

Lessons from COVID-19: ETFs as a Source of Stability



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Introduction

Exchange-traded funds (ETFs) proved their resilience in the first part of 2020. Unprecedented market volatility resulting from the COVID-19 pandemic presented ETFs with the most significant test they have faced since the 2008 global financial crisis (GFC). As liquidity in underlying markets deteriorated during the selloff, especially in fixed income, ETFs continued to trade efficiently, playing a leading role in price discovery for investors and banks as they gave transparency to the values at which investors were prepared to exchange risk.

ETFs did not increase market volatility; instead, they were a source of stability as investors increasingly turned to ETFs to efficiently rebalance holdings, hedge portfolios and manage risk. However, as we look back at this period of market volatility, we recognize that there are still areas where additional improvements can be made to bolster the strength and resiliency of the ETF market. In this *ViewPoint*, we examine ETF performance through April 2020 and offer recommendations to further strengthen the ETF ecosystem and benefit investors.

Key observations and recommendations

1. ETFs faced two tests in the first part of 2020: unprecedented market volatility and the most extreme conditions in the bond market since the GFC.
2. Elevated volumes in ETF trading, both in the aggregate and as a percentage of equity market volumes, demonstrated how investors looked to ETFs to allocate capital, adjust positions, and manage risk amidst record market turmoil.
3. As bond market liquidity deteriorated, investors increasingly relied on ETFs for fixed income exposure, as evidenced by ETF trading volumes that were many multiples of trading volumes of the underlying holdings. Moreover, ETFs provided real-time transparency into bond market prices when cash bond markets were frozen or difficult to trade.
4. While ETFs were resilient during the COVID-19 crisis, there are some areas that can be improved to further enhance their ability to add stability to markets:
 - a) Clarification around settlement requirements for US-listed ETFs when underlying markets are closed
 - b) Flexibility in redemption fees for US ETFs in times of extreme volatility
 - c) Enhanced classification system for exchange-traded products (ETPs)
 - d) Improved ETF trading transparency in Europe through the implementation of a consolidated tape and European Best Bid and Offer (EBBO)

The opinions expressed are as of July 2020 and may change as subsequent conditions vary.

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Updated version as of July 24, 2020

ETFs: Primary vs. Secondary Markets

Uniquely, ETFs operate in two markets, a “primary” market and a “secondary” market.

The majority of ETF trading occurs in the **secondary market**, where investors buy and sell existing shares of ETFs on-exchange or over-the-counter (OTC).

Similar to all publicly traded stocks, the price of ETF shares in the secondary market is determined in real-time based on supply and demand.

In contrast, in the **primary market**, large institutions known as authorized participants (APs) transact with

ETF issuers to create or redeem ETF shares. Creation and redemption activity occurs when there is an imbalance of orders to buy or sell shares, and therefore, demand cannot be fully met through the secondary market.

For more information on primary and secondary markets, and the role of APs, see our 2017 *ViewPoint: “A Primer on ETF Primary Trading and the Role of Authorized Participants”* and our 2019 *iShares Investigates: “Authorized Participants and Market Makers.”*

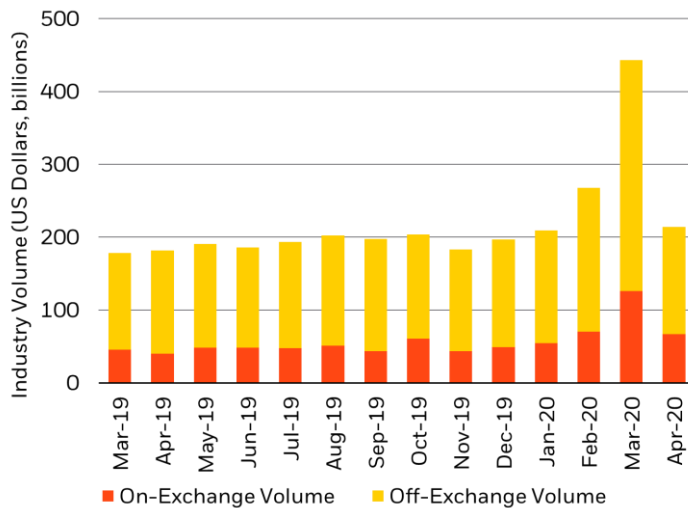
Secondary market trading volumes

Historically, ETF trading volumes have risen in times of market stress.¹ This held true during recent market events as well. On the most volatile trading days this year, secondary market trading of ETFs accounted for as much as 34% of all cash equity trading across Europe and 41% in the US, compared to daily average trading volumes of 21% and 27%, respectively, in 2019.²

