5 go-to ETF statistics to watch in high-velocity markets

Case study: December 2018

What to watch in ETFs when markets turn volatile

Exchange traded funds (ETFs) are popular investment tools because they are low cost, have clearly defined holdings and strategies, and provide tax-efficient access to a wide range of exposures. As the ETF market grows, BlackRock believes that spotlighting key metrics can equip investors with tools to analyze high-velocity markets.

This report uses December 2018 as a case study to focus on market volatility through an ETF lens. Five statistics can tell investors most of what they need to know.

1. ETF flows
2. Estimated impact of ETF flows on market prices
3. ETF trading volume
4. Bid/ask spreads
5. Bond ETF trading versus individual bond trading

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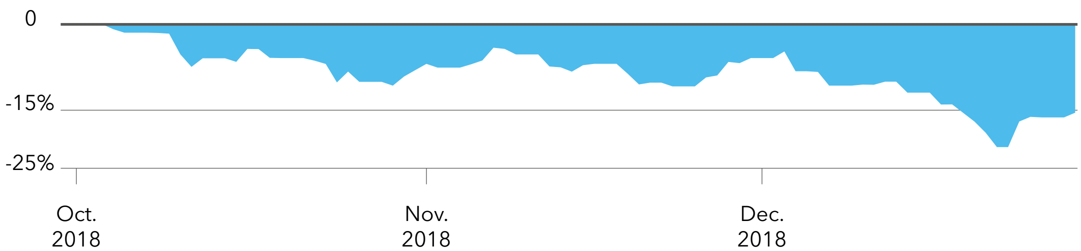
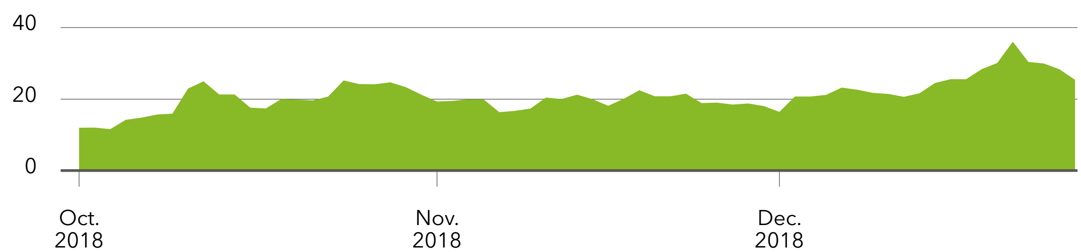
December 2018: A market recap

December 2018 was an unusually wild month for investors. The S&P 500 plunged to the brink of a "bear market," only to bounce back with its biggest one-session advance in more than nine years.[1] The Cboe Volatility Index (VIX), the market's "fear gauge," doubled.[2] No U.S. company issued a high yield bond in December, the first month in a decade with zero issuance.[3] Concerns about trade wars, global economic growth and rising interest rates all contributed to the gyrations.

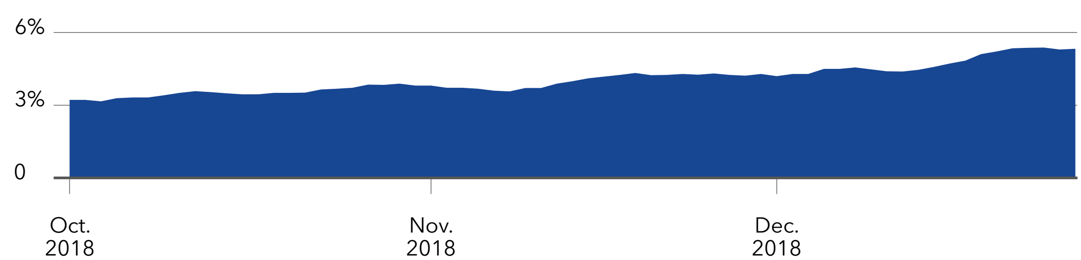
S&P 500 Index total return



Cboe Volatility Index (VIX) daily level



High yield bond spreads (difference between the ICE BofAML US High Yield Master II Index and comparable Treasury bonds)



