, but also the GSIB capital surcharge methodology and the global market shock (GMS) component of the Fed's capital stress test.[8] As explained in another BPI post, if U.S. banking regulators implement the Basle Committee on Banking Supervision's Net Stable Funding Ratio (NSFR), that requirement would add a further hindrance to bank intermediation in the repo markets, whose liquidity is critical to Treasury market liquidity.[9]

The Federal Reserve's narratives imply that in some cases banks' own risk limits, not regulatory constraints, may have been the binding constraints on dealers' intermediation. But this is a false distinction. Those limits are the product of the amounts of capital that dealers have allocated to support market intermediation, and the regulatory constraints just mentioned, by requiring unnecessarily large amounts of capital to support relatively low-risk market intermediation, have discouraged banks from allocating capital to market intermediation and

[5] Federal Reserve Monetary Report to Congress, June 2020.
[6] Lorie K. Logan, Executive Vice President, Markets Group, Federal Reserve Bank of New York, "The Federal Reserve's Recent Actions to Support the Flow of Credit to Households and Businesses," Remarks before the Foreign Exchange Committee, April 14, 2020.
[7] Bill Nelson and Pat Parkinson, "Have Banking Regulations Reduced Market Liquidity?", June 9, 2020; and Pat Parkinson, "Bank Intermediation in Financial Markets Under Stress," July 29, 2020.
[8] Regarding the GMS, see Francisco Covas and Adam Freedman, "The Global Market Shock and Bond Market Liquidity," Bank Policy Institute, 2019. They estimate that subjecting the six largest bank-affiliated dealers to the GMS caused them to reduce their holdings of inventories of corporate bonds by about two-thirds.
[9] Bill Nelson, "The Net Stable Funding Ratio Would Have Made Things Worse, Not Better (So Why Adopt it?)," Bank Policy Institute, September 15, 2020.

thereby resulted in tighter internal limits than would apply if those regulations better reflected the risks of market intermediation. Consequently, a necessary first step toward enhancing market liquidity under stress is a thoughtful reevaluation and revision of the bank regulatory framework. A revised framework could restore substantial liquidity to U.S. Treasury and other fixed income markets, allowing those markets to absorb considerable stress (like the degree of stress experienced in September 2019) without the need for government intervention.

For the market to have any hope of absorbing stress on the order of March 2020, however, additional steps likely will be necessary. Bond markets have grown so extremely rapidly (and are likely to continue to do so) that the small and shrinking number of bank-affiliated dealers that currently are the dominant providers of principal-at-risk market-making in those markets cannot be expected to meet liquidity demands under stress. Stanford economist Darrell Duffie has documented that since the Great Financial Crisis, marketable U.S. Treasury securities outstanding have grown substantially faster than the balance sheets of the very large U.S. banks whose broker-dealer subsidiaries are the leading providers of those intermediation services.[10] Furthermore, those same dealers are also the leading providers of intermediation services in the U.S. corporate bond markets and other U.S. debt markets. Some of those other markets, especially the corporate bond markets, have also been growing rapidly in recent years. In particular, since the Federal Reserve intervened to support the markets in March, issuance of corporate debt in the United States has been very heavy.

A truly holistic review of the March disruptions must come to grips with this fundamental structural problem. And a structural problem requires structural solutions. Those solutions should include enhancements to the infrastructure of the U.S. bond markets, especially the U.S. Treasury markets, whose current structure is fragmented and archaic. Professor Duffie, drawing on earlier work by a group of market participants, suggests the need for new rules requiring central clearing of Treasury transactions for all firms that are active in the market.[11] This not only would facilitate the reduction of counterparty credit risks in those markets; as he notes, it would also alleviate balance sheet pressures on bank-affiliated dealers because cleared trades are treated more appropriately in leverage requirements applicable to bank holding companies. Furthermore, in principle, it would allow direct trading between non-dealer buyers and sellers, which likely would increase market efficiency, both in normal conditions and under stress. Although such a comprehensive review of market infrastructure is most clearly warranted for the U.S. Treasury markets, a review of the infrastructure (trade execution, clearing, and settlement) for corporate bonds and other private debt is also appropriate.

