

April 2026



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Three key takeaways

- ETFs remained resilient during the Covid-19 shock, supporting liquidity and price discovery when underlying markets were dislocated.
- Severe stress in credit and equity markets pushed investors toward ETFs as a more reliable source of tradable liquidity.
- When futures markets were halted by circuit breakers, ETFs became a key reference point for market pricing, especially outside US hours.

One of the most common questions that is asked of exchange traded funds (ETFs) is 'How do they hold up in times of stress and volatility?' Amid unprecedented market conditions arising from the Covid-19 pandemic from March 2020 and beyond, our conclusion is that ETF demand was not only relatively stable during this period, but ETFs also played a critical role in liquidity provision and price discovery, helping investors navigate dislocated underlying markets.

This blog series explores how different segments of the ETF market functioned during this stress event, and why the ETF structure proved resilient across asset classes.

How Covid-19 impacted the markets

The scale and speed of the market shock from Covid-19 in early 2020 was extraordinary. Equity markets experienced levels of volatility not seen since the Global Financial Crisis. The VIX index, a widely used measure of expected volatility, closed above 80 in March 2020, briefly surpassing levels reached in 2008.¹ During the same month, the S&P 500 recorded two of the 10 worst daily returns in its history and suffered its largest one month drawdown since October 1931.² These events understandably dominated market headlines at the time.

The dislocation in fixed income markets was equally significant and, in many respects, more dramatic. During the Global Financial Crisis, the iBoxx Investment Grade Corporate Bond Index declined by 15.7% from peak to trough over a period of 278 days. In stark contrast, during March 2020 the same index fell by 23.3% in just 14 days (Figure 1). Six of the ten worst daily moves ever recorded for the index occurred during that single month, including a 5% decline on 18 March, the worst day in its history.³ Credit volatility reached unprecedented levels as investors struggled to assess the implications of government lockdowns, supply chain disruptions, and collapsing demand on corporate balance sheets.

1. Source: Bloomberg

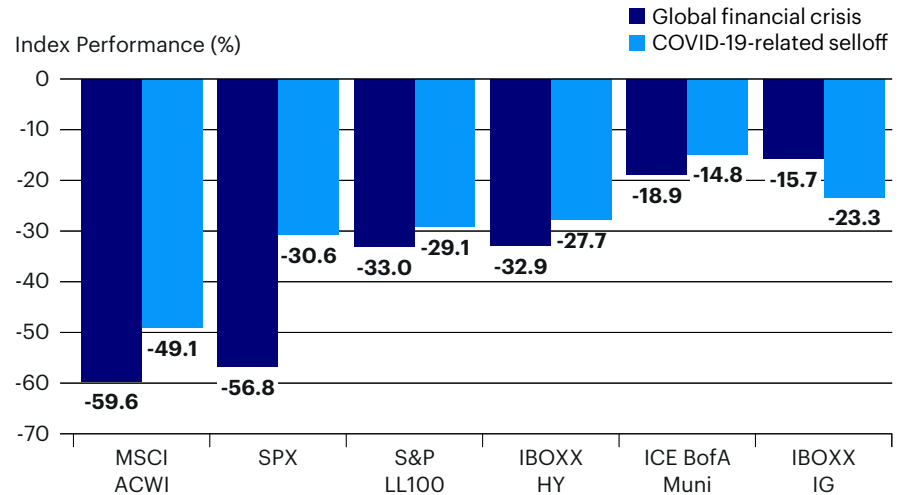
2. Ibid.

