IDC Independent Directors Council

ETF Primer for Fund Directors

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About IDC

IDC represents independent directors and trustees who serve on the boards of mutual funds, closed-end funds, exchange-traded funds, and other registered investment companies. IDC's activities and advocacy promote excellence in fund governance for the benefit of shareholders. IDC's core mission is to:

- Deliver education and programming to enhance the effectiveness of independent directors in service to fund shareholders;
- Foster community and engagement among independent directors, including through peer-to-peer exchange and learning;
- Advocate for public policies from the independent director perspective in support of fund shareholders; and
- Promote public understanding of the vital role and responsibilities of independent directors and the operations of fund boards.

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Introduction

An exchange-traded fund (ETF) is a type of open-end fund with shares that trade intraday on a national securities exchange at market-determined prices. Investors may buy or sell ETF shares through a broker or in a brokerage account, just as they would the shares of any publicly-traded company. ETF shares are created when an authorized participant (AP) provides a specified basket of securities, cash or both–often called a "creation basket"–to the ETF.[1] In return, the AP receives a block of ETF shares called a "creation unit." Some or all of these shares may then be sold by the AP to investors on the applicable exchange. APs, which are larger institutions, may redeem ETF shares directly with the ETF in creation unit increments, receiving a "redemption basket" of securities, cash or both from the ETF in return. Unlike APs, retail investors cannot purchase or redeem shares directly from the ETF, as they would from a mutual fund, but can buy or sell individual shares on an exchange.

This paper discusses the differences between ETFs and traditional mutual funds, the history and regulatory framework of ETFs, the role of APs, the creation and redemption of ETF shares, and ETFs' arbitrage mechanism. It includes practical questions for directors to consider and is intended to be a helpful resource for ETF directors as they perform their oversight responsibilities, as well as for directors who do not currently oversee ETFs but wish to become more familiar with them.

Differences Between ETFs and Traditional Mutual Funds

The vast majority of ETFs are structured as open-end investment companies (that is, like traditional mutual funds) and generally are governed by the same regulations as traditional mutual funds. For example, like a mutual fund, an ETF typically determines its net asset value (NAV) at the end of each trading day and must comply with the main investor protection mechanisms of the Investment Company Act of 1940 (the 1940 Act), including limitations on leverage, daily valuation and liquidity requirements, prohibitions on transactions with affiliates, and rigorous disclosure obligations.

A key difference between mutual funds and ETFs is in how their shares are priced. Traditional mutual funds are "forward priced," which means that although investors can place orders to buy or sell the shares throughout the day, all such orders will receive the same price—the NAV—the next time it is computed, which typically is 4:00 p.m. Eastern Time, when US stock exchanges typically close. In contrast, ETF shares are continuously traded on an exchange, so their price is continuously determined by market forces. Consequently, the price at which investors buy and sell ETF shares on the exchange will not necessarily be equal to the ETF's NAV. Two investors selling the same ETF shares at different times on the same day may receive different prices for their shares, both of which may differ from the ETF's NAV, which, like a mutual fund, generally is calculated as of 4:00 p.m. Eastern Time.

The responsibilities of an ETF director are substantially similar to those of a traditional mutual fund director, although there are certain differences and distinct areas of focus.[2] Like all fund directors, ETF directors have a fiduciary duty to the fund and serve to protect the interests of fund shareholders.

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1 An AP is a member or participant of a clearing agency registered with the Securities and Exchange Commission (SEC), which has a written agreement with an ETF or one of its service providers (usually, its distributor) that allows the AP to place orders for the purchase and redemption of creation units. APs are also full participating members of the National Securities Clearing Corporation (NSCC) and the Depository Trust Company (DTC).

2 For a more complete discussion of a board's role and responsibilities in overseeing ETFs, please see IDC's white paper, **Board Oversight of Exchange-Traded Funds**.

Evolution of ETFs

The first US ETF—a broad-based domestic equity fund tracking the S&P 500 index—was launched in 1993 after the SEC granted the fund sponsor exemptive relief from several provisions of the 1940 Act that would not otherwise allow the ETF structure to operate. As other fund sponsors brought new ETFs to market, they each had to obtain their own exemptive relief order from the SEC.

> As of June 2025, there were 1,935 index-based ETFs—with $10.2 trillion in total net assets—that were registered with the SEC under the 1940 Act.