Sources: Bloomberg; Cboe; Federal Reserve Bank of St. Louis (as of Jan. 2019).
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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1. ETF flows

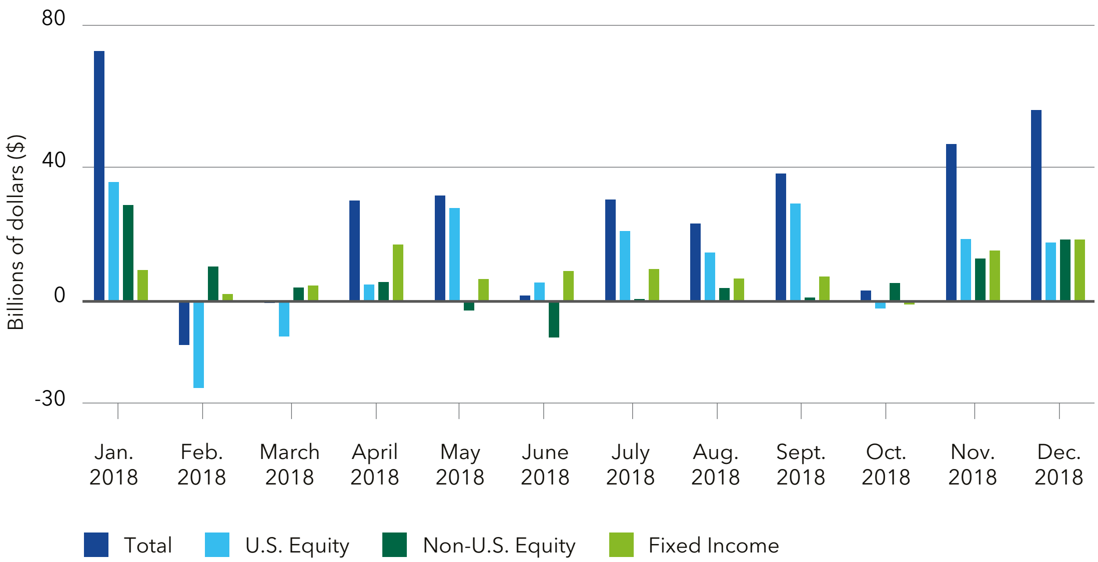
Why it matters: Follow the money

Many people follow aggregate ETF inflows and outflows—net flows—for insights into market sentiment and investor behavior. Net flows represent, in dollar terms, fluctuations in demand. When demand for an ETF exceeds supply, new shares are created (inflow). When demand contracts, shares are redeemed (outflow). Net flows demonstrate how ETF investors allocate, adjust positions and manage risk.

How it played out in December 2018

Investor demand spurred the creation of $53.7 billion in new ETF shares in December, the most since Jan. 2018.[4] The trend was evident across the board, with money moving into U.S.-equity, non-U.S. equity, bond, and commodities ETFs. December's net flows demonstrate that ETF investors were buyers amid the volatility.

Monthly net ETF flows



Source: BlackRock (as of Jan. 2019); U.S.-listed ETFs; excludes exchange traded notes (ETNs) and leveraged and inverse exchange traded products (ETPs).