Even such changes to market infrastructure may not by themselves materially reduce the dependence of U.S. bond markets on a small number of large banks and their dealer affiliates. Because many nondealer buyers and sellers of bonds and counterparties to repos typically are unwilling to be direct members of central counterparties (CCPs) in cleared markets, they usually rely on affiliates of a small number of large banks, most of which are the same large banks that intermediate in the uncleared markets, to clear their trades. The only way to fully resolve this structural problem is to facilitate and promote the provision of intermediation services by additional bank-affiliated and independent dealers[12]. The entry of more independent dealers could be seen as problematic, however. The ability of such firms to provide liquidity to markets under stress is limited by their ability to fund the securities that they purchase, and such firms do not have standing direct access to funding from Federal Reserve liquidity facilities under normal circumstances. For that matter, most bank-affiliated dealers do not have direct access to Fed funding

[10] Darrell Duffie, "Still the World's Safe Haven? Redesigning the US Treasury Market After the COVID19 Crisis," Brookings Institution, Hutchins Center Working Paper #62, June 2020, 3.

[11] As Duffie emphasizes (page 4), such new requirements should be preceded and informed by a data-based effectiveness study. Of course, such a study is only as good as the data that go into it. One important step that should be taken as soon as possible is to ensure that any significant data gaps, such as the lack of data on bilateral uncleared repos, are eliminated.

[12] Independent dealers include a few large firms, such as Citadel and Jefferies, and hundreds of small firms.

either; as broker-dealers rather than banks, they have only indirect access through their bank affiliates. Furthermore, for securities other than U.S. Treasury and agency securities, even that access that is quite limited by the bank-affiliate transactions restrictions imposed by section 23A of the Federal Reserve Act.[13] Because of this, both in the GFC and in the COVID-19 crisis, the Federal Reserve has been compelled to create emergency (section 13(3)) liquidity facilities that provided direct access to a small group of twenty or so Primary Dealers.[14]

If the fundamental structural problem of excessive concentration of intermediation services in U.S. debt markets is to be resolved, the rules governing broker-dealer access to central bank liquidity need to change. These rules are outdated. When the Federal Reserve was created, banks were the dominant source of credit for the U.S. economy; however, today credit market debt is a larger source of credit to the U.S. economy than the banking system.[15] Accordingly, the safety net should be expanded through the creation of a permanent standing Federal Reserve liquidity facility for eligible broker-dealers[16] (both bank-affiliated and independent) that provide liquidity to the U.S. fixed income markets (Treasury and agency, MBS, corporate, state and local, and ABS markets).[17] The liquidity would be provided through repos on which the Fed charged haircuts similar to those charged in private transactions in normal market conditions and at interest rates slightly above normal market rates. This would address concerns about fire sales of securities as a result of runs on repo by providing a reliable source of alternative funding. The public policy case is really the same as that for the discount widow for banks. It helps ensure a stable supply of credit to U.S. households, governments, and businesses and avoids the very real danger that runs on the liabilities of intermediaries result in severe contractions of credit that can be so damaging to the economy and to financial stability. With market-based intermediation so important to the U.S. economy, market-based intermediation dependent on dealers, and dealers dependent on reliable access to repo financing, a broader safety net is needed.

