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Policymakers Need to Focus on Economic Fundamentals and Not Blame Bond Mutual Funds: Examining the Evidence of Investment Grade Corporate Bond Yield Spreads in March 2020

By Sean Collins and Shelly Antoniewicz

Bond mutual funds' activities during March 2020 had little impact on the investment grade corporate bond market. According to an ICI study, core bond mutual funds, on net, sold *only* \$8 billion of their \$780 billion in holdings of investment grade corporate bonds in the first three weeks of March 2020. Further, we present evidence that these sales accounted for only a tiny fraction of the sharp increase in yield spreads on investment grade corporate bonds that month.

These results contradict some policymakers' contentions that bond mutual funds amplified stresses in the investment grade corporate bond market during the COVID-19 pandemic-related turmoil of March 2020. These policymakers argue that to meet redemptions, bond mutual funds were among the largest sellers of corporate bonds, making them a key source of market stress. Their hypothesis, however, is not supported by the data.

A far more compelling explanation for the jump in yield spreads is a rapid change in fundamentals stemming from market concerns that the US economy could be headed suddenly into a deep and prolonged recession—a legitimate conclusion in light of the unprecedented actions by governments to shut down their economies to combat the pandemic.

In not focusing on the fundamentals, policymakers are wrongfully attributing the March 2020 liquidity issues to bond mutual funds, overstating their role and impact. The danger is that these unfounded views by some policymakers appear to be leading to proposed regulatory reforms that will have detrimental consequences for bond mutual funds and their investors.

A Series on Bond Mutual Funds' Role in the Fixed-Income Markets During March 2020

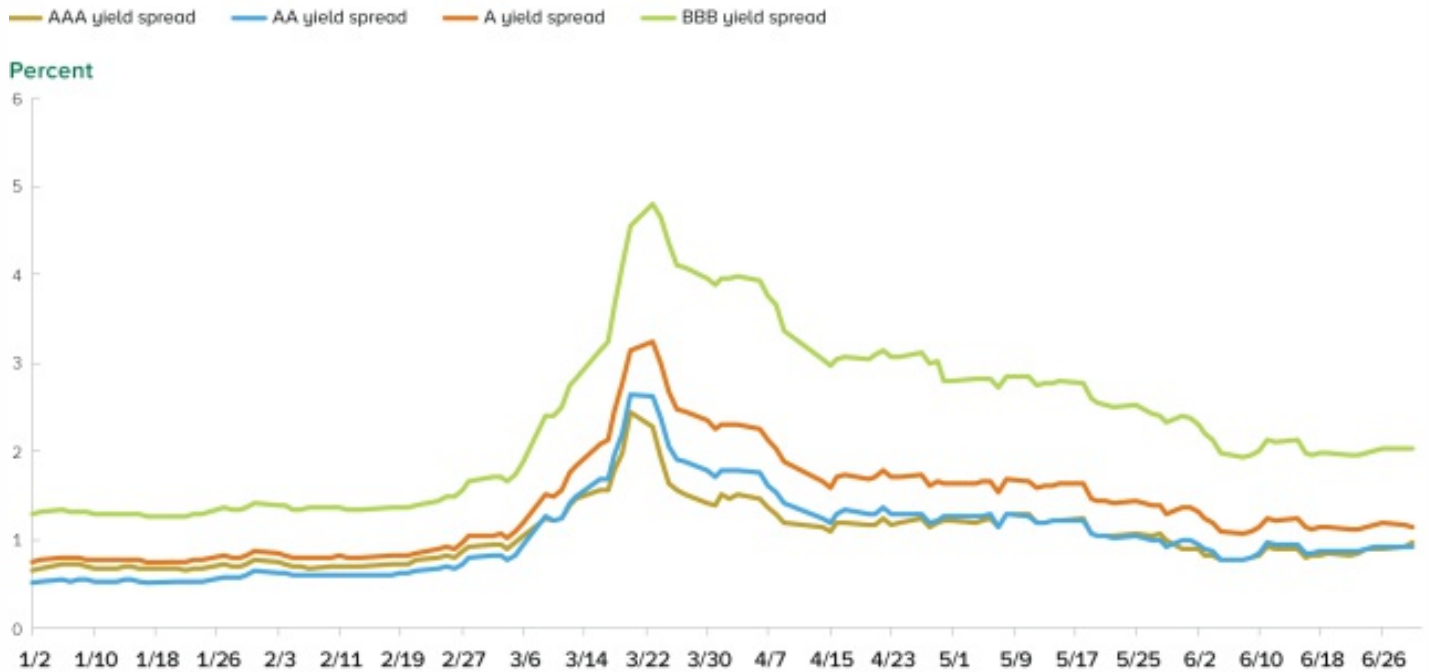
Two previous posts in this *ICI Viewpoints* series covered bond mutual funds' role in the Treasury market during March 2020.^[1] Our analysis was based on data from a unique ICI survey on bond mutual funds' daily activities.^[2] This post summarizes some of our findings on their role in the investment grade corporate bond market.^[3]

