

SENDING A CLEAR SIGNAL

Bond ETFs show where markets are trading in real time

Overview

Worries about the economic impact of the coronavirus pandemic in recent weeks have led to a rapid deterioration in liquidity across nearly every corner of the fixed income markets—from emerging market debt to corporate bonds to even Treasuries and municipals. Amid the turmoil, investors have increasingly turned to bond exchange traded funds (ETFs) for clarity about what is happening across fixed income markets and to actively adjust portfolios.

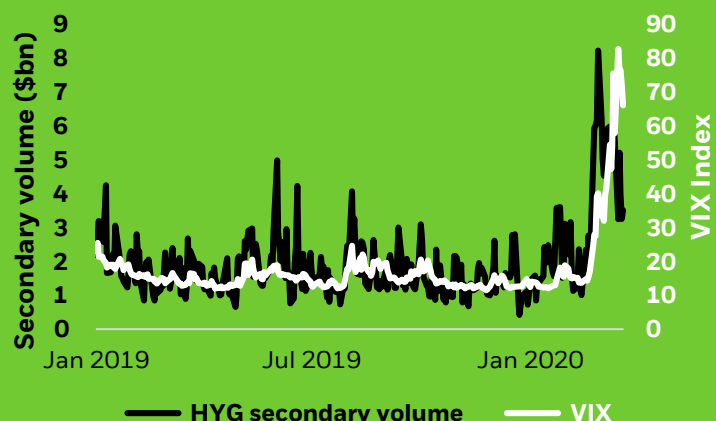
Bond ETFs can accurately reflect the conditions of the markets while improving price transparency, providing access to liquidity and offering immediacy of trading that is not available in individual bonds during this unprecedented period of market stress.

Commentators have long speculated about what would happen should bond ETFs be tested by a once-in-a-generation market shock and raised questions about whether ETFs can withstand waves of selling. The facts from the past few weeks highlight that ETFs held up well in extreme fixed income market conditions.

Investors have turned to the most liquid bond ETFs to help navigate bond market dislocations. As they did so, these flagship ETFs became sources of real-time price discovery for markets where transparent quotations and trading activity deteriorated. It became cheaper to transact in many bond ETFs than in bonds themselves, and bond ETFs continued to perform as designed by tracking their indexes closely.

ETF trading jumps in line with market volatility

HYG secondary volume vs. Cboe Volatility Index



Source: BlackRock, Bloomberg (data as of March 24, 2020)

As bond markets get more volatile, investors are flocking to bond ETFs

As financial market volatility has increased over the past four weeks, average daily trading volumes in all U.S. bond ETFs more than tripled to nearly \$35 billion, compared with \$11 billion last year.¹