Many of these early ETFs tracked traditional indexes, which were mostly weighted by market capitalization. As the industry has evolved, index-based ETFs have tended to follow benchmarks that use an array of index construction methodologies, with weightings based on market capitalization or other fundamental factors, such as sales or book value. Others follow factor-based metrics–indexes that first screen potential holdings for a variety of attributes, including dividend payments, value, or growth–and then weight the selected securities equally or by market capitalization. Other customized index approaches include screening, selecting, and weighting securities to minimize volatility, maximize diversification, or achieve a high or low degree of correlation with the market. In some cases, an ETF may track a multiple of its index, an inverse of its index, or even a multiple inverse of its index.

Actively-managed ETFs do not seek to track the return of a particular index. Instead, the adviser selects a portfolio of investments to meet a particular investment objective and policy. Like the adviser of an actively-managed mutual fund, the actively-managed ETF adviser may trade securities at its discretion. For instance, the adviser may seek to outperform a segment of the market or designated benchmark.

Until 2008, the SEC only approved exemptive relief orders for ETFs that tracked specified indexes. In early 2008, the SEC granted exemptive relief to several fund sponsors to offer fully transparent, actively-managed ETFs. As other fund sponsors wanted to offer actively-managed ETFs, they had to obtain their own exemptive relief.

> **From the approval of the first actively-managed ETFs in 2008 through June 2025, the market has grown to 1,936 actively-managed 1940 Act ETFs with $1.1 trillion in total net assets.**

After granting more than 300 exemptive orders to fund sponsors for index-based and fully transparent actively-managed ETFs since 1993, the SEC adopted the "ETF Rule"[3] in 2019. It enables any fund sponsor to offer an ETF that satisfies certain conditions, including daily disclosure of portfolio holdings, NAV per share, market price, any premium or discount and median bid-ask spread, without the expense and delay of obtaining exemptive relief from the SEC. While the ETF Rule does not specify any particular director obligations, it provides that an ETF must adopt and implement written policies and procedures that govern in-kind basket transactions between the ETF and APs, including any custom baskets. As part of its oversight role, the board reviews and approves the compliance program for the ETF, including the basket construction policies and procedures.

3 Rule 6c-11 under the 1940 Act.

In 2019, the SEC also granted exemptive relief to five models of ETFs that did not fall under the new ETF rule because they do not fully disclose their portfolio holdings each day. These ETFs, commonly referred to as non-transparent or semi-transparent ETFs, provide limited daily information on the value of the securities they hold and, similar to mutual funds, are not required to publicly disclose their full schedule of portfolio holdings more often than quarterly. These ETFs have been approved for use only in limited asset classes—primarily domestic equity—and must prominently disclose in their prospectuses, on their websites, and in marketing materials that they are different from the more traditional ETFs allowed under the ETF Rule.[4]

The first ETFs of this new type were launched in 2020, and by June 2025 there were 40 of these funds with $17.1 billion in total net assets.

In the 2000s, the SEC granted exemptive relief for a sponsor to offer index mutual funds with an ETF share class. Other fund sponsors who wish to offer the same strategy through both a mutual fund and an ETF are still required to do so through two separate funds. Since 2023 when a patent for this so-called ETF Share Class expired, more than 60 fund sponsors have filed exemptive applications seeking relief to offer funds with both mutual fund and ETF share classes. The SEC staff has been directed to "prioritize" its review of those exemptive applications.[5]

The Role of Authorized Participants

APs play a key role in the primary market for ETF shares because they are the only investors allowed to purchase shares from, and sell shares to, an ETF. APs do not receive compensation from an ETF or its sponsor and have no legal obligation to create or redeem the ETF's shares. Rather, APs typically derive their compensation from acting as dealers in ETF shares. Also, APs create and redeem shares in the primary market when doing so is a more effective way of managing their firms' aggregate exposure than trading in the secondary market. Some APs are clearing brokers (rather than dealers) and receive payment for processing creations and redemptions as an agent for a wide array of market participants such as registered investment advisers and various liquidity providers, including market makers,[6] hedge funds, and proprietary trading firms.