3. Ibid.

How the ETF market structure holds up during extreme volatility: Part 1

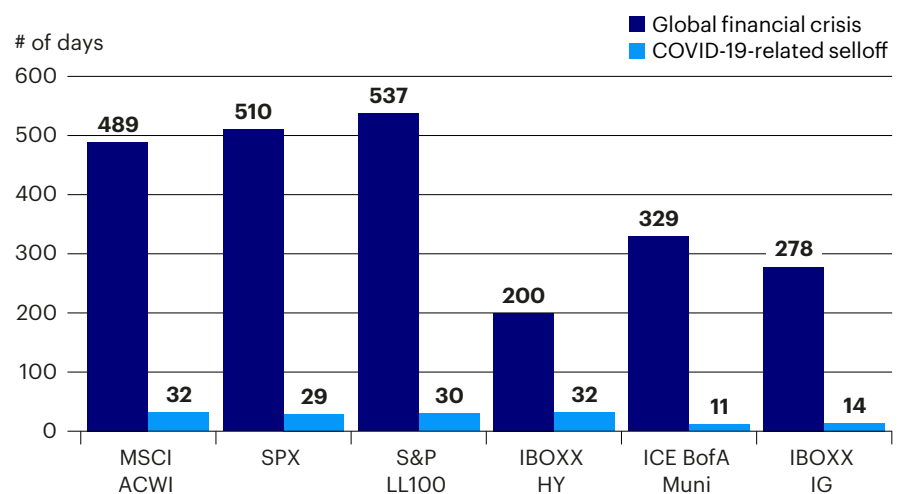
April 2026

Figure 1
Drawdown comparisons by asset classes



Source: Bloomberg, as at April 2020.

Figure 2
Number of trading days to hit max of drawdown



Source: Bloomberg, as at April 2020.

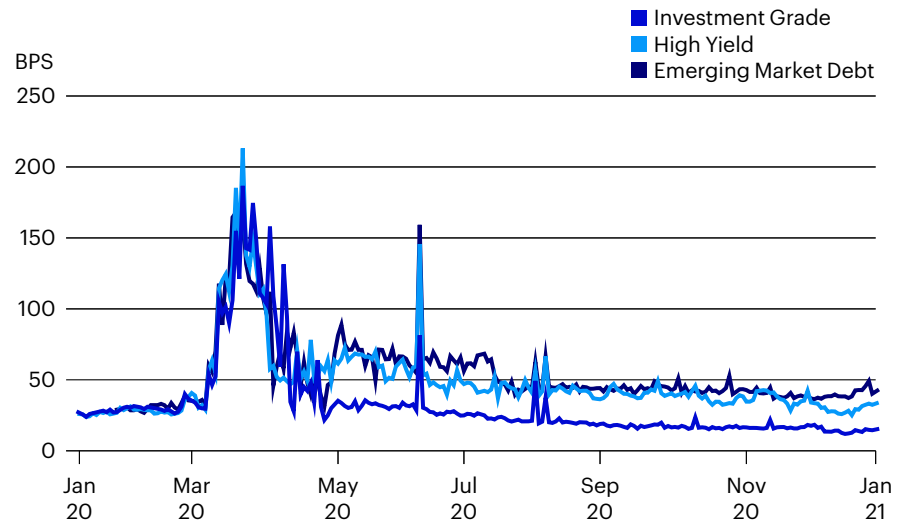
In 2020, banks and market makers were better capitalized relative to 2008 and thus the cash bond market continued to function. If market participants needed to sell, however, liquidity came at a price. Fund redemptions flooded dealers with supply and record credit volatility magnified the liquidity risk premium for dealers to warehouse inventory. It is worth noting that this market correction took place while non-essential offices were being shut, forcing buy-side and sell-side traders to adjust to work from home (WFH) conditions. While it is difficult to measure the direct impact of this shift in operations, we believe it further fragmented liquidity conditions throughout 2020.

To illustrate the deterioration of credit market liquidity in March 2020, below we include a time series of investment grade, emerging market, and high yield bond bid/ask spreads. We can see that investment grade bid/ask spreads were 15x their normal levels, while high yield and emerging market debt were also trading 7x and 5x wider compared to their usual average (Figure 3). From April 2020, spreads started to normalize, however, high yield and emerging market spreads continued to trade wider than prior to the Covid-19 selloff.