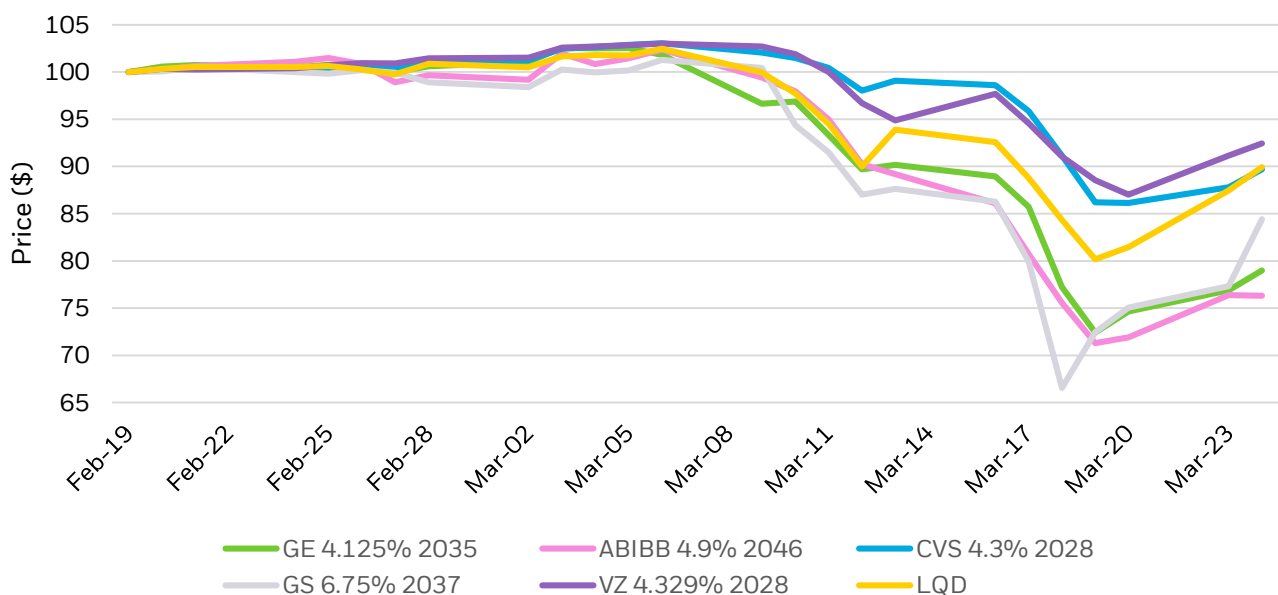
Investors have tended to use bond ETFs even more during times of uncertainty because they are efficient and effective tools to for rebalancing holdings, hedging portfolios and managing risk. Consider that earlier this month the daily trading volume in the iShares iBoxx \$ High Yield Corporate Bond ETF (HYG) surged to more than \$8 billion (compared with an average of \$1.7 billion in 2019) on the same day that the Cboe Volatility Index, or VIX, climbed to its highest level since 2011.²

By itself, HYG accounted for 27% of total high-yield bond market trading over the past four weeks. That's up from 14% in January.³

Whether in HYG or other ETFs that track bond indexes, the implication is clear: as markets became more volatile, investors have flocked to fixed income ETFs.

A window into real-time pricing

Prices of LQD vs. top holdings



Name of holding	Weight in LQD
GE Capital International Funding (GE)	0.35%
Anheuser-Busch Companies Llc (ABIBB)	0.31%
CVS Health Corp (CVS)	0.31%
Verizon Communications Inc (VZ)	0.22%
Goldman Sachs Group Inc. (GS)	0.21%

As of 3/23/20. Holdings subject to change. Information on non-iShares Fund securities is provided strictly for illustrative purposes and should not be deemed an offer to sell or a solicitation of an offer to buy shares of any security other than the iShares Funds, that are described in this material.

1 BlackRock, Bloomberg; ADV includes all U.S-listed bond ETFs from Feb. 24, 2020 through March 23, 2020 (data as of March 24) **2** BlackRock, Bloomberg (data as of March 24) **3** BlackRock, Bloomberg (data as of March 24, 2020)

As more investors turned to bond ETFs, they became indicators of real-time prices

Bond ETFs trade frequently, meaning their prices to incorporate more real-time information than even their most heavily traded portfolio bonds. This is especially true during volatile markets as ETF trading activity increases.

On March 12, one of the worst days for U.S. stock benchmarks in modern history, shares of the iShares iBoxx \$ Investment Grade Corporate Bond ETF (LQD) changed hands almost 90,000 times on exchange, while its top five holdings traded an average of only 37 times apiece.⁴ Throughout March, more than half of LQD's bonds traded between zero and five times per day, on average.⁵ Especially during periods of bond market volatility, ETFs regularly trade thousands of times more frequently than the bonds in their portfolios.

Even in calm market conditions, most bonds seldom change hands. Of the more than 21,000 publicly registered corporate bonds, for example, fewer than 1% trade daily in the over-the-counter market.⁶

Prices for infrequently traded bonds are estimated. An estimate is very different from a real-time, actionable market price that a bond ETF can provide.

Consider a fund's net asset value (NAV), or the estimated fair value of its holdings. U.S. ETFs are required to publish NAV each trading day and, for fixed income ETFs, NAV is based on actual trades and estimates based on trades of similar bonds from the same issuer or sector, or other market metrics. Importantly, NAVs represent an aggregate of individual bond prices, while a bond ETF's price represents an actionable trade for that entire portfolio at that moment. The two can differ, particularly during periods of volatility and market stress.