In 2024, there were 65 APs that had registered agreements with ETF sponsors, of which 43 were active (*i.e.*, they created and redeemed shares). This difference reflects the fact that not all APs are active in any given year. For example, some APs enter into agreements with ETF sponsors so they have the option to engage in primary market activity should (and when) they want to do so. Over the years, policymakers have expressed concerns that APs may step away from their role in facilitating creations and redemptions of ETF shares during periods of market stress. However, data on APs and primary market activity during the COVID-19 crisis show that rather than pulling back, APs stepped in—with more APs facilitating a significantly higher volume of ETF creations and redemptions compared with a normal period in the year prior.[7]

[4] These ETFs are required to hold a special board meeting promptly in certain situations such as, for example, if the ETF shares trade at a significant premium or discount or bid-ask spread over an extended period of time. In such a case, a special board meeting is required to be held so that the board may consider whether shareholders were being harmed and what action to take, if any.

[5] At a March 2025 industry conference, then-Acting SEC Chairman Mark Uyeda stated that he had directed the SEC staff to "prioritize their careful review of the many applications filed" for ETF share class relief. See Acting Chairman Mark T. Uyeda, **Remarks to the 2025 ICI Investment Management Conference** (Mar. 17, 2025).

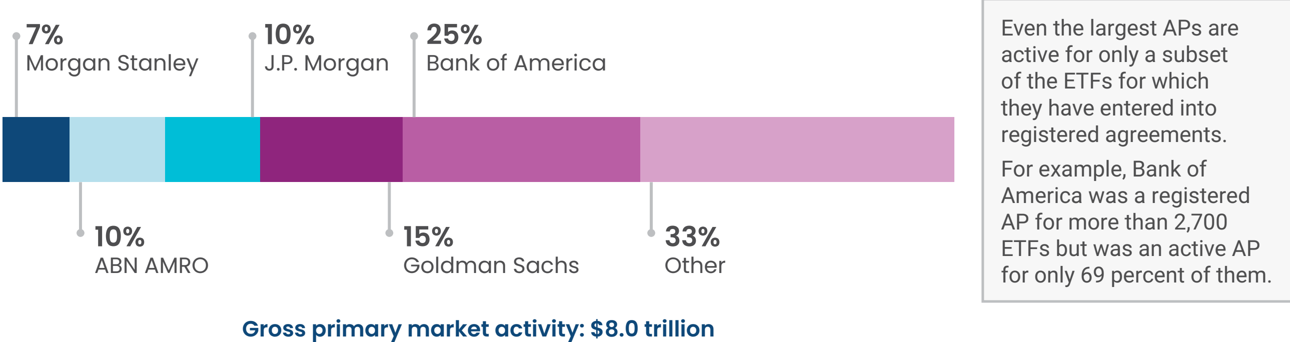
[6] Some AP firms also act as market makers for ETF shares in the secondary market. That is, they assume obligations to provide continuous two-sided (buy and sell) quotes for particular ETF shares on certain stock exchanges.

[7] **https://www.ici.org/system/files/private/2021-04/20_rpt_covid2.pdf**

Bank of America, Goldman Sachs, and J.P. Morgan facilitated the most creations and redemptions for ETFs in 2024, collectively accounting for more than half of all ETF creations and redemptions. Despite their collective activity, these APs do not engage in primary market activity for all the ETFs for which they have contractual agreements. For example, Bank of America had agreements with more than 2,700 ETFs in 2024 but was an active AP for only 69 percent of them.

Five APs Created and Redeemed Two-Thirds of ETF Shares in 2024

Percentage of total dollar value of gross creation and redemption activity for ETFs, annual, 2024