How the ETF market structure holds up during extreme volatility: Part 1

April 2026

Figure 3
Credit Market Average Bid/Ask Spreads



Source: Invesco, Virtu, as at December 2020.

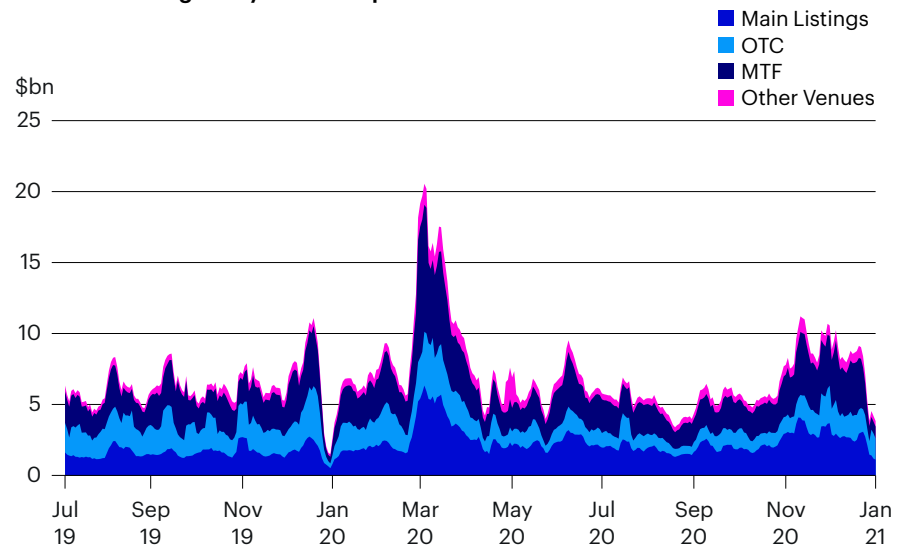
How did ETFs hold up?

As the Covid-19 crisis began to impact financial markets, ETFs saw a sharp increase in secondary market trading volumes, both on-exchange and over the counter (OTC). From the first week of March 2020, European ETF trading volumes increased to over two times their average 2019 volumes (Figure 4), and European equity ETFs accounted for 30% of all equity trading on the busiest days of this period.⁴

Investors that had difficulty accessing liquidity in underlying equity and fixed income markets, turned to ETFs as a source of liquidity and price discovery, leading to an extraordinary increase in secondary market trading volumes.

ETFs also proved a vital source of price discovery, as pricing underlying instruments was difficult for investors due to the lack of liquidity in certain market segments.

Figure 4
EMEA ETF Average Daily Volume Reported



Source: Invesco, Bloomberg, as at December 2020.