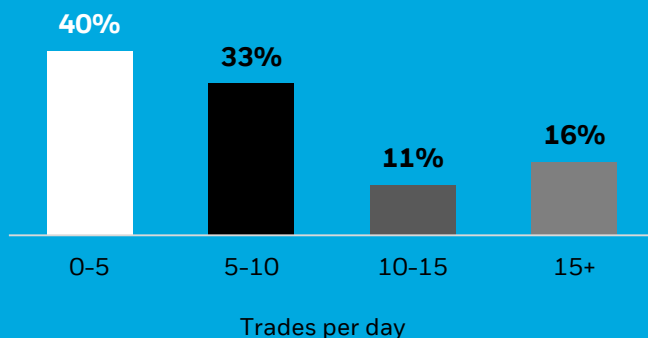
At times bond NAVs can resemble appraisals for a home, which are similarly derived from both real trades in the neighborhood as well as estimates. As any homeowner knows, the difference between an appraisal price and the closing price can vary markedly: the price that matters is the one at which you can buy or sell.

When a fixed income ETF trades at a "discount" during volatile periods, the takeaway is often that ETFs offer real-time price indications much like closing prices for a home represent levels where real buyers meet real sellers.

How often did LQD index holdings trade during a volatile March 2020?

Source: FINRA TRACE, BlackRock from 3/2/2020 – 3/20/2020. Includes only end investor buys and sells – not dealer-to-dealer trades.

Percentage of LQD universe trading



⁴ BlackRock, TRACE (as of March 24, 2020) ⁵ BlackRock; NYSE (data as of March 24, 2020). ⁶ Citigroup, "The coming revolution in credit portfolio trading" (November 2019)

In stressed bond markets, bond ETFs can offer lower transaction costs than individual bonds

Bond ETFs have demonstrated lower trading costs relative to individual bonds in the recent market stress, making them the cheapest and most efficient ways to exit or enter the bond market.

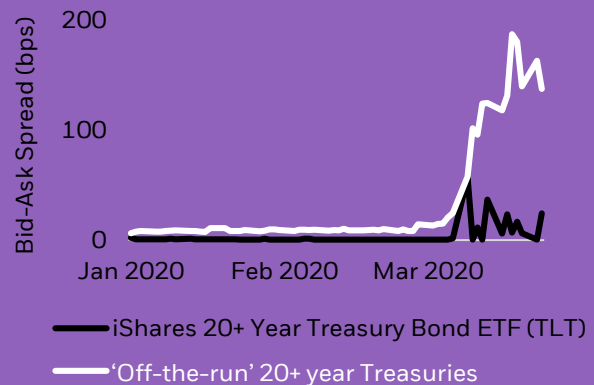
This is true even in the market for U.S. Treasuries, one of the deepest and most liquid markets in the world. Over the past four weeks, the bid/ask spreads in the iShares 20+ Year Treasury Bond ETF (TLT), which seeks to track an index of long-dated U.S. government bonds, averaged roughly eight basis points and rose at times into double-digits, up from one in normal market conditions.⁷

By comparison, the spreads of “off-the-run” long-dated Treasury bonds—which are less frequently traded than the most-recent U.S. government issues and account for the bulk TLT’s portfolio—widened sharply to more than 80 basis points on average over the past four weeks and many as 188 basis points on March 18. This compares with and 10 basis points in calm conditions.

Investors ultimately use index-tracking fixed income ETFs to seek index performance. Many of the most liquid iShares fixed income ETFs have done this over the past month, even in the face of extreme volatility. And recent market volatility has not impacted longer-term index tracking. Performance and tracking information for every iShares ETF is available every day for all investors.

