

TRADING FIXED INCOME ETFS: WHAT YOU NEED TO KNOW

How is fixed income ETF trading different?

While many investors are familiar with trading equity ETFs, there are crucial differences to understand when trading fixed income ETFs.

Bonds Don't Trade on Exchanges

Probably the most important concept to understand is that bonds don't trade on exchanges like stocks. Instead, fixed income liquidity is diffused across hundreds of primary dealers with little pricing transparency. There are over 44,221 unique corporate bonds compared to about 4,045 U.S. stocks. As a result, bonds can go days without trading, a rarity for stocks.

A Bond ETF's Value Can Differ from Its Trading Price

Without an available exchange-traded price, fixed income ETFs are valued both intraday and endof-day on the bid. Because an ETF's intraday net asset value (INAV) is derived from bid-side bond pricing, the ETF's intraday trading price often differs from its INAV. This difference can cause a perceived premium or discount between the ETF's INAV and its trading price. Premiums and discounts can also occur if bond prices are "stale," and the ETF's price better reflects the true value of the bonds in the portfolio. In both cases, fixed income ETF prices can be different than the perceived value of their underlying securities.

Bond ETF Creations and Redemptions Employ Sampling of Their Indexes

To create or redeem fixed income ETFs, a liquidity provider usually delivers or receives a subset of the bonds in the full indexes. This "sampling" approach allows portfolio managers to use creations and redemptions to maintain the correct index exposure as indexes change. At the same time, smaller, more manageable creation and redemption baskets are easier for liquidity providers to trade and price. As an example, the figure below shows the number of bonds in the ProShares Investment Grade—Interest Rate Hedged ETF (IGHG) versus typical creation and redemption baskets.



Unique Rules of Engagement for Trading Bond ETFs

Fixed income ETFs, unlike individual bonds, offer intraday electronic trading and are often more liquid than the underlying baskets of bonds they track. However, there are some best practices specific to trading bond ETFs.

- 1. Avoid trading at the open of the market. Underlying bonds have wider spreads and may be more volatile at market open.
- 2. Steer clear of market orders. A market order runs the risk of sweeping through an ETF's book of liquidity, which may lead to higher trading costs.
- 3. Use a block trading desk for large orders. A block trading desk can access unseen liquidity and leverage a liquidity provider's inventory of bonds. The liquidity provider may only need 10 to 15 bonds to create or redeem the bond ETF.
- 4. The midpoint of the bid-ask spread may be a better indicator of fair value than the INAV. As discussed earlier, the INAV can become stale and fail to be an accurate gauge of where a bond ETF should be trading.

For more information email capitalmarkets@proshares.com.

This information is not meant to be investment advice.

Shares of any ETF are generally bought and sold at market price (not NAV) and are not individually redeemed from the fund. Brokerage commissions will reduce returns.

IGHG does not attempt to mitigate factors other than rising Treasury interest rates that impact the price and yield of corporate bonds, such as changes to the market's perceived underlying credit risk of the corporate entity. IGHG seeks to hedge investment grade bonds against the negative impact of rising rates by taking short positions in Treasury futures. These positions lose value as Treasury prices increase. The short positions are not intended to mitigate credit risk or other factors influencing the price of the bonds, which may have a greater impact than rising or falling interest rates. Investors may be better off in a long-only investment grade investment than investing in IGHG when interest rates remain unchanged or fall, as hedging may limit potential gains or increase losses. No hedge is perfect. Because the duration hedge is reset on a monthly basis, interest rate risk can develop intra-month, and there is no guarantee the short positions will completely eliminate interest rate risk. Furthermore, while IGHG seeks to achieve an effective duration of zero, the hedge cannot fully account for changes in the shape of the Treasury interest rate (yield) curve. IGHG may be more volatile than a long-only investment grade bond investment. Performance of IGHG could be particularly poor if investment grade credit deteriorates at the same time that Treasury interest rates fall. **There is no guarantee the fund will have positive returns.**

Carefully consider the investment objectives, risks, charges and expenses of ProShares before investing. This and other information can be found in their summary and full prospectuses. Read them carefully before investing. Obtain them from your financial advisor or broker-dealer representative or visit ProShares.com.

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