4. Ibid.

April 2026

Equities: The impact of circuit breakers

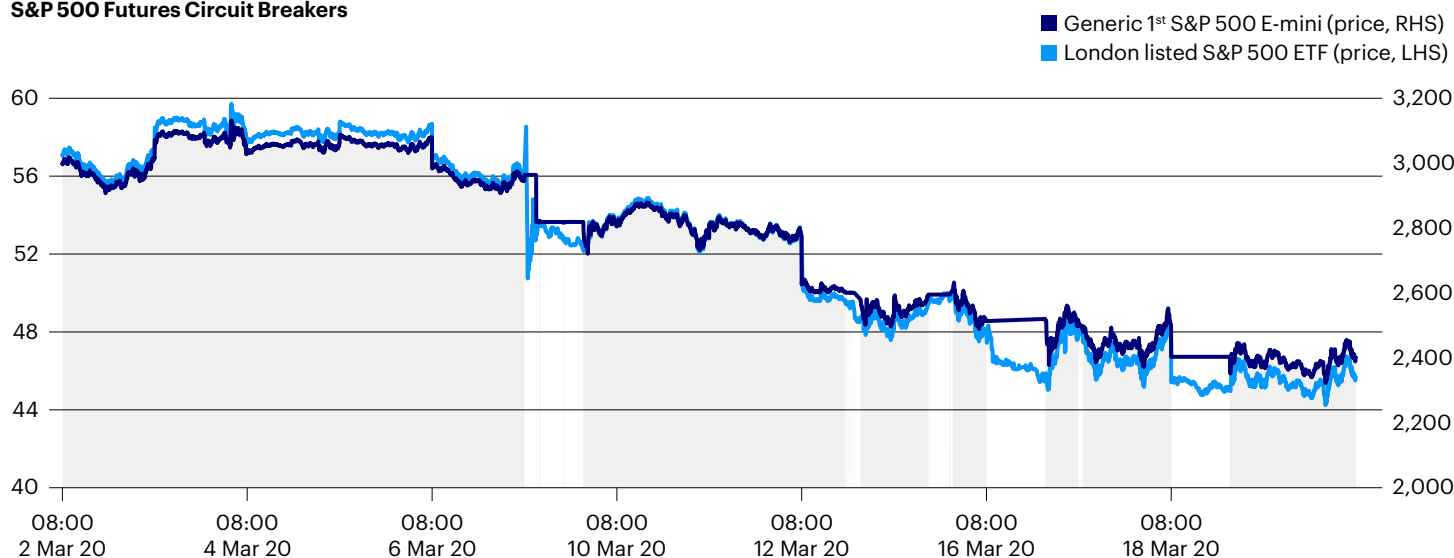
Although all assets were impacted by the Covid-19-related market volatility, equity ETFs faced their own challenges at the start of the turbulence. The S&P 500 Index saw two of its worst 10 days ever recorded as well as the largest one-month drawdown since October 1931. Such volatile swings led to circuit breaker levels being triggered on one of the most liquid futures products globally, the E-mini S&P 500 futures. Circuit breakers were introduced to curb panic-selling and are typically triggered when indices, such as the S&P 500 Index, face sharp quick drawdowns.

A 7% decline in the S&P 500 Index will trigger a Level 1 circuit breaker which results in trading being halted for 15 minutes for the NYSE cash equity market and all US-based equity index futures and options, including E-mini S&P 500, Micro E-mini S&P 500, and S&P 500 futures and options. The next trigger is a 13% decline (Level 2 circuit breaker) where trading will be halted for additional 15 minutes. Finally, the last trigger is a 20% decline (Level 3 circuit breaker) in the S&P 500 Index that will terminate trading for the remainder of the trading day.

These rules are in place during US market hours, however when US underlying futures are being traded out of US hours, stricter provisions apply. In such cases there is a hard upside and downside limit of 7% that, if triggered, the market stops trading until the US market opens. This meant S&P 500 Index futures were unable to be traded soon after European markets had opened upon the first 7% decline trigger being reached. Between Sunday 11 March and Monday 12 March 2020, the trading of E-mini S&P 500 futures was stopped for almost 12.5 hours.

In EMEA, and particularly outside US trading hours, ETF market makers reference the E-mini S&P 500 futures as a vehicle for hedging US exposures and providing market liquidity. With access to the E-mini S&P 500 futures halted until US markets opened, market makers had to quickly adjust their hedging models. ETFs swiftly adapted and became the only reference point for the S&P 500 Index during the peak of the COVID-19-related market turmoil.