A yawning price gap in trading costs

Bid/ask spread price comparison
TLT versus ‘off-the-run’ 20+ year Treasuries



Source: BlackRock, Bloomberg (as of March 24, 2020)

Bond ETFs have performed as expected

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Note that LQD has maintained tight performance to its indexes after fees relative to its benchmark since markets began to show signs of stress on Feb. 19, 2020. And over the past year, LQD’s performance including fees has exactly matched the performance of the index. It has also closely tracked its benchmark over three, five and 10 years. The same holds true for HYG, TLT, the iShares J.P. Morgan USD Emerging Markets Bond ETF (EMB), and the iShares National Muni Bond ETF (MUB), and other liquid iShares bond ETFs.

⁷ BlackRock; NYSE (data as of March 24, 2020).

iShares fund performance as of 6/30/2020

Performance for iShares iBoxx \$ Investment Grade Corporate Bond ETF (LQD)

	2/19 - 3/24 2020	1-Year	3-Year	5-Year	10-Year	Since Inception
Total return	-12.98%	11.04%	7.11%	6.38%	5.96%	5.91%
Market price	-10.50%	11.64%	7.28%	6.56%	5.97%	5.94%
Benchmark	-13.05%	11.17%	7.22%	6.59%	6.14%	6.15%
Total return v. benchmark	+0.07%	-0.13%	-0.11%	-0.21%	-0.18%	-0.24%
Current exp. ratio	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%

Performance for iShares iBoxx \$ High Yield Corporate Bond ETF (HYG)

	2/19 - 3/24 2020	1-Year	3-Year	5-Year	10-Year	Since Inception
Total return	-20.61%	-1.62%	2.54%	3.62%	5.60%	4.99%
Market price	-18.68%	-1.52%	2.55%	3.65%	5.68%	4.97%
Benchmark	-20.76%	-1.25%	2.92%	4.18%	5.97%	5.45%
Total return v. benchmark	+0.15%	-0.37%	-0.38%	-0.56%	-0.37%	-0.46%
Current exp. ratio	0.49%	0.49%	0.49%	0.49%	0.49%	0.49%

Performance for iShares J.P. Morgan USD Emerging Markets Bond ETF (EMB)

	2/19 - 3/24 2020	1-Year	3-Year	5-Year	10-Year	Since Inception
Total return	-20.27%	0.56%	3.21%	4.83%	5.40%	5.71%
Market price	-18.97%	0.73%	3.37%	4.82%	5.36%	5.73%
Benchmark	-13.05%	1.01%	3.67%	5.35%	6.10%	6.42%
Total return v. benchmark	-7.22%	-0.45%	-0.46%	-0.52%	-0.70%	-0.71%
Current exp. ratio	0.40%	0.40%	0.40%	0.40%	0.40%	0.40%

Performance for iShares National Muni Bond ETF (MUB)

	2/19 - 3/24 2020	1-Year	3-Year	5-Year	10-Year	Since Inception
Total return	-7.85%	4.27%	3.91%	3.61%	3.78%	4.04%
Market price	-7.89%	4.45%	4.02%	3.69%	3.79%	4.05%
Benchmark	-7.86%	4.23%	4.08%	3.83%	4.04%	4.20%
Total return v. benchmark	+0.01%	0.04%	-0.17%	-0.22%	-0.26%	-0.16%
Current exp. ratio	0.07%	0.07%	0.07%	0.07%	0.07%	0.07%

Performance for iShares 20+ Year Treasury Bond ETF (TLT)

	2/19 - 3/24 2020	1-Year	3-Year	5-Year	10-Year	Since Inception
Total return	13.30%	25.77%	12.14%	9.41%	7.89%	7.65%
Market price	12.11%	25.87%	12.07%	9.50%	7.86%	7.65%
Benchmark	13.31%	25.96%	12.28%	9.52%	8.00%	7.75%
Total return v. benchmark	-0.01%	-0.19%	-0.14%	-0.11%	-0.11%	-0.10%
Current exp. ratio	0.15%	0.15%	0.15%	0.15%	0.15%	0.15%

Source: Bloomberg, BlackRock (as of June 30, 2020). Returns are annualized except for periods of less than one year.

Index performance is for illustrative purposes only. Index performance does not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.

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