Secondary market trading volumes increased significantly in March 2020 as the market responded to news relating to the COVID-19 pandemic. As demonstrated in Exhibit 1, the European ETF market traded \$443 billion, 231% more than the average monthly volume in 2019.³ The increase was even more striking in the US, where ETFs traded \$5.41 trillion in March, almost 300% more than the average month in 2019 (Exhibit 2).⁴

Exhibit 1: Total monthly secondary market trading volumes in the European ETF Industry

March 2019 – April 2020



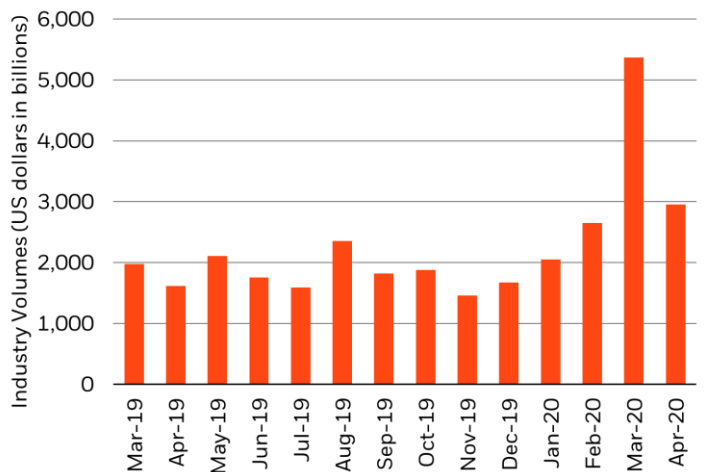
Source: BlackRock and Bloomberg, as of April 30, 2020.

While trading volumes in March were higher across all ETF asset classes, the increase in fixed income ETF trading activity was particularly noteworthy.⁵ As the underlying cash bond market liquidity deteriorated, many investors relied on ETFs for bond market exposure.

In the US, fixed income ETF volumes reached an average of \$33.5 billion per day in March 2020, which is more than three times the 2019 daily average.⁶ Record secondary market trading volumes in high yield and investment grade corporate bond ETFs signaled just how challenged underlying bond market liquidity had become. Investors traded \$282 billion of the five largest US high yield bond ETFs by assets under management (AUM) in the first quarter of 2020; \$135 billion of which took place solely in March.⁷ The five largest US investment grade bond ETFs by AUM also experienced elevated volumes (\$210 billion) as a

Exhibit 2: Total monthly secondary market trading volumes in the US ETF Industry

March 2019 – April 2020



Source: BlackRock and Bloomberg, as of April 30, 2020.

result of heightened activity in March (\$114 billion).⁸ The average daily volume in both sets of these funds throughout the quarter was approximately double their average daily volume in 2019, further illustrating how investors increasingly turned to ETFs when markets were stressed.⁹

Similarly, in Europe, during the first quarter of 2020, UCITS fixed income ETFs traded an average of \$18.75 billion per week, more than 1.3 times the 2019 weekly average of \$14.25 billion. During the month of March 2020, the combined average daily volume (ADV) of the five largest UCITS corporate bond ETFs by AUM reached \$265 million (nearly double the 12-month ADV).¹⁰