Amid the pandemic-induced turmoil of March 2020, the investment grade corporate bond market came under considerable stress. Yield spreads on investment grade corporate bonds relative to the 10-year Treasury bond—a common gauge of strain in that market—widened substantially across the investment grade credit spectrum (Figure 1). The yield spread on AAA-rated investment grade corporate bond funds rose from 0.92 percent at the end of February 2020 to a peak of 2.44 percent on March 20, and the lowest tier (BBB-rated) yield spread jumped from 1.67 percent to a peak of 4.80 percent on March 23.

Figure 1

Investment Grade Corporate Bond Market Under Stress During COVID-19 Turmoil

Yield spreads on investment grade corporate bonds; daily, January 2–June 30, 2020



Note: Yield spread is calculated as the yield on the ICE BofA US Corporate Index for each credit rating less the yield on the 10-year constant maturity Treasury.
 Source: Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED)

Factors Affecting Investment Grade Corporate Yield Spreads: Fundamentals and Technicals

The source of this sharp increase in investment grade corporate yields spreads in the first few weeks of March 2020 is still being debated. Some policymakers, as well as some academics, have asserted that bond mutual funds significantly amplified stresses in the investment grade corporate bond market, implying that technical factors played a dominant role.^[4] But research by other academics and analysis by ICI suggests that bond mutual funds' sales of investment grade corporate bonds had only a minor impact on the yield spread—meaning that fundamental factors arising from COVID-19 developments were primarily responsible.^[5]

Reasons for movements in corporate yield spreads typically fall into two broad categories:

- **Fundamental macroeconomic factors**, including actual or expected developments in business profits, consumer spending, and employment
- **Technical factors**, including momentum, investor behavior, and portfolio transactions by funds

The fact that fundamental factors and technical factors can both influence corporate yield spreads is generally accepted by academics, policymakers, and market participants. However, what often can be disputed—and is being disputed in the case of March 2020—is the relative contributions of the two factors to a change in the corporate yield spread.

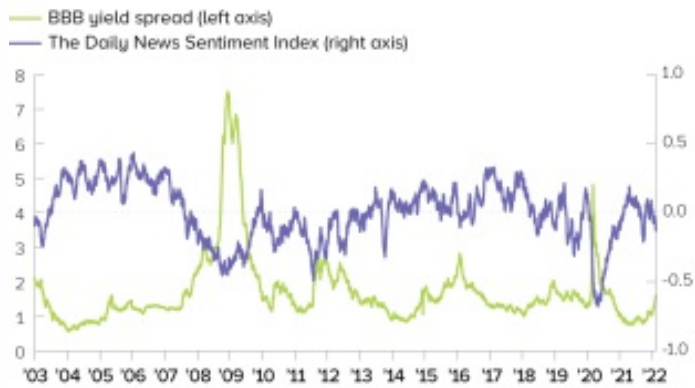
Fundamental Factors: Macroeconomic Pressures Arising from COVID-19 Developments

The arrival of the COVID-19 virus in the United States in early 2020—and the decision by authorities in mid-March to try to slow the spread by imposing social distancing measures—raised the specter of a deep and prolonged recession. Prospects for US businesses were marked down because companies were expected to suffer a sharp drop in sales and profits with the economy locked down. In turn, businesses might have faced cash flow problems, creating the threat of widespread bankruptcies and debt defaults. Investor fear, as measured by the Cboe Volatility index (VIX), spiked. Accordingly, to compensate for these risks, market participants began demanding greater yields on investment grade corporate bonds relative to Treasuries.

