SEC FIMSAC:
A survey of academic research on Bond Funds during the Covid pandemic

Kumar Venkataraman
Professor of Finance, Cox School of Business
Southern Methodist University
Do Bond funds pose a risk to financial market stability?

Significant growth in Assets Under Management by bond mutual funds and ETFs in the last decade.

Low interest rates have pushed bond funds to ‘reach-for-yield’ by holding less liquid assets.

Post-crisis banking regulations have reduced dealer capital for market making.

**Concern**
Large investor outflows
Funds selling relatively illiquid assets
Price disruptions that will destabilize markets

Source: SEC’s FIMSAC sub-committee, Financial Stability Board; International Monetary Fund.
Liquidity mismatch in Bond Funds that hold illiquid assets

Fund policy: Redeeming investors receive the end-of-day NAV.

(1) NAVs do not capture the cost of liquidation.
(2) Funds usually sell the most liquid assets first, making the fund’s holding less liquid over periods of persistent redemptions.

Transfers liquidation costs and liquidity risk from redeeming investors to other investors who keep money in the fund.

(theory) Large first-mover advantage in funds holding illiquid assets ⇒ amplifying withdrawals from illiquid funds.

(Empirics) Poor performance leads to large flows out of the bond sector, particularly for funds with illiquid holdings.

**Bond funds: unprecedented outflows during Covid-19 crisis**

**Between February and March 2020**
Cumulative outflows: 9% of Net Asset Value
Large fraction of funds experienced extreme and persistent outflows.

**Taper Tantrum (June-July of 2013)**
Cumulative outflows: 2.2% of Net Asset Value

Large outflows in the week prior to March 23 (Fed announcement)
Investment-grade funds and ETFs experienced large and sustained outflows

*Source: Falato, Goldstein and Hortacsu (2020): Financial Fragility in the Covid-19 crisis, working paper, NBER.*
Evidence from COVID:  
Fund Illiquidity amplifies fragility, as predicted by theory

Evidence consistent with investor panic is first observed in
• Funds with less liquid holdings
• Funds exposed to higher fire-sale risk (commonality in holdings)
• Funds experiencing bad fund performance.

Fed’s announcement of corporate bond purchases stopped the outflows by calming the market.

Next time around .............

Swing pricing – mitigates the run dynamics.
• Introduced in 2018 but is still not implemented in US.

Evidence from UK – corporate bond funds
• Significantly reduced redemptions during stress periods.

Source: Falato, Goldstein and Hortacsu (2020); Jin, Kacperczyk, Kahraman, and Felix (2020) – available on SSRN.
Safer assets faced larger price disruptions

Interpretation

Large and persistent selling pressure from bond investors trying to obtain cash by selling the safer and more liquid securities.

Prices recover after the Fed announcement to purchase assets.

Figure 4: Returns during the COVID-19 crisis across asset classes, normalized by beta. This figure reports the cumulative log returns for the stock market (S&P500), an investment-grade corporate bond ETF (LQD) and a high-yield corporate bond ETF (HYD) through the COVID-19 crisis, from February to early April 2020. Returns are scaled to all have a market beta of 1 based on the previous two years of data.

Source: Haddad, Moreira and Muir (2020): When selling becomes Viral, working paper, NBER.
Liquid ETFs traded at a discount to NAV

Investment-grade ETFs trade at a large discount (5%) to NAV. Similar discounts are observed between large ETFs and identical “twin” mutual funds.

High-yield ETFs do not exhibit such dislocation.

Figure 11: ETF-NAV discounts.
Panel A plots the discount of ETF price relative to NAV for iShares ETFs: an investment-grade corporate bond ETF (LQD), a high-yield corporate bond ETF (HYG), a Treasury ETF (TLT), a municipal bond ETF (MUB), a MBS ETF (MBB), and two ETFs that track separately short- and long-term investment grade corporate bonds (IGSB and IGLB). Panel B plots discounts between matched Vanguard ETF and mutual fund shares trading the same portfolio for corporate bonds, municipal bonds, mortgage-backed securities, and a total bond index (70% Treasuries, 30% Investment grade bonds). Discounts are given in percent, with negative value indicating that an ETF price is lower than its NAV.

Source: Haddad, Moreira and Muir (2020): When selling becomes Viral, working paper, NBER.
Selling pressure and not information?

**Figure 7: CDS-bond basis.**
The figure plots the median CDS-bond basis — green line — for investment-grade bonds in the LQD portfolio that have CDS contracts present in the CDX IG basket (Panel A) and high-yield bonds in the HYG portfolio with CDS contracts present in the CDX HY basket (Panel B). The blue line is the bond spread, and the orange line is the CDS spread. See text for data construction.

Source: Haddad, Moreira and Muir (2020): When selling becomes Viral, working paper, UCLA and NBER.
Future Research

New Fed policy as a financial stability tool? Is it beneficial in the long run?

Who drove the selling pressure?
• Bond funds
• Insurance companies

Source of structural fragilities & how to fix them
• Swing pricing.

ETF prices versus NAV (evaluated) prices
• Where is the real price?