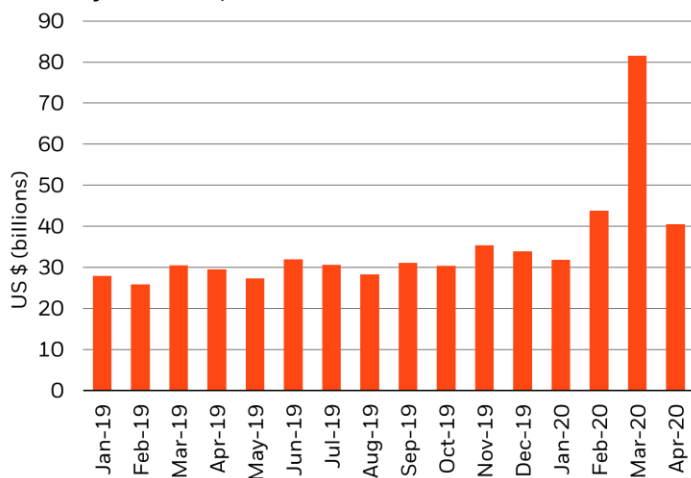
Creation, redemption and ETF ecosystem participation

Similar to secondary market activity, primary market activity was elevated in the first quarter of 2020. A record \$81.6 billion of primary market trading occurred in iShares European-domiciled ETFs in March 2020, which is a 168% year-over-year increase and 155% higher than the trailing 12-month average (see Exhibit 3).¹¹ US iShares primary market volumes were higher than average at \$171.6 billion for the month, which is 231% more than March 2019 and over 200% higher than the trailing 12-month average (see Exhibit 4).¹²

Contrary to claims that market makers and APs are likely to step away in times of market stress, the ETF ecosystem functioned efficiently amidst the volatility and surging volumes. Participation from authorized participants (APs) was broad, with 22 different APs creating and redeeming shares of iShares ETFs in Europe and 24 in the US during March 2020.¹³ For comparison, 24 and 28 APs were active in iShares ETFs in Europe and the US, respectively, in 2019.

Exhibit 3: Primary Market Activity in Europe

January 2019 – April 2020



Source: BlackRock and Bloomberg. As of May 4, 2020.

These participation statistics are validated by our analysis of the breadth and depth of the US AP universe. Drawing on data disclosed by registered investment companies in Form N-CEN filings, as required by the US Securities and Exchange Commission (SEC) annually, we found that 37 different APs were active in US-listed ETFs in 2019. On average, each US-listed ETF has approximately 5 active APs.¹⁴

While some have suggested that primary market activity is concentrated, in actuality, the AP responsible for the highest amount of creations and redemptions of US-listed ETFs accounted for less than one quarter of all ETF creation and redemption activity by dollar value.¹⁵ **The breadth of the AP universe, and the evidence from the latest stress test of the ETF ecosystem from March 2020, should assuage concerns that ETFs rely too heavily on a limited number of institutions, or that APs step away during a crisis.**

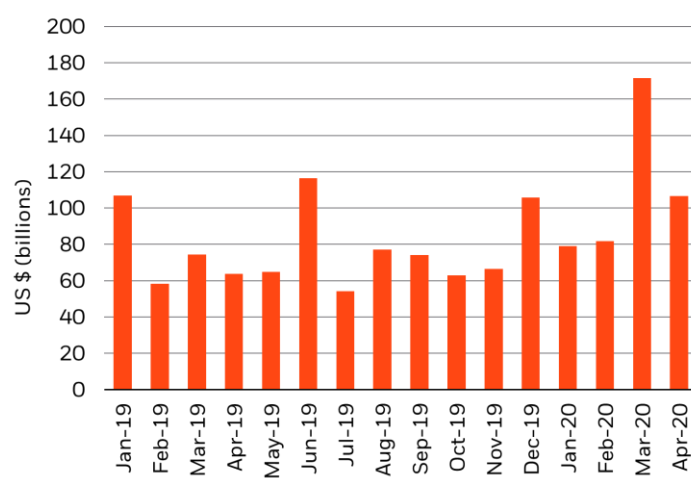
Bid-ask spreads

Bid-ask spreads for all securities tend to widen in times of market uncertainty as market makers seek to price in risk.¹⁶ During the recent bout of market volatility, bid-ask spreads in ETFs widened in-line with the market. This widening was largely due to elevated trading volumes and the hedging costs that market makers were experiencing as a result of exceptional levels of volatility and a lack of liquidity in underlying assets. Despite this, in many instances, it was cheaper to trade the ETF than the basket of underlying securities.