Historically, yield spreads on corporate bonds have been associated with business cycle developments. As shown in Figure 2, news about the economy^[6] (upper left panel), business conditions^[7] (upper right panel), odds of the economy entering a recession^[8] (lower left panel), and uncertainty in the stock market (lower right panel) have been strongly related to the daily yield spread on BBB-rated investment grade corporate bonds for the past two decades. Given the extreme macroeconomic factors experienced in March 2020, the jump in investment grade yield spreads was not surprising.

Figure 2
Yield Spreads on Corporate Bonds Are Linked to Economic Activity and Financial Market Uncertainty

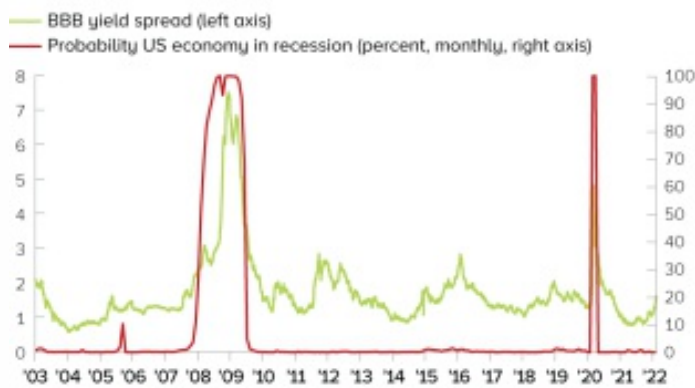
Yield spread and Daily News Sentiment Index
Daily, January 2003–February 2022



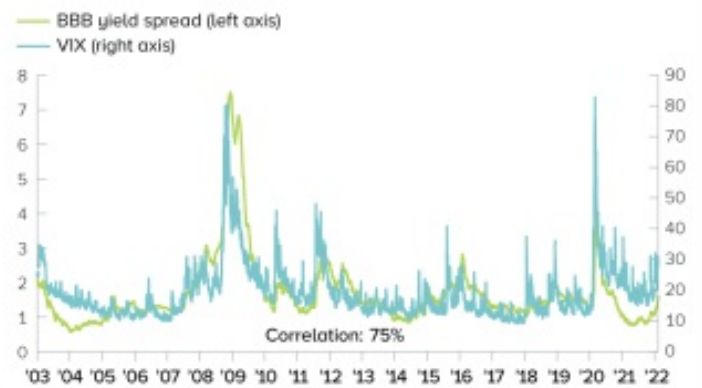
Yield spread and Aruoba-Diebold-Scotti Business Conditions Index
Daily, January 2003–February 2022



Yield spread and recession probability
Daily and monthly, January 2003–February 2022



Yield spread and VIX
Daily, January 2003–February 2022



Note: The BBB yield spread is calculated as the yield on the ICE BofA BBB US Corporate Index less the yield on the 10-year constant maturity Treasury.

Sources: Federal Reserve Bank of St. Louis, Federal Reserve Economic Data (FRED); Federal Reserve Bank of Philadelphia; and Federal Reserve Bank of San Francisco

Technical Factors: Bond Mutual Funds' Sales of Corporate Bonds During March 2020

Others, however, posit that the increase in corporate bond yield spreads relates to the activities of bond mutual funds during March 2020. According to this hypothesis, bond mutual funds, and especially those that focus on investment grade corporate bonds, faced large investor outflows, which they sought to fulfill by selling corporate bonds. Because of this, the hypothesis continues, corporate bond prices fell and their yields rose. This hypothesis, however, generally gives short shrift to the possibility that conventional business cycle factors (as seen in Figure 2) may explain all or most of the rise in yield spreads in March 2020.

Moreover, the data do not support this hypothesis. Daily data from ICI's survey show that during the height of the distress, bond mutual funds sold, on net, a small amount of investment grade corporate bonds—only \$11 billion from February 28 to March 23, 2020 (Figure 3). Of this, the majority (\$8 billion) was due to “core bond mutual funds.” Much regulatory and academic scrutiny has focused on the activities in March 2020 of core bond mutual funds. Accordingly, we now turn our attention to those funds.

Figure 3
Bond Mutual Funds Sold Small Amounts of Investment Grade Corporate Bonds in March 2020
February 28–March 23, 2020

ICI bond mutual fund category	Net purchases of investment grade corporate bonds
All bond mutual funds	-\$11.0 billion
Core bond mutual funds	-\$8.1 billion

Investment grade bond mutual funds*	-\$9.1 billion
Multisector bond mutual funds	\$1.0 billion
Other bond mutual funds	-\$2.9 billion

* ICI's investment grade category includes ultrashort investment grade bond mutual funds.