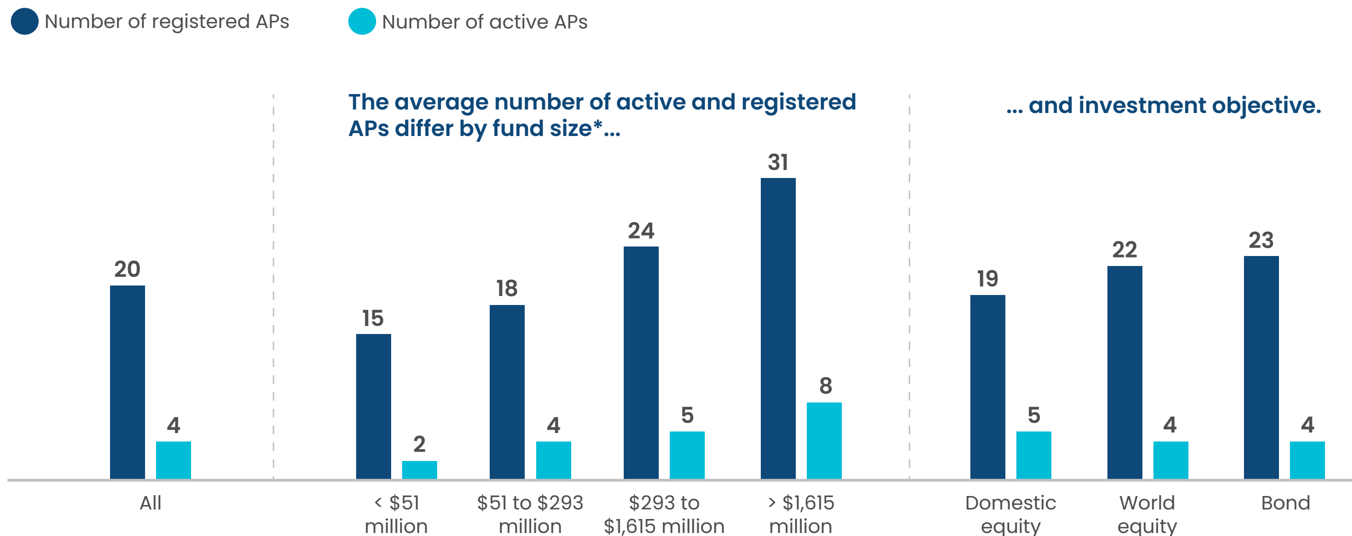
Note: Data include ETFs that filed a Form N-CEN in 2024 and had not liquidated or merged at any point during the year.

Source: ICI calculations of publicly available Form N-CEN data

Most ETFs have multiple APs that engage in creations and redemptions of their shares. In 2024, ETFs had an average of 20 registered APs that could create and redeem shares of the ETF and four APs that were actively doing so. In general, larger ETFs with relatively higher trading volume tend to have both more active APs and a greater number of AP agreements in place. The number of registered versus active APs also varies somewhat by investment objective.

On Average, ETFs Have Four Active APs Engaging in Primary Market Activity During the Year

The average number of registered APs able to facilitate primary market activity for each ETF is far larger



* Data represent quartiles based on ETF total net assets at year-end 2024.

Note: Data include ETFs that filed a Form N-CEN in 2024 and had not liquidated or merged at any point during the year.

Sources: Investment Company Institute and publicly available Form N-CEN data

An ETF board might wish to inquire with the ETF's adviser about whether APs will be permitted to purchase or redeem creation units in kind, with cash, or both. ETFs that invest in less-liquid or hard-to-obtain securities, or securities that cannot be readily transferred, such as those in an emerging market index, might allow APs to purchase creation units in cash, rather than with a creation basket of securities. Cash transactions create transaction costs for ETFs, however, and can reduce the tax efficiencies created by the in-kind creation/redemption process. Where APs purchase or redeem creation units partly or wholly in cash, ETFs typically charge APs an additional fee to protect shareholders from the transaction costs associated with investing the cash or selling portfolio holdings to generate cash.

The following are a few questions ETF directors may consider as part of their oversight of APs and market makers:

- How many APs and market makers does the ETF use or expect to use?
- Which APs are most or least active with respect to creating and/or redeeming ETF shares?
- What steps does the adviser take to promote active, ongoing engagement with market makers to maintain tight bid-ask spreads and secondary market liquidity?
- What is the process for onboarding a new AP and how frequently is this done?

Creations and Redemptions

The creation or redemption of ETF shares—activity directly involving the ETF's underlying securities—is categorized as primary market activity. The creation and redemption mechanism in the ETF structure allows the number of an ETF's outstanding shares to expand or contract based on investor demand. Each business day, ETFs publish the creation and redemption baskets for the next trading day. The creation and redemption baskets are specific lists of names and quantities of securities, cash, and/or other assets. Often baskets will track the ETF's portfolio through either a pro rata slice or a representative sample. At times, baskets may be limited to a subset of the ETF's portfolio and contain a cash component. For example, the composition of baskets for bond ETFs may vary from day to day with the mix of cash and the selection of bonds in the baskets based on liquidity in the underlying bond market. Typically, the composition of an ETF's daily creation and redemption baskets mirror one another.

The following questions may enhance an ETF director's understanding of the creation and redemption activity of the ETF:

- How frequently are standard baskets used for the ETF as compared to custom baskets?
- What controls and procedures are in place to approve and monitor baskets (standard and custom)?
- How are creation and redemption baskets used to manage the tax efficiency of the ETF?
- Have there been any recent changes or innovations in basket management that the adviser is considering adopting?
- Has the ETF experienced any operational issues or errors related to basket delivery or settlement?
- What steps does the adviser take to promote active, ongoing engagement with APs to understand any issues related to the creation and redemption process?