For example, in the US Treasury market, one of the deepest and most liquid markets in the world, average bid-ask spreads on the five largest Treasury bond ETFs by AUM fluctuated from one to three basis points, while spreads on

Exhibit 4: Primary Market Activity in the US

January 2019 – April 2020

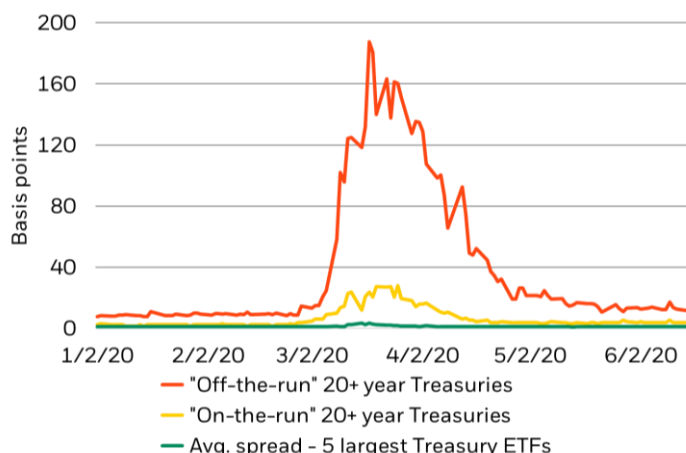


Source: BlackRock and Bloomberg. As of July 22, 2020. This graph has been updated in the version of this paper, dated July 24, 2020.

off- and on-the-run Treasury bonds widened sharply to a peak of nearly 188 basis points on March 18 and 27 basis points on March 20.¹⁷ In other words, the dislocations in the Treasury market caused the bid-ask spreads of individual bonds to widen more than 20 times what was available through a comparable Treasury ETF on the same day. While the spreads on Treasury ETFs can be tighter than the spreads on underlying Treasuries in normal market conditions, this advantage was magnified during the recent market turbulence (see Exhibit 5).

In Europe, credit markets were especially stressed, with bid-ask spreads widening by a factor of 2-3 times compared to normal market averages. The cost of trading corporate bonds averaged 55 basis points between March 9 and March 20. In comparison, bid-ask spreads in the five largest corporate bond ETFs by AUM averaged 24.4 basis

Exhibit 5: Bid-ask spread comparison (Treasury ETFs versus Treasuries)



Source: Bloomberg, NYSE, BLK. As of June 17, 2020.

Fixed income market structure – implications in March 2020

Bond trading is conducted almost exclusively in decentralized, OTC markets. The opaque nature of these markets means that even with the advent of reporting systems, such as the Trade Reporting and Compliance Engine (TRACE) in the US, transparency has remained challenged. In Europe, despite the concept being introduced via MiFID II, post-trade transparency remains opaque and fragmented due to the absence of consolidated tape akin to TRACE. The lack of an effective consolidated tape amplified the challenges in Europe.

Historically, investors bought and sold bonds through broker-dealers as principals that utilized balance sheet capacity to warehouse bond inventory. However, regulatory reforms following the GFC have resulted in higher funding and capital costs for banks and regulated broker-dealers, ultimately reducing the amount of bonds these institutions hold on their balance sheets.

Increased algorithmic bond pricing and an accelerated adoption of electronic trading and alternative bond trading architecture, such as all-to-all networks, have modernized the bond market. Today, fixed income markets are more transparent and offer lower transaction costs than ever before.

In March 2020, global financial markets experienced a massive deleveraging, evidenced by flows across nearly all asset classes. As volatility increased, long-only investors sold both on- and off-the-run government-issued debt (US Treasury bonds and UK Gilts) to raise liquidity. This—combined with reduced liquidity, increased funding pressure, and increased bid-ask

spreads, particularly in off-the-run Treasuries—strained liquidity and financing in the market.