Source: Investment Company Institute

To understand how core bond mutual funds acted in March 2020, it is important to understand the structure of their portfolios. Many commentators mistakenly argue that these funds are “illiquid” because they assume these funds hold the great majority of their assets in corporate bonds. In fact, these funds hold roughly half their assets in the most-liquid fixed-income instruments and a minority in investment grade corporate bonds. At the end of February 2020, assets in core bond mutual funds totaled nearly \$2.8 trillion (Figure 4, left panel). Only 28.1 percent was in investment grade corporate bonds. About half was in the most-liquid fixed-income securities: Treasuries (24.8 percent), agency securities (17.3 percent), certain cash equivalents (4.5 percent), and other assets (5.9 percent), which includes highly liquid instruments such as repurchase agreements, derivatives, and exchange-traded fund (ETF) shares.

Core bond mutual funds hold such a large portion of their assets in these highly liquid securities for a couple of reasons. Some funds' investment objectives or policies require them to do so. For example, some large core bond mutual funds are index funds that target the Bloomberg US Aggregate Bond Index, about two-thirds of which is allocated to Treasury and agency securities. Another reason core bond mutual funds hold these highly liquid securities is to help them manage liquidity. The right panel in Figure 4 shows that core bond mutual funds had \$125 billion in outflows from February 28 to March 23, 2020. To meet these redemptions, they primarily sold highly liquid assets, especially Treasuries (\$58 billion), which represented 46 percent of their outflow.^[9] They also rolled off repurchase agreements, used reverse repurchase agreements, and sold other unidentified assets.^[10]

Some policymakers and academics have argued these funds depleted their liquid assets to the detriment of non-redeeming fund shareholders. But, in fact, even after meeting the \$125 billion in redemptions, core bond mutual funds still held very substantial amounts of highly liquid assets. For example, their \$58 billion in net sales of Treasuries was only a small fraction (8 percent) of the \$690 billion they held. The story is similar for their holdings of agency securities and cash equivalents: even after net sales or run-offs to meet redemptions, core bond mutual funds still had on hand substantial amounts of these highly liquid assets.^[11]

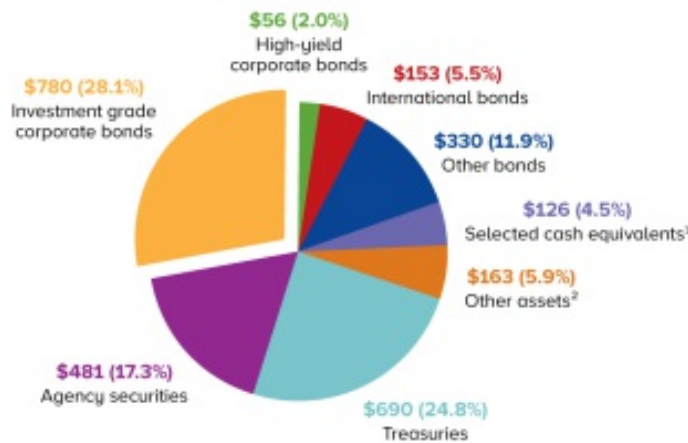
What didn't core bond mutual funds sell much of? Investment grade corporate bonds. Their \$8 billion in net sales represented less than 7 percent of their total outflow during that time and was far less than in proportion to their February holdings.

Figure 4

Core Bond Mutual Funds Hold Highly Liquid Assets and Sold Them for Various Reasons in March 2020

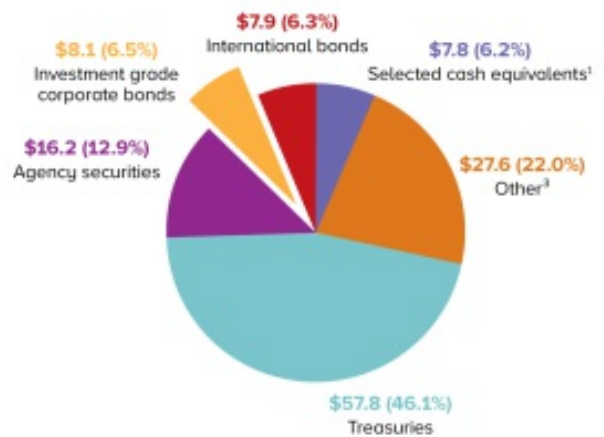
Billions of dollars

Holdings: February 2020



**Total net assets of core bond mutual funds:
February 2020 = \$2,779**

Total net sales: February 28 to March 23, 2020



**Outflow from core bond mutual funds:
February 28 to March 23, 2020 = \$125.4**

¹This category is the sum of commercial paper, certificates of deposit, money market fund shares, and Treasury bills.