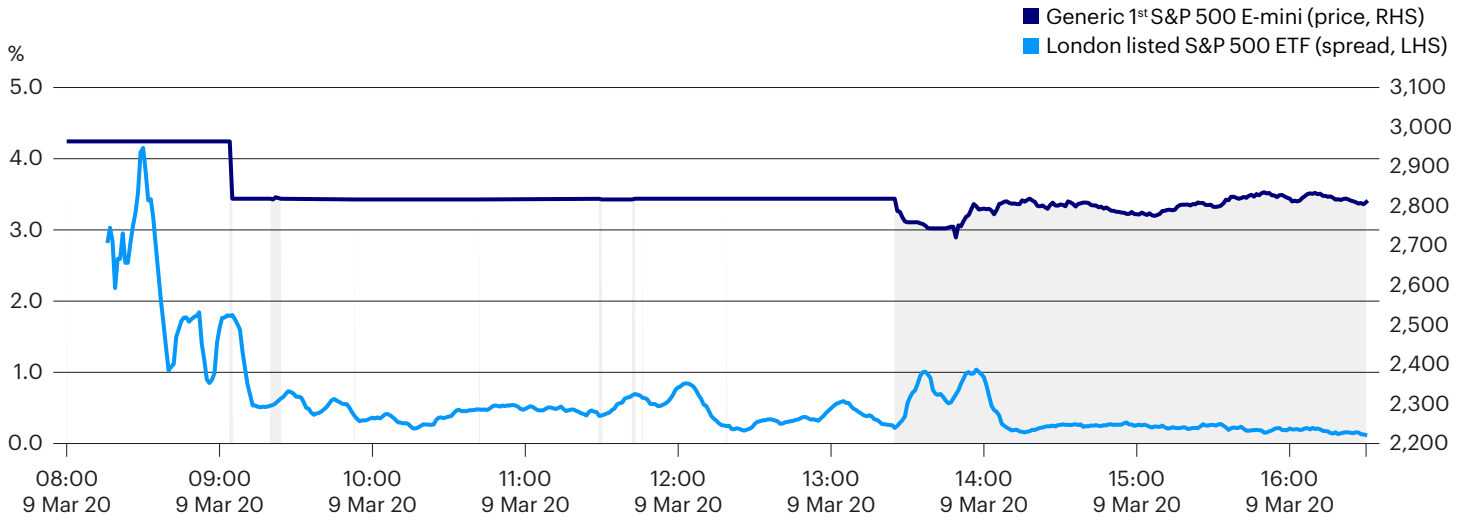
Figure 5
S&P 500 Futures Circuit Breakers



Source: Invesco, Bloomberg, as at March 2020.

Taking 9 March 2020 as an example (Figure 6), ETFs were the only reference point for the S&P 500 Index as trading in E-mini S&P 500 futures had stopped. We saw infrequent trading in the first hour of the trading session as investors and market makers took step back in order to adjust to the new regime. After the first hour, markets settled however spreads were wider than normal, but stable until US markets opened. At the open of the New York Stock Exchange (NYSE), a Level 1 circuit breaker was immediately triggered causing volatility and hence spread widening, however as we can see from the chart, spreads normalized shortly after trading resumed in cash and futures markets.

Figure 6
S&P 500 Futures Circuit Breakers – 9 March 2020



Source: Invesco, Bloomberg, as at March 2020.

In the next articles in this series, we will examine these dynamics in more depth, focusing specifically on fixed income ETFs and commodity ETFs, and exploring the broader lessons from the COVID 19 stress episode for investors, market makers, and regulators.

How the ETF market structure holds up during extreme volatility: Part 1

April 2026

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The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

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There are risks involved with investing in Exchange-traded Funds ("ETFs"), including possible loss of money. Index-based ETFs are not actively managed, and the return of index-based ETFs may not match the return of the Underlying index. Actively managed ETFs do not necessarily seek to replicate the performance of a specific index. Both index-based and actively managed ETFs are subject to risks similar to those of stocks, including those related to short selling and margin maintenance requirements. Equity risk is the risk that the value of equity securities, including common stocks, may fail due to both changes in general economic and political conditions that impact the market as a whole, as well as factors that directly related to a specific company or its industry.

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How the ETF market structure holds up during extreme volatility: Part 1

April 2026

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How the ETF market structure holds up during extreme volatility: Part 1

April 2026

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