The increased use of fixed income ETFs over this period highlighted the structural weaknesses inherent in the underlying bond market. Fixed income ETFs allow for efficient trading of baskets of securities that may otherwise be difficult or expensive to access individually. Additionally, the ability to trade ETFs on-exchange provides an incremental layer of liquidity to the bond market because buyers and sellers can exchange shares of the ETF without having to buy or sell the underlying bonds. This exchange-tradability also makes fixed income ETFs both a more efficient and effective tool for implementing investment conviction when fixed income markets are stressed and a more reliable indicator of price discovery than most individual bonds (because most bonds do not trade every day).

Over the past decade, the growing adoption of fixed income ETFs and other fixed income index exposures have been one of the primary drivers of change in the fixed income market. For example, the increase in broker-dealers and market makers to rapidly price and trade portfolios of bonds in order to facilitate fixed income ETF creation and redemption has led to the rise of algorithmic bond pricing and a further acceleration in the adoption of electronic trading and alternative bond trading architecture. As a result, fixed income markets are more transparent from a pricing perspective and offer lower transaction costs than ever before. However, there is still more to be done (see recommendations in *Areas for Improvement* on pgs. 6-7).

points over the same period.¹⁸ **This means that it was more cost-effective for investors to access the corporate bond market using ETFs than to do so by buying or selling the individual bonds.**

Fixed income ETF premiums and discounts

Despite the significant increases in trading volumes and dislocations in underlying markets in the first part of 2020, ETFs have demonstrated their ability to perform as designed. This was particularly evident with fixed income ETFs. When bond markets were impaired in March, ETFs provided investors access to liquidity by allowing them to trade in the secondary market at real-time prices.

Over this period, one widely observed and criticized behavior was that the prices of many fixed income ETFs deviated from the value of their underlying securities, or net asset value (NAV).¹⁹

The NAV of an ETF is generally calculated once daily, using pricing services that maintain their own methodologies. Inputs for NAV calculation are typically actual trades (for bonds that traded that day) and/or estimates for bonds that trade infrequently or did not trade that day. Estimates for infrequently traded bonds are typically based on observed market activity for similar bonds that did trade (established by issuer, sector, or other attributes) and other metrics such as dealer quotes and interest rate movements.

Because prices from pricing services, and therefore NAVs, can be based largely on estimates, they are determined in a different way than the prevailing market sentiment reflected in real-time ETF prices. Typically, an ETF's price is in-line with its NAV, but it is possible for ETFs to trade at prices above (premium) or below (discount) NAV. These differences are usually insignificant for most ETFs but can be inflated during periods of market stress or high volatility.

Rather than exposing a flaw in the ETF structure, these discounts highlighted how fixed income ETF prices can provide a window into underlying market conditions, transmitting real-time information and providing price discovery for market participants.²⁰ Bonds that trade infrequently may not have current market sentiment fully embedded in their prices, which means end-of-day NAVs may not represent up-to-date market levels. ETF market prices adjust quickly in rapidly changing markets, so the trading price of the ETF can be a source of price discovery of where investors are valuing the underlying portfolio of bonds.²¹

For example, when market volatility spiked on March 12, shares of a UCITS ETF providing exposure to US dollar investment grade credit closed (on local European

exchanges on which it was listed) at a price that was roughly 7.5% below its end-of-day NAV.²² This was not an “issue” with the ETF; instead, the ETF's market price may have reflected the then-current market-clearing price for bonds that traded less frequently, and therefore provided a more real-time source of price discovery compared to the NAV. In fact, the fund changed hands more than 1,000 times on exchange and over the counter, while its top five underlying holdings traded an average of only 37 times each.²³ This phenomenon extended through April's “risk-on” period in investment grade credit; on April 9, the same ETF traded 537 times, while its top five underlying bonds each traded fewer than 20 times.²⁴ In the US, the largest high yield bond ETF traded over 168,000 times per day during the week of March 23 to March 27, while the fund's largest five bond holdings traded an average of 25 times per day.²⁵

Exhibit 6: Divergence between ETF price and NAV

\$IG end of day premium / discount to NAV
(January 2020 – May 2020)



Source: Bloomberg, as of June 1, 2020. Data for the largest by assets under management of a US investment grade corporate bond ETF.

