

International Equity ETFs: A close look at pricing

The closing market price of an ETF is generally aligned with its net asset value (NAV), the value of the ETF based on the stocks within its portfolio.¹ This is especially true for ETFs that primarily hold U.S. stocks, even though the market price fluctuates throughout the day, while the NAV is calculated once a day. However, for some ETFs that invest in securities that trade outside the U.S., it may be more common for market prices to differ from the NAV, that is, trade at a premium or discount, particularly in times of increased market uncertainty or volatility. While this may initially be a source of concern or confusion for investors, a closer look reveals why this difference can occur, and highlights one of an ETF's potential advantages: price discovery.

ETF pricing in International markets

ETFs that provide exposure outside the U.S. invest in securities that trade on exchanges in different time zones, many of which are closed when U.S. markets are open. In those cases, an ETF's NAV generally reflects the closing price of its portfolio holdings at the close of the trading day of the non-U.S. exchange. But while those non-U.S. markets are closed, events are transpiring in the U.S. and elsewhere that may impact the anticipated future value of those securities, potentially driving expectations for their prices to change from their previous closing price when they are next available to trade. How, then, does the market price of an ETF with international holdings reflect such changing price expectations during the U.S. trading day?

Price discovery

Information and news that can impact stocks is available around the clock and is constantly being processed by investors, traders, the media, corporations and financial institutions. In fact, even when international markets are closed, the market price of U.S.-domiciled ETFs holding international securities continue to be influenced by information about their underlying securities, through a process known as "price discovery."

It's the business of Authorized Participants (APs)—large institutions such as market makers or clearing firms that create and redeem large blocks of ETF shares—to determine the "intrinsic fair value" (IFV)² of an ETF given that, as the U.S. trading day progresses, the closing prices of international securities often go "stale" because they don't reflect events that have occurred since their close. IFV is an AP's proprietary calculation of the ETF's value based on its holdings' current price or, for any holding in closed markets, expected price at its next market open; it generally takes into account a range of factors, from earnings announcements, economic data releases, creation/redemption costs or the direction of U.S. stock markets to natural disasters and other non-financial news or events. It also reflects activity in futures, currency and foreign-exchange markets, many of which provide traders access 24/7. Price discovery, then, allows an ETF that holds securities whose markets are closed to reflect more realistic market prices.

¹ Net asset value is the per-share valuation of an ETF's securities, officially calculated once per day at market close. Market price is the price on the secondary market at which investors buy and sell shares throughout the trading day.

² Intrinsic Fair Value (IFV) is not calculated or published by Charles Schwab Investment Management, Inc., or any of its affiliates; it is calculated by professional market makers and/or APs, and may differ for each firm.

Many world stock exchanges do not trade during U.S. market hours

Because of differences in the trading hours of international markets, NAVs of ETFs that hold non-U.S. securities can become “stale,” meaning that they may not reflect the latest information available to the market.



During New York Stock Exchange trading hours of 9:30AM – 4:00PM

Does not trade:

■ Tokyo
■ Moscow
■ Hong Kong
■ Taipei
■ Shanghai
■ Sydney
■ Bombay

Does not trade for most of the day:

■ London
■ Johannesburg

Trades for most of the day:

■ Sao Paulo

Price discovery: how it works

As price discovery helps keep an ETF’s market price in line with its intrinsic fair value and next-expected NAV, investors should be aware that the impact of current events is likely priced into the ETF in a relatively short period of time, even when international markets are closed. Through price discovery, ETF market prices typically reflect the latest and most relevant information—updating the potentially stale NAV—as evidenced by the ETF’s current bid and ask prices.³ In other words, most anomalies between an international ETF’s NAV and its current market price is an intended consequence of price discovery, not an aberration.

Investors can measure how well any ETF tracks its benchmark by comparing NAV returns to Index returns, as both are calculated based on the closing prices of portfolio holdings and index constituents on their respective exchanges.

Market Price and NAV For An International ETF That Tracks the FTSE Emerging Index

- The FTSE Emerging Index has more than 900 constituents, which trade across 22 countries and 11 time zones.
- More than 80% of these constituents do not trade during U.S. market hours.
- As a result, the closing price of those constituents is known well in advance of when the ETF calculates its end-of-day NAV (when U.S. markets close).
- Throughout the U.S. trading day, the ETF’s market price and bid/ask prices will refresh, pricing in new information about markets and companies, as it becomes available, that may impact the value of the ETF’s holdings.
- Such new information can result in a market price that differs from the NAV—reflecting a premium or discount from the “stale” NAV previously calculated by the ETF.
- Price discovery helps minimize the difference between the ETF’s “stale” NAV and the fair value of its securities by pricing in news and information as it becomes available.

³ “Bid” is a price at which an investor stands ready to commit to buy shares; “ask” is a price at which an investor is willing to sell shares.

Next steps

- Go to www.csimfunds.com for performance and price information on Schwab ETFs and for more ETF articles.
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