ETFs also are permitted to use custom baskets—those that differ from other baskets used in other transactions that day—when doing so is in the best interests of the ETF and its shareholders. For example, an ETF might use a custom basket to improve positioning relative to a benchmark, to effect a rebalance or reallocation of its portfolio to a target or model portfolio, to replace securities from a standard basket that an AP is restricted from owning, if portfolio changes have occurred that are not reflected in the standard basket and/or when effecting creations or redemptions using a standard basket is no longer in the best interests of the ETF and its shareholders. Boards typically receive quarterly reports on an ETF's compliance with its policies and procedures governing the construction and acceptance of custom baskets.

When overseeing custom baskets, ETF directors may wish to consider asking the following questions:

- What types of securities are typically included in or excluded from custom baskets, and why?
- What are the primary reasons for using a custom basket?
- How do custom baskets contribute to the ETF's performance, tax efficiency, and tracking error management (if applicable)?
- How does the adviser seek to ensure that custom baskets are in the best interest of the ETF and its shareholders?
- How does the ETF's use of custom baskets compare with that of peer ETFs?

Creations

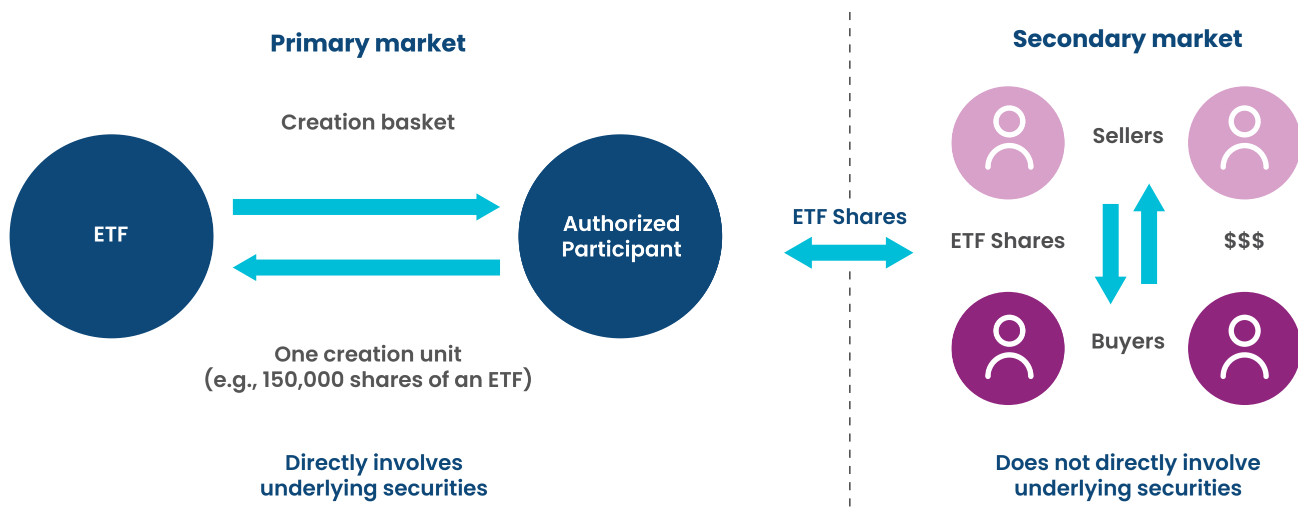
ETF shares are created when an AP submits an order for one or more creation units. A creation unit consists of a specified number of ETF shares, typically 50,000 shares. The ETF shares are delivered to the AP when it transfers the specified creation basket to the ETF. The ETF may permit or require an AP to substitute cash for some or all of the securities or assets in the creation basket. This generally occurs when an instrument in the creation basket is difficult to obtain or may not be held by certain types of investors (such as certain foreign securities). An AP also may be charged a cash adjustment or transaction fee to offset any transaction expenses the ETF undertakes. The value of the creation basket and any cash adjustment equals the value of the creation unit based on the ETF's NAV at the end of the day on which the transaction was initiated.

The AP can either keep the ETF shares that make up the creation unit or sell all or part of them to its clients or to other investors on an exchange, in a private exchange, also known as a "dark pool," or in other trading venues. Purchases and sales of existing ETF shares among investors, including APs, are referred to as secondary market trading or activity.