This was not limited to the credit market; we saw similar examples across municipal bonds and Treasuries as well. At a time when bond market liquidity was challenged, bond ETFs provided price discovery.²⁶

Federal Reserve purchases of fixed income ETFs

On March 23, the Federal Reserve established the Secondary Market Corporate Credit Facility (SMCCF) to provide liquidity to the corporate bond market. In addition to buying individual bonds, the SMCCF may purchase US-listed ETFs whose investment objective is to provide broad exposure to the market for US corporate bonds.²⁷

Floating Rate Bond ETFs

Amid the market turmoil in early March, investors sold ultra-short and floating-rate fixed income exposures to raise cash, leading to a reduction in liquidity and pricing in the bond market. During this time, the largest US floating rate bond ETF closed at a discount to its net asset value (NAV) on multiple days. On March 12, heightened selling pressure drove the fund to close at a discount of 8%.

We believe the market price of the ETF was reflective of the underlying market for floating-rate notes. Many of the fund's underlying bonds had not traded over the period, which means their prices may not have been reflective of current market conditions.

Because investors could trade the ETF on exchange, we believe the fund's market price was a better indicator of the pricing of and accessibility to the underlying floating-rate market. In essence, the fund was acting as a price discovery vehicle.

Fixed income ETFs are designed to provide a low cost, diversified, and transparent vehicle to access the broad bond market. There are many benefits to accessing the bond market with fixed income ETFs and the Federal Reserve's decision to buy ETFs appears consistent with trends we are observing in the wider financial market by a variety of investors.

Since the GFC, fixed income ETFs have become an integral part of the fixed income ecosystem by providing intraday liquidity, exchange trading, price discovery and transparency to a generally bilateral, opaque and discontinuously liquid bond market. Fixed income ETFs make it easier to access the bond market. A single purchase in an ETF can provide diversified access to thousands of individual bonds. Moreover, fixed income ETFs provide an alternative, on exchange vehicle for investor to obtain bond market exposure. This not only takes away pressure from the underlying bond market, but also adds transparency and price discovery.

Areas for improvement

As we have discussed above, ETFs were resilient through the recent period of volatility and were additive to the overall functioning of markets. That said, we have identified several recommendations to further strengthen the ETF ecosystem to benefit investors.

1. Guidance for US-listed ETFs when underlying markets are closed

Under the Investment Company Act of 1940 (1940 Act), redemption requests must generally be settled within seven calendar days from when the redemption request is received. For ETFs that invest in foreign securities and operate on an in-kind basis, there is additional flexibility for delayed settlement when such underlying markets are closed for up to 15 days.²⁸ However, this flexibility would not apply to ETFs that operate in cash. Extended holiday periods in non-US markets (especially if they are unplanned or during periods of high market volatility) or other unforeseen events, such as the imposition of capital controls and economic sanctions, may disrupt settlement cycles, making it challenging to meet redemption requests in a timely fashion.

We recommend that the SEC offer limited relief such as the ability to delay settlement during unforeseen and extended market events in order to help ETF sponsors address these potentially challenging market situations.

2. Redemption charge flexibility for US ETFs in times of extreme volatility

Pursuant to the 1940 Act, the amount funds can charge to APs on redemptions to mitigate against the potential dilutive impact of cash redemptions is capped at 2% of the value of the shares redeemed. While this 2% maximum limit is generally sufficient under normal market conditions, when markets are extremely volatile, transaction and other costs incurred by the ETF may exceed 2%. In such cases, the excess would be absorbed by the ETF to the detriment of the ETF's remaining shareholders.

We recommend that the SEC consider limited relief for ETFs that operate in cash to allow charges on redemptions in excess of 2% during periods of increased volatility to better protect fund investors in such unusual circumstances.

