

## Exchange-Traded Funds

### Pricing and Liquidity Versus Common Stocks

Misconceptions about pricing and liquidity of exchange-traded funds (ETFs) are common among investors. For example:

- **Misconception:** ETFs are driven by the same market forces as stocks because they are bought and sold on an exchange like stocks.
- **Reality:** A stock's price and an ETF's price are determined by different processes.
  
- **Misconception:** Shareholders in lower volume ETFs won't be able to exit their position readily or will be forced to sell at a price substantially below the ETF's net asset value (NAV).
- **Reality:** ETFs generally trade very close to their NAV regardless of how many shares are traded.
  
- **Misconception:** An ETF's liquidity depends on the ETF's average trading volume, or the number of shares traded per day.
- **Reality:** A better measure of ETF liquidity is the liquidity of the underlying stocks in the index.

This white paper helps dispel some of these misconceptions about pricing and liquidity of ETFs.

#### Pricing<sup>1</sup>

A stock's price and an ETF's price are affected by different market forces and are determined by different processes.

#### Common Stocks

Corporations issue a limited amount of their shares for investors to purchase through the initial public offering process (the primary market). These shares are then available to buy and sell on the secondary market through major exchanges or the over-the-counter market. Investor demand for the limited number of shares available in the secondary market bids up or drives down share price. The combination of many available shares and low demand causes the stock price to fall. Conversely, few available shares and high demand result in a rise in the stock price.

#### ETFs

Shares of ETFs are issued through institutional parties known as authorized participants (APs), who create large blocks of the fund's shares called creation units, or a standard basket. Since the standard basket mirrors the holdings in the index the ETF replicates, the basket contains a certain number of stocks in proportionate percentages.<sup>2</sup>

The underlying stocks of the standard basket are priced every 15 seconds, and the percentage amounts of the stocks are totaled to arrive at the value of all the stocks on a per-unit basis. This value is called the intraday indicative value (IIV), or the approximate intraday NAV of the fund.

<sup>1</sup> Ordinary brokerage fees and commissions apply.

<sup>2</sup> Because the Fund utilizes a sampling approach, its return may not correlate as well with the return on the Underlying Index, as would be the case if it purchased all of the stocks in the Underlying Index.

Shares are not individually redeemable and owners of the shares may acquire those shares from the Fund and tender those Shares for redemption to the Fund in Creation Unit aggregations only, typically consisting of 100,000 shares.

At this point, APs attempt to profit by offering shares of the fund at a discount or premium to the intraday NAV. However, other APs have the ability to create and redeem shares of the standard basket, and they also have incentive to tighten this spread if they're able to buy (or sell) shares of the standard basket and then simultaneously sell (or buy) the underlying stocks of the ETF for a profit. This arbitrage opportunity for APs prevents specialists from making an unfair market of the fund's shares and is beneficial to ETF investors because it keeps the price of the ETF shares close to the intraday NAV of the fund—typically 15 basis points or less. ETFs, like PowerShares, that also have options and other derivatives tied to them, typically have an even tighter bid-ask spread because of the heightened activity among specialists, market makers and arbitrageurs.

To summarize pricing mechanisms briefly:

- The price of a stock is determined by the supply of and demand for its shares, while the price of an ETF is closely tied to the value of the underlying securities contained in the fund.
- Any discount or premium to the intraday indicative value of the ETF is kept low through an arbitrage process.

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## Liquidity

Like pricing, the liquidity of stocks and ETFs is driven by different market forces. The most important difference is that companies issue a fixed number of shares of common stock, while ETFs are able to issue and redeem shares.

### Common Stocks

Since a corporation issues a limited number of its shares, a seller must be matched with a buyer of those shares through major U.S. exchanges or the over-the-counter market. If a seller can't find a buyer for his shares at a certain price, the seller lowers the price of the shares to attract a buyer. Low demand may cause shares of a stock to become illiquid.

### ETFs

Unlike stocks, ETFs don't have a fixed number of shares. APs can issue and redeem shares of the ETF at any time to alleviate supply/demand mismatch. As a result, sellers don't necessarily have to be matched with buyers, and shares of the ETF can be broken down and created to meet the demand. If there are more buyers than sellers, APs create more shares to meet the higher demand. Conversely, APs redeem shares for lower demand when there are more sellers than buyers.

The APs do this because they are seeking to profit from arbitrage opportunities, as described on page 2. The APs are under no contractual obligation to act in the shareholders' interests. While cataclysmic market conditions may result in illiquidity for ETFs, we believe they are still more liquid even in this scenario than traditional mutual funds, which offer no market in the fund's shares until the market closes. During the decade that they've been available, ETFs have proved they can trade efficiently throughout the day and are as liquid as the basket of stocks they replicate.

In summary:

- Companies issue a limited number of shares of common stock, while ETFs can create and redeem shares to meet market demand.
- A stock's liquidity depends on trading volume, while a better measure of an ETF's liquidity is the liquidity of the underlying stocks of the index it seeks to replicate.
- ETFs, which trade throughout the day, offer greater liquidity than traditional mutual funds, which trade after the market closes.

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**NOT FDIC INSURED | MAY LOSE VALUE | NO BANK GUARANTEE**

Shares are not individually redeemable and owners of the shares may acquire those shares from the Fund and tender those Shares for redemption to the Fund in Creation Unit aggregations only, typically consisting of 100,000 shares.

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## **Important Disclosures**

There are risks involved with investing in ETFs, including possible loss of money. Index-based ETFs are not actively managed. Actively managed ETFs do not necessarily seek to replicate the performance of a specified index. Both index-based and actively managed ETFs are subject to risk similar to stocks, including those related to short selling and margin maintenance.

ETFs are not a tax shelter, and their structure was not designed with tax benefits as the objective. If you buy a share of an ETF and then sell it at a higher price, you owe taxes on the gain. ETFs do not reduce these taxes but merely minimize or remove the distortions embedded in the mutual fund structure.

This discussion is for informational purposes only and should not be regarded as tax advice. Each shareholder is urged to consult with his/her tax advisor. Note that a shareholder buying shares of an ETF and selling them later at a higher price is subject to taxation on the gains from these secondary market trades, just as a purchase and sale of any other stock is taxable.

Invesco PowerShares may engage in active and frequent trading of its portfolio securities, which could result in an increase in taxable capital gains distributions to shareholders, as well as higher brokerage costs. Dividends from net investment income, if any, are taxable as ordinary income.

Like any investment, ETFs have risks. These include the general risks associated with investing in securities, potential tracking error and the possibility that particular indexes may lag other market segments or active managers.

Invesco PowerShares Capital Management LLC makes every effort to use reliable, comprehensive information, but the Company makes no representation that it is accurate or complete.

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**An investor should consider the funds' investment objectives, risks, charges and expenses carefully before investing. For a copy of the prospectus, which contains this and other information about the fund, call 800 983 0903 or visit [invescopowershares.com](http://invescopowershares.com). Please read the prospectus carefully before investing.**

Note: Not all products, materials or services available at all firms. Advisors, please contact your home office.

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