2. Estimated impact of ETF flows on market prices

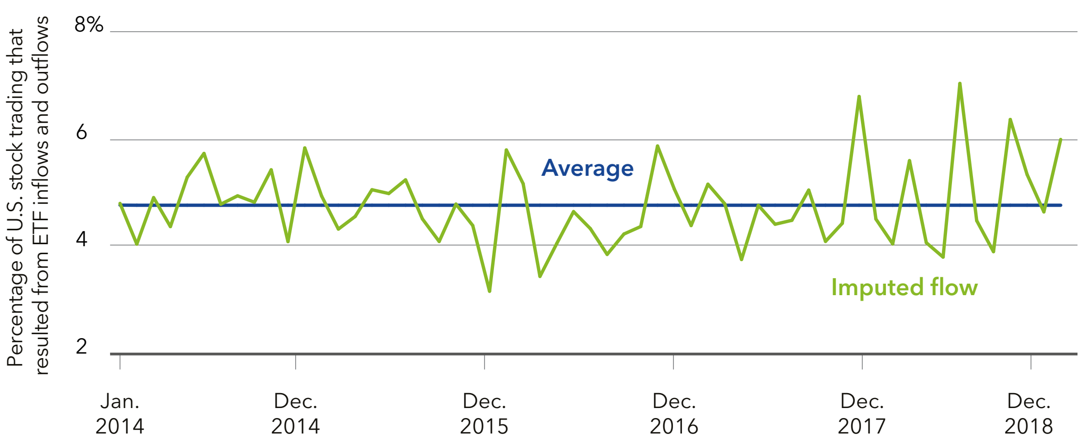
Why it matters: ETFs are price takers, not price makers

Questions sometimes arise about whether ETFs influence the prices of their constituent stocks. The estimated impact of net flows on stock trading, or imputed flows, can approximate an answer. This metric is derived from the collective weight of flows into all ETFs holding all U.S. stocks, and demonstrates that most ETF shares trade on exchange, between buyers and sellers. The majority of on-exchange activity doesn't affect the market price of constituent stocks in which ETFs invest; ETF constituent stocks are affected by ETF trading only when ETF shares are created or redeemed. BlackRock estimates that ETF inflows and outflows account for just 4.7% of trading in individual U.S. stocks in the average month.[5]

How it played out in December 2018

ETFs had minimal impact on stock prices in the U.S., as usual, in December. Based on imputed flow data, ETF inflows and outflows resulted in 5.9% of U.S. equity trading in December 2018, slightly above the 4.7% long-term monthly average but less than 6.7% that occurred in December 2017. Put another way, ETF trading in December exerted modest influence on stocks, even in volatile markets.

Estimated impact of flows on U.S. stock prices (monthly imputed flows)



Source: BlackRock (as of Jan. 2019).
There can be no assurance that an active trading market for shares of an ETF will develop or be maintained.

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3. ETF trading volume

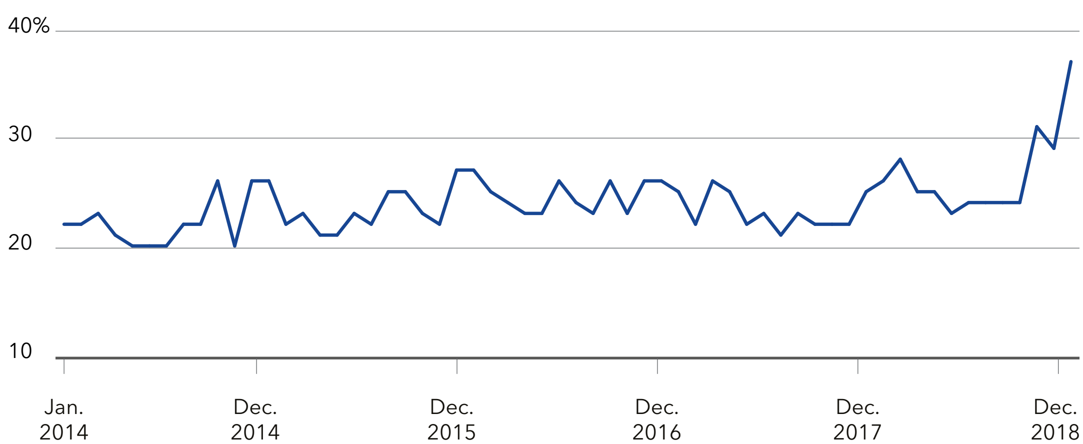
Why it matters: More volatility has typically led to more ETF trading

Investors tend to use ETFs more in times of uncertainty because they make it simple to rebalance and hedge portfolios. This is clear when comparing the dollar volume of ETF shares that trade on exchange against the dollar volume of individual stocks.