An obvious objection to the creation of a standing repo facility that would provide financing to broker-dealers is that it would entail moral hazard and thereby encourage excessive leverage and maturity transformation. That is a legitimate and important concern. As in the case of banks and the discount window, however, the concern can be addressed through the regulation of the broker-dealers that have access to the repo facility. The Federal Reserve should be authorized to impose prudential requirements, above and beyond SEC requirements, on independent broker-dealers that want access to the facility. Those requirements should include stand-alone capital and liquidity requirements, margin requirements (minimum haircuts on repos and other securities financing transactions), and a ban on proprietary trading. Those rules should not be the same rules that currently apply to bank holding companies, however, because, as noted above, some BHC rules impair the liquidity-providing activities that the standing facility would be intended to facilitate. Thus, a thoughtful review and reevaluation of the existing BHC rules are important not only to encourage bank-affiliated dealers to allocate more capital to market intermediation but also to enable independent dealers to allocate more capital. Access to the facility should be open to bank-

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[13] Section 23A generally requires that a bank's extensions of credit to (and other covered transactions with) its affiliates be subject to certain quantitative limits (transactions with a single affiliate limited to 10% of bank capital and surplus, and no more than 20% of capital and surplus to all affiliates) and qualitative limits (collateral requirements and low-quality asset transfer prohibition). Generally speaking, transactions fully secured by the U.S. government and agency securities are exempt from these limits.

[14] As of October 5, 2020, there were twenty-four Primary Dealers, of which twenty-one were bank-affiliated.

[15] The Bank of England seems to have reached this conclusion regarding the UK financial system, in which market-based finance also plays a significant role, albeit less significant than in the United States. It has already adapted its liquidity facilities to support market-based finance.

[16] As discussed below, an enhanced regulatory regime would need to be imposed on eligible broker-dealers to address moral hazard concerns.

[17] The creation of a standing facility that lent against securities other than Treasury and agency securities would require new statutory authority.

affiliated broker-dealers as well as independent dealers. Opening the facility to bank-affiliated broker-dealers would reduce their reliance for funding on their affiliated banks and thereby reduce interconnectedness between banks and their broker-dealer affiliates, which would increase confidence in the ability of authorities to resolve large banks with significant dealer affiliates. Finally, the combination of equal access to the new facility and application of a consistent set of regulatory requirements would create a level playing field on which bank-affiliated dealers and independent dealers could compete to provide the intermediation services that U.S. capital markets require.

To promote expanded central counterparty clearing in the fixed income markets, as discussed above, the Federal Reserve should also create liquidity facilities for U.S. CCPs that serve those markets. Without such facilities, CCPs need to look to their members for liquidity, which a recent report by a trade association for independent dealers identified as a major impediment to participation by such dealers in the Fixed Income Clearing Corporation (the CCP for the U.S. Treasury and Agency markets) and therefore an impediment to their providing additional liquidity to repo markets under stress.[18] Any moral hazard created by CCP liquidity facilities can be addressed through CCP regulation, for which the Dodd-Frank Act provided ample authority to market regulators and to the Fed itself.

To be sure, it is unclear how much additional capital would be attracted to bond market intermediation by the combination of changes to banking regulation that have been unnecessarily impeding bank intermediation, market infrastructure improvements, and a new safety net for broker-dealers. But that uncertainty is a poor excuse for inaction because if more capital is not forthcoming, bond market liquidity will continue to be dependent (and, with the continued rapid growth of the bond markets, as seems likely, will be even more dependent) on the kinds of massive market interventions that the Federal Reserve was forced to make earlier this year. While those interventions were necessary to prevent the meltdown of the bond markets and an even more severe economic downturn, they entailed considerable moral hazard that cannot readily be addressed by regulation of financial institutions, because it was the issuers of, and investors in, the bonds that were the beneficiaries of those programs. In recent years, the Federal Reserve has been warning about the risks to financial stability posed by the rapid growth of corporate debt, but its interventions in March weaken what already seems to have been weak market discipline on corporate leverage. Finally, it is hard to imagine that an institution that plays such a broad role in financial markets would be permitted the degree of independence from politics that the Federal Reserve has had to date. Policies that enable the provision of private market liquidity and preserve the Fed's independence to conduct monetary policy are preferable to policies that rely on market liquidity on a central bank whose independence has been impaired.

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[18] "White Paper on the Repo Market Affecting US Treasury and Agency MBS," Independent Dealer & Trader Association, December 6, 2019, 8-9.