²Other assets includes other cash equivalents, repurchase agreements, bank loans, ETF shares, market value of derivatives positions, and any assets not represented in the identified categories.

³Other reflects other sources funds may have used to meet outflows, such as interest income, proceeds from matured bonds, rolling off repurchase agreements, using reverse repurchase agreements, and net sales of other assets.

Note: Core bond mutual funds are ICI's categories of investment grade (which includes ultrashort funds) and multisector bond mutual funds.

Source: Investment Company Institute

In fact, during this period, some core bond mutual funds—motivated by the belief that investment grade corporate bonds were undervalued relative to Treasuries—sought to *buy* investment grade corporate bonds but found it difficult to do so. One explanation may be that by mid-March, other market participants also came to view investment grade corporate bonds as a good value and were therefore reluctant to sell. Another difficulty, which some survey respondents cited, is that dealers, seeking to preserve their balance sheet capacity, shifted from trading corporate bonds on a principal basis to an agency basis. With agency trades, the dealer must find and bring together both a seller and a buyer, which can take time, thus slowing trading and making it more challenging for both sellers and buyers.

Fundamental Factors Explain Virtually All of the Increase in Investment Grade Corporate Yield Spreads in March 2020

Our survey results, combined with academic research, strongly suggest that core bond mutual funds' small sales of investment grade corporate bonds added only marginally to the very substantial run-up in yield spreads in March 2020. Instead, the jump can be attributed to the rapid deterioration in macroeconomic fundamentals stemming from concerns that the US economy was headed into a deep and potentially prolonged recession.

We arrive at this conclusion by combining our survey results with those from a careful academic study of the corporate bond market in March 2020 done by V. Haddad, A. Moreira, and Tyler Muir (2021). Their results, which use FINRA's TRACE transaction-level data on corporate bonds, suggest that bond mutual funds' net sales of corporate bonds accounted for about 10 percent of the increase in yield spreads, with the remainder due to fundamental factors or other technical factors.

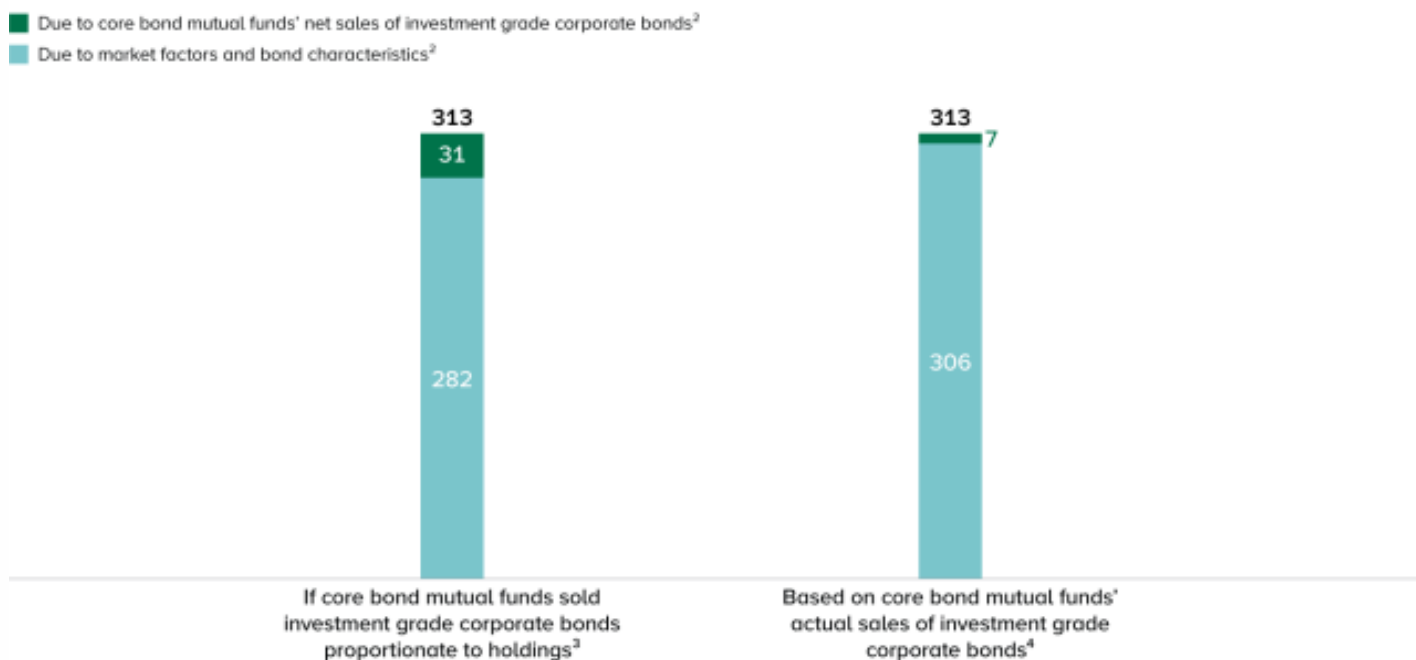
In deriving this result, the authors assume bond mutual funds sold corporate bonds in proportion to their February 2020 holdings. On this basis, core bond mutual funds' net sales of investment grade corporate bonds might have accounted for 31 basis points of the 313 basis point increase in the yield spread on BBB-rated investment grade corporate bonds from February 28 to March 23 (Figure 5, left bar).