How it played out in December 2018

ETFs accounted for 37% of total U.S. equity market trading by value in December, the highest monthly reading since 2009.[6] Trading volumes rose as investors targeted ETFs to help rebalance allocations and offset risk. A note: ETF trading volume measures only on-exchange transactions between buyers and sellers, and is separate from inflows and outflows (recall that only a fraction of ETF trading volume generates trading in constituent stocks). To put December's ETF trading volume in perspective, $37 of every $100 that changed hands across all U.S. stock venues in December took place with ETFs.

Monthly ETF trading volume as a percentage of total U.S. stock market volume



Source: BlackRock (as of Jan. 2019).

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4. Bid/ask spreads

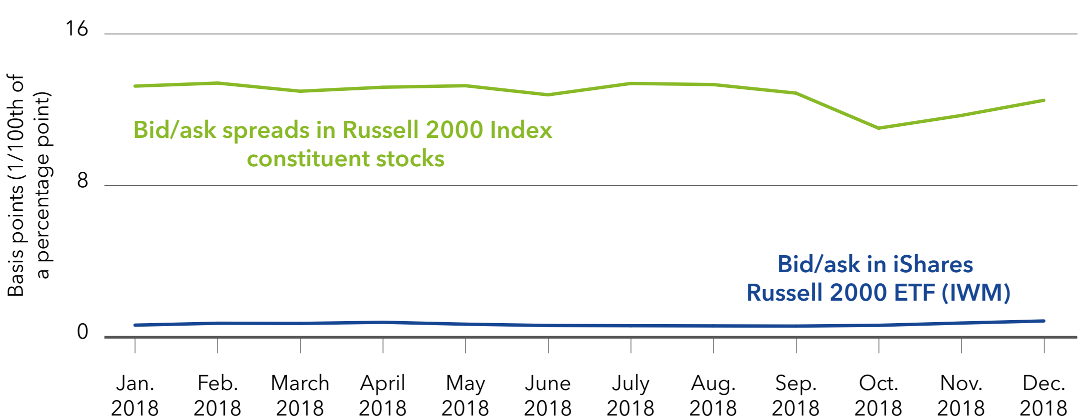
Why it matters: How much for a round-trip ticket?

ETF investors tend to have a laser focus on management fees but the total cost of ETF ownership also includes transaction costs. For active traders, transaction costs add up. ETF prices, like stock prices, are established by "bid" and "ask" quotations. The bid is the highest current price at which investors are willing to buy; the ask is the lowest current price at which investors are willing to sell. The difference 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). Market volatility creates pricing uncertainty and often translates into wider bid/ask spreads in stocks and ETFs.

How it played out in December 2018

Bid/ask spreads for iShares ETFs widened only modestly in December's stressed markets, and in some cases remained narrower than in the corresponding constituent stocks.[7] The average bid/ask spread for iShares ETFs on an asset-weighted basis was 0.0321% (3.21 basis points) in December, modestly wider than the 0.0264% (2.64 basis points) monthly average for all of 2018.[8] ETF trading costs, while elevated, were generally stable. In some cases, the ETF bid/ask spread was more favorable than a comparable basket of constituent stocks. For example, the basket-weighted average bid/ask spread of every stock in the Russell 2000 Index was 0.125% (12.5 basis points) in December. At the same time, the bid/ask spread in the iShares Russell 2000 ETF (IWM), which seeks to track the Russell 2000 Index, was 0.0086% (0.86 basis points). In other words, the cost to trade IWM was less than the cost of trading each stock in the index during December's volatility.[9]

Monthly bid/ask spreads in the iShares Russell 2000 ETF (IWM) and Russell 2000 Index stocks



Source: BlackRock (as of 2/18/2019).