3. Enhanced classification of exchange-traded products (ETPs)

Recent market events have underscored the need for clearer ETP classifications to better inform investors of the wide range of structures and risks associated with different ETPs. "ETF" has become a blanket term for any product that offers exchange-tradability. However, many products labelled as "ETFs" have elements distinct from the type of product most commonly associated with the term (i.e., those providing a linear return on a benchmark index), such as the use of leverage to deliver a return that is a multiple of the index the fund tracks or, in the case of exchange-traded notes, exposure to the creditworthiness of the issuer of the underlying debt. For example, in April 2020, the dramatic

decline in oil prices resulted in a 3x levered long crude oil-linked exchange-traded note being delisted with an expected value of zero dollars per note.²⁹

As a wider range of end-investors turn to ETPs, it is becoming increasingly important to protect investors by helping them distinguish among different product types, the way such products behave during periods of market volatility and the risks involved. In the US, BlackRock has joined an industry coalition in asking the US stock exchanges to adopt a proposed a classification system.³⁰ BlackRock is also working with industry participants and trade associations to advance similar efforts in Europe.

We believe an ETP classification system will better serve end-investors by providing more clarity on the specifics of these products as well as help policy makers and regulators focus their efforts.

4. Improved ETF trading transparency in Europe

The European ETF industry has benefited from the execution transparency delivered through MiFID II, which enables market participants and sophisticated investors to see daily ETF trading volumes. However, we believe there is more to be done.

A lack of common reporting standards has prevented commercial providers from creating a centralized record of all ETF trade reports, resulting in an uneven playing field that favors sophisticated investors with the capacity to aggregate data (versus retail investors who are unable to accurately assess the liquidity ETFs provide). BlackRock remains actively engaged in industry efforts to establish an appointed and regulated Consolidated Tape Provider (CTP) which would aggregate and disseminate ETF trade reporting to all venues and clients as near to real-time as possible. As noted above, the COVID-19 crisis has also highlighted the opacity and fragmentation of underlying

bond markets, which led to ETFs becoming a price discovery tool; this reinforces the need for a consolidated tape across both fixed income and equity markets. The current proposal is part of MiFID II review consultations being conducted by the European Commission and ESMA; the solution has similarities to the Securities Information Processor (SIP) in the US, which consolidates trade information into one accessible data feed.

In our view, a single CTP should be mandated and overseen by European Securities and Markets Authority, which would specify the request for proposal appropriately with clear delivery guidelines, latency requirements, and other technical specifications. The Consolidated Tape could be delivered widely and at reasonable cost. Our preference is for it to be funded by a cost-plus-margin fee charged to users, with a portion of the revenue generated used to compensate trading venues for the data they input to the Consolidated Tape.

Conclusion

ETF performance throughout the market volatility in the first part of 2020 demonstrated how ETFs can add stability to capital markets. In the face of record volatility, ETFs performed as designed. Instead of stepping away, APs and market makers were engaged, facilitating heightened ETF trading volumes. In fixed income, ETFs offered price transparency and liquidity to an otherwise opaque, illiquid bond market. Throughout the pandemic and resulting market volatility, investors increasingly turned to ETFs to allocate capital and manage risk in their portfolios.

While there are some areas that can be improved to further benefit investors, ETFs generally functioned well and delivered on investor expectations during the COVID-19 crisis despite facing the most turbulent market conditions in over a decade.

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- [Comment Letter: SEC Proposed Rule on Exchange-Traded Funds](#)