But, as we showed in Figure 4, core bond mutual funds in fact sold investment grade corporate bonds far less than in proportion to their holdings. Adjusting the results of Haddad, Moreira, and Muir for this, we conclude that core bond mutual funds' net sales of investment grade corporate bonds accounted for a miniscule part (7 basis points) of the 313 basis point rise in BBB yield spreads from February 28 to March 23 (Figure 5, right bar). In other words, yield spreads on investment grade corporate bonds rose either because of fundamentals or other technical factors.

Figure 5

Fundamentals Account for Nearly All of the Increase in Investment Grade Yield Spreads in March 2020

Increase in BBB yield spread,¹ basis points, February 28–March 23, 2020



¹ The BBB yield spread is calculated as the yield on the ICE BofA BBB US Corporate Index less the yield on the 10-year constant maturity Treasury.

² Estimates based on Haddad et al. (2021; p. 5342 and appendix p. 73), which uses daily data on individual corporate bonds for March 2020 to assess the influence of various factors on corporate bond yields spreads in March 2020.

³ Consistent with Haddad et al. (2021), the estimate assumes that to meet redemptions in March 2020, core bond mutual funds sold proportionate slices of all the asset types in their portfolios. Their results indicate that mutual funds' net sales of corporate bonds accounted for about 10 percent of the total increase in yield spreads of investment grade corporate bonds over Treasuries from February 28 to March 23. Thus, their results suggest 31 basis points (10 percent) of the 313 basis point rise in the BBB yield spread is attributable to bond mutual funds' sales of investment grade corporate bonds.

⁴ This estimate is based on Haddad et al. (2021), but is corrected for the fact that core bond mutual funds sold a less-than-proportionate slice of their portfolio holdings of investment grade corporate bonds in March 2020. Using ICI's survey, core bond mutual funds would have sold \$35.2 billion in investment grade corporate bonds had they sold a pro rata slice of their assets. In reality, these funds sold \$8.1 billion, or 23 percent, of the assumed \$35.2 billion pro rata slice. As a result, we scale the estimated 31 basis point impact down to 7 basis points (31 basis points * 0.23).

Note: Core bond mutual funds are ICI's categories of investment grade (which includes ultrashort funds) and multisector bond mutual funds.

Source: Investment Company Institute

Conclusion

Policymakers have repeatedly claimed that bond mutual funds, faced with historically high outflows during March 2020, amplified or contributed significantly to stresses in the fixed-income markets. These unfounded claims appear to be leading to proposed reforms that will have detrimental consequences on bond mutual funds and their investors. Our analysis underscores the importance of *quantifying* the size of the amplification. In the case of core bond mutual funds' impact on the investment grade corporate bond market, it is immaterial.