5. Bond ETF trading versus individual bond trading

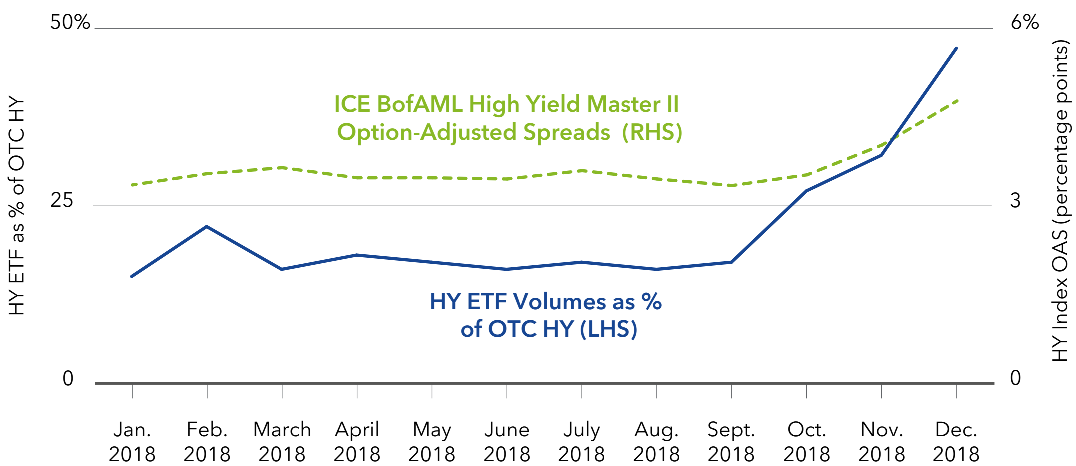
Why it matters: ETFs are an on-exchange bond alternative

ETFs provide an additional outlet for investors in harder-to-access assets, like bonds. Individual bonds trade differently than ETFs and stocks, which are bought and sold on exchanges with transparent bid/ask quotations. In contrast, the bond market is relatively opaque and bid/ask quotations are not readily available. In stressed markets, trading individual corporate bonds can be time-consuming and expensive. Investors increasingly rely on bond ETFs for more transparent, on-exchange pricing and trading.

How it played out in December 2018

Trading in U.S. high yield corporate bond ETFs surged to a record in December at the same time that trading in individual high yield bonds dwindled. These related trends, which took place as the corporate bond markets were under stress, underscore that investors are increasingly turning to the certainty of on-exchange ETF trading. Consider that volume in all U.S.-listed high yield bond ETFs surged to a record $72 billion in December.[10] At the same time, volume in individual high yield bonds was $154 billion, the lowest since June 2014.[11] Taken together, December's average daily trading in all U.S. high yield bond ETFs reached 47% of individual high yield bonds traded in the over-the-counter (OTC) market—a record. For every $100 that traded in individual high yield bonds in December, an additional $47 traded in high yield ETFs.

High yield corporate bond ETFs volume increased, and individual high yield bond volume decreased, as credit conditions deteriorated



Sources: SIFMA TRACE; BlackRock (as of 1/3/2018); Federal Reserve Bank of St. Louis.

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Glossary

Authorized participant (AP): Financial institutions that manage the creation and redemption of ETF shares in the primary market. Each AP has an agreement with an ETF sponsor that gives it the right (but not the obligation) to create and redeem ETF shares. APs may act either on their own, or on behalf of market participants.

Bid/ask spreads: A measure of the average cost to buy and then sell stocks or ETFs on exchange. Spreads are the difference between the bid price of the trade (what the buyer is willing to pay) and the ask price (what the seller is willing to accept).

Exchange traded fund (ETF): Like a mutual fund, an ETF is a pooled investment fund that offers access to a broad mix of stocks, bonds, or other assets. Unlike mutual funds, ETFs trade on-exchange intraday, just like a stock. The first U.S. ETF launched in 1993 and the U.S. ETF industry ended 2018 with $3.38 trillion in assets under management.[12]

ETF trading volume: Trading volume is a measure of buying and selling that takes place on exchange, sometimes called secondary market activity. Such on-exchange ETF trading is typically measured two ways: 1) total value traded 2) total number of shares traded. In 2018, the total value of ETFs traded constituted 28% of average equity trading compared with less than 26% in 2017; the number of ETFs traded accounted for 20% of the total U.S. equity market in 2018, compared with 18% in 2017.[13]

Imputed ETF flows: Imputed ETF flows estimate the proportion of all U.S. stock trading that resulted from ETF creations or redemptions. Imputed flows are the product of the collective weight of flows into all ETFs holding all stocks. Imputed ETF flows give an approximation for how much stock trading is generated by ETF inflows and outflows.