Endnotes

1. BlackRock, Bloomberg. As of 5 June 2020.
2. Bloomberg, BlackRock, CBOE. As of 5 June 2020. European volumes include the full universe of European-domiciled ETFs measured against volumes for the European exchange-based cash equity market (EU, UK, & Swiss stocks). Secondary market trading as a percentage of cash equities peaked in Europe on March 4, 2020 and in the US on March 3, 2020.
3. BlackRock, Bloomberg. As of 30 April 2020.
4. BlackRock, Bloomberg. As of 30 April 2020.
5. BlackRock, Bloomberg. As of 30 April 2020.
6. Bloomberg, BlackRock. As of 6 April 2020.
7. Bloomberg, BlackRock. As of 6 April 2020.
8. Bloomberg, BlackRock. As of 6 April 2020.
9. Bloomberg, BlackRock. As of 6 April 2020.
10. Bloomberg. As of 20 March 2020.
11. BlackRock. As of 4 May 2020.
12. BlackRock. As of 9 June 2020.
13. BlackRock. As of 4 May 2020.
14. BlackRock, Form N-CEN. As of 27 March 2020. For full analysis, see iShares, "iShares Investigates: ETF Ecosystem - Authorized Participants by the Numbers" (Oct. 7, 2019), available at <https://www.ishares.com/us/literature/investor-education/ishares-investigates-authorized-participants-market-makers-part-2-en-us.pdf>.
15. Bloomberg. As of 20 March 2020.
16. The bid is the highest current price at which dealers are willing to buy; the ask is the lowest current price at which dealers are willing to sell. The different between the two, the "bid-ask spread," measures how much it costs to get in and out of each ETF share (wide spreads mean higher costs, narrow spreads mean lower costs).
17. A basis point is one hundredth of one percent. BlackRock, Bloomberg, NYSE. As of 31 March 2020.
18. Tradeweb. As of 18 June 2020.
19. Financial Times, "ETFs have proved critics wrong during the crisis" (April 30, 2020), available at: <https://www.ft.com/content/edae8e90-8a1e-11ea-9dcb-fe6871f4145a>.
20. For more information on this topic, see Bank of England, "Interim Financial Stability Report" (May 2020), available at: <https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-report/2020/may-2020.pdf>, pp. 7.
21. For more information on this topic, see BIS Bulletin, "The recent distress in corporate bond markets: cues from ETFs" (14 April, 2020), available at: <https://www.bis.org/publ/bisbull06.pdf>.
22. NAV is calculated and published at the end of day's trading for US markets, typically at 3pm New York time for this exposure.
23. BlackRock. As of 4 May 2020.
24. BlackRock. As of 14 July 2020.
25. BlackRock, Bloomberg. As of 5 May 2020.
26. For more information see iShares, "Bond ETFs send a clear signal" (April 14, 2020), available at: <https://www.ishares.com/us/insights/etf-trends/bond-etfs-send-a-clear-signal>.
27. Federal Reserve, "Secondary Market Corporate Credit Facility" (SMCCF), available at <https://www.federalreserve.gov/monetarypolicy/smccf.htm>.
28. Rule 6c-1.1 will grant relief to permit an ETF to delay satisfaction of a redemption request for more than seven days if a local market holiday, or a series of consecutive holidays, or the extended delivery cycles for transferring foreign investments to redeeming authorized participants, or the combination thereof prevents timely delivery of the foreign investment included in the ETFs basket. See Securities and Exchange Commission, Exchange Traded Funds, Investment Company Act Release No. 33646, 84 Fed. Reg. 57162 (Oct. 24, 2019) at 57175, available at <https://www.federalregister.gov/documents/2019/10/24/2019-21250/exchange-traded-funds>.
29. The price decline reflected the embedded economics and risks of this ETN; it performed as expected but with volatility and market risks significantly different than unlevered index tracking ETFs. Barclays exercised its issuer call option, which allows the issuer to call the ETN at its discretion. See Barclays, Press Release, "Barclays announces the redemption of the iPath® Series B S&P GSCI® Crude Oil Total Return Index ETNs ("the ETNs") and the suspension of further sales and issuance of the ETNs" (April 20, 2020), available at <https://barxis.barcap.com/file.app?action=shared&path=iPath/US/Press/Barclays%20suspends%20further%20creations%20for%20OIL%20ETN.pdf>
30. For more information, see BlackRock, Charles Schwab, Fidelity Investments, Invesco, State Street Global Advisors, and Vanguard, *Letter to Exchanges Regarding ETP Classification* (May 13, 2020), available at <https://www.blackrock.com/corporate/literature/publication/letters-to-exchanges-regarding-etp-classification-051320.pdf> and iShares, "Know What You Own: Advancing ETP Classification," available at <https://www.ishares.com/us/education/etp-classification>.

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