NOTES

[1] See Shelly Antoniewicz and Sean Collins, "[Setting the Record Straight on Bond Mutual Funds' Sales of Treasuries](#)," *ICI Viewpoints* (February 2022), and Shelly Antoniewicz and Sean Collins, "[Policymakers Say Bond Mutual Funds Contributed Significantly to Treasury Market Stress but...](#)" *ICI Viewpoints* (March 2022).

[2] For a description of the survey, see Shelly Antoniewicz and Sean Collins, "[ICI Bond Mutual Fund Survey Brings Facts to the Debate](#)," *ICI Viewpoints* (February 2022).

[3] See also "[An Analysis of Bond Mutual Funds' Role in the US Fixed-Income Markets During March 2020](#)," ICI webinar (May 4,

2022) for a summary of the survey results on bond mutual funds' activities in the Treasury and investment grade corporate bond markets, as well as an in-depth discussion by a panel of fund industry representatives describing their experience during March 2020.

[4] See, e.g., [Financial Stability Oversight Council Statement on Nonbank Financial Intermediation](#) (February 4, 2022) (asserting that asset sales by US open-end funds were a significant contributor to stress in US fixed-income markets during March 2020); International Monetary Fund, "[The Behavior of Fixed-Income Funds During COVID-19 Market Turmoil](#)" (March 16, 2021) (stating that forced asset sales by open-end mutual funds amplified price pressures and contributed to liquidity falling across fixed-income markets, and that the drop in market liquidity may have played a role in encouraging further withdrawals from these funds). See also Stijn Claessens and Ulf Lewrick, "[Open-Ended Bond Funds: Systemic Risks and Policy Implications](#)," *BIS Quarterly Review* (December 2021) (noting that the March 2020 market turmoil revived concerns about the amplification of financial stability risks by nonbank financial intermediaries, including open-end bond funds). See also Nellie Liang, "[Corporate Bond Market Dysfunction During COVID-19 and Lessons from the Fed's Response](#)," Brookings, Hutchins Center Working Papers (October 1, 2020), arguing that the paper "documents the acceleration of large redemptions from investment grade corporate bond mutual funds, which put downward pressure on the prices of investment grade corporate bonds" in March 2020; Annette Vissing-Jorgensen, "[Bond Markets in Spring 2020 and the Response of the Federal Reserve](#)," University of California Berkeley and NBER (October 20, 2020), suggesting that "Outflows from bond mutual funds, especially investment grade corporate funds contributed to both Treasury and corporate market price pressure."

[5] V. Haddad, A. Moreira, and Tyler Muir, "[When Selling Becomes Viral: Disruptions in Debt Markets in the COVID-19 Crisis and the Fed's Response](#)," *Review of Financial Studies* 34 (2021). Jaewon Choi, Saeid Hoseinzade, Sean Seunghun Shin, and Hassan Tehranian, "[Corporate Bond Mutual Funds and Asset Fire Sales](#)," *Journal of Financial Economics* (November 2020), analyzes data through 2019 and states that "We find little evidence...that bond fund redemptions drive fire sale price pressure."

[6] The [Daily News Sentiment Index](#) is a high-frequency measure of economic sentiment based on lexical analysis of economics-related news articles.

[7] The [Aruoba-Diebold-Scotti Business Conditions Index](#) is designed to track real business conditions at high observation frequency. Its underlying (seasonally adjusted) economic indicators (weekly initial jobless claims; monthly payroll employment, monthly industrial production, monthly real personal income less transfer payments, monthly real manufacturing, and trade sales; and quarterly real GDP) blend high-frequency and low-frequency data.

[8] Marcelle Chauvet and Jeremy Max Piger, "Smoothed US Recession Probabilities [RECPROUSM156N]," retrieved from [FRED](#), Federal Reserve Bank of St. Louis.

[9] In a [previous post](#), we presented evidence that bond mutual funds' sales of Treasuries during this period had only a minimal impact on the Treasury market.

[10] Funds also may have met redemptions in part with cash spun off from their portfolio holdings through interest income, bonds maturing, or prepayments of principal.

[11] During market downturns, market forces can actually bolster the proportion of these funds' assets in highly liquid securities, such as cash, cash equivalents, and Treasuries and agencies. This can happen if, for example, the prices of Treasury and agencies fall less than prices of corporate bonds (as would typically be the case during a downturn). All else equal, that would automatically boost the proportion of a fund's assets in Treasuries and agencies and lower its proportion in corporate bonds.

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