Net ETF flows: Inflows and outflows represent, in dollar terms, fluctuations in demand for ETF shares outstanding. An inflow occurs when the supply of outstanding ETF shares expands through new issuance. An outflow occurs when the supply of outstanding ETF shares contracts through redemptions. Net flows represent the sum of inflows and outflows.

Option-adjusted credit spread (OAS): The yield difference between a U.S. Treasury bond and a corporate debt security with the same maturity, adjusted for embedded options. The extra yield demanded by investors to own corporate bonds instead of government bonds is seen as a market-based indicator of credit risk.

Over-the-counter (OTC) market: Refers to decentralized market where securities trading takes place between two parties outside of formal exchanges. The OTC market relies on intermediaries including banks and brokers to conduct bilateral transactions.

Primary market: Refers to activities through which securities, including stocks and bonds and ETFs are issued and redeemed. The primary market for ETFs involves fund companies and authorized participants (APs).

Secondary market: Refers to the market where securities, including ETF shares, are traded and includes trading through regulated exchanges (such as NYSE ARCA, NASDAQ and Bats Global Markets). Secondary market trading also includes activity on Electronic Communications Networks (ECNs) and over-the-counter (OTC) between institutions.

1 Bloomberg, "Stocks Pushed to the Brink of a Bear Market on Christmas Eve," Dec. 24, 2018; (S&P 500's 7.1% decline in five sessions ended Dec. 24 was followed by a 5% advance on Dec. 26); Barron's, "In December, the Stock Market Tested the Extremes," Dec. 28, 2018.

2 CBOE Options Exchange.

3 Financial Times, "Record Outflow from U.S. Junk Bond Funds in 2018," Dec. 30, 2018.

4 BlackRock (as of Jan. 2019); U.S.-listed ETFs; excludes exchange traded notes (ETNs) and leveraged and inversed exchange traded products (ETPs).

5 BlackRock (as of Jan. 2019); average imputed flow on a monthly basis from 2014 through 2018.

6 BlackRock analysis of Bloomberg; Credit Suisse, "Learning to Live With Volatility Again," Jan. 15, 2018.

7 BlackRock (as of 2/18/2019; includes all products, including equity, fixed income and commodities); Goldman Sachs, "Investors Leaning on ETFs for Volatility in Volatile Tape," Jan. 7, 2019.

8 BlackRock (as of 2/18/2019; includes all products, including equity, fixed income and commodities).

9 BlackRock (as of 2/18/2019).

10 BlackRock; Bloomberg (as of 1/3/2018).

11 SIFMA TRACE; BlackRock (as of 1/3/2018).

12 BlackRock (as of Jan. 10, 2019).

13 Credit Suisse, "Learning to Live With Volatility Again," Jan. 15, 2018.

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Investing involves risk, including possible loss of principal.

When comparing stocks or bonds and iShares Funds, it should be remembered that management fees associated with fund investments, like iShares Funds, are not borne by investors in individual stocks or bonds.

Transactions in shares of ETFs will result in brokerage commissions and will generate tax consequences. All regulated investment companies are obliged to distribute portfolio gains to shareholders.

Fixed income risks include interest-rate and credit risk. Typically, when interest rates rise, there is a corresponding decline in bond values. Credit risk refers to the possibility that the bond issuer will not be able to make principal and interest payments. Non-investment-grade debt securities (high-yield/junk bonds) may be subject to greater market fluctuations, risk of default or loss of income and principal than higher-rated securities.

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