An ETF director may wish to consider the following questions when seeking to understand the ETF's creation unit size:

- What is the rationale behind the ETF's specified creation unit size?
- How does the ETF's creation unit size compare to that of peer ETFs?
- Does the adviser have discretion to increase or decrease the creation unit size? If so, what controls are in place with respect to that process?

Creation of ETF Shares



Redemptions

The redemption process in the primary market is simply the reverse of the creation process. A creation unit is redeemed when an AP acquires the number of ETF shares specified in the ETF's creation unit and returns the creation unit to the ETF. In return, the AP receives the daily redemption basket of securities, cash, and/or other assets. The total value of the redemption basket and any cash adjustment is equivalent to the value of the creation unit based on the ETF's NAV at the end of the day on which the transaction was initiated.

The Arbitrage Mechanism

Directors can benefit from a general understanding of the processes for creating and redeeming ETF creation units, the trading of ETF shares on the secondary market, and how the adviser seeks to ensure that these processes work for the benefit of ETF investors.

Sample questions directors may wish to consider include the following:

- To what extent have the ETF shares been trading at a premium or a discount?
- What is the bid-ask spread and what have the trends in the bid-ask spreads been over time?
- Is that consistent with the adviser's expectations and disclosures to shareholders?
- For index ETFs, what is the tracking error and correlation?
- What is the trading volume of the ETF?

The price of an ETF's shares on the applicable exchange is influenced by the forces of supply and demand. Though imbalances in supply and demand can cause the price of an ETF share to deviate from its underlying value, substantial deviations tend to be short-lived for many ETFs. Two primary features of an ETF's structure promote trading of its shares at a price that approximates its underlying value: portfolio transparency and the ability for APs to create or redeem ETF shares at the NAV at the end of each trading day.

Transparency of an ETF's holdings—either through full disclosure of the portfolio or other information on the value of the securities—enables investors to observe and attempt to profit from discrepancies between the ETF's share price and its underlying value during the trading day.

When there are discrepancies between an ETF's market price and the value of its underlying securities, trading can more closely align the ETF's price and its underlying value. For example, if an ETF is trading at a discount to its underlying value, investors may buy ETF shares or sell the underlying securities, or both. Increased demand for the ETF's shares should raise its price, and any sales of the underlying securities should lower their prices, narrowing the gap between the ETF's market price and its underlying value. If the ETF is trading at a premium to its underlying value, investors may choose to sell the ETF shares or buy the underlying securities, or both. These actions should bring the ETF's market price and the market value of its underlying securities closer together by reducing the ETF share price or raising the price of the underlying securities, or both.

The ability to create or redeem ETF shares at the end of each trading day also helps an ETF trade at market prices that approximate the underlying market value of the portfolio. When a deviation between an ETF's market price and its underlying value occurs, APs (on their own behalf or on behalf of other market participants) may create or redeem creation units in the primary market in an effort to capture a profit. For example, when an

ETF is trading at a discount, market participants may find it profitable to buy the ETF shares and sell short the underlying securities. At the end of the day, APs return ETF shares to the ETF in exchange for the ETF's redemption basket, which is used to cover the short positions in the underlying securities. When an ETF is trading at a premium, market participants may find it profitable to sell short the ETF during the day while simultaneously buying the underlying securities. At the end of the day, the APs (on their own behalf or on behalf of other market participants) will deliver the creation basket to the ETF in exchange for ETF shares that are used to cover the short sales.

These actions by market participants, commonly described as arbitrage, help keep the market-determined price of an ETF's shares close to its underlying value. In seeking to understand an ETF's arbitrage mechanism, directors may wish to consider the following questions:

- What is the relationship between the ETF's portfolio liquidity and the trading of the ETF's shares (e.g., their market prices and spreads), including the efficiency of the arbitrage function and the level of active participation by market participants, including APs?
- How effective has the arbitrage mechanism been in keeping the ETF's market price in line with its NAV per share?
- What controls and procedures are in place to address any prolonged or significant deviations between the ETF's market price and NAV per share?
- Are there specific times or market conditions when spreads tend to widen, and what processes are in place to address increases in spreads?
- What metrics does the adviser review to assess the health of the arbitrage mechanism?

Conclusion

Demand for ETFs has grown markedly as investors—both institutional and retail—increasingly turn to them as investment options in their portfolios. With the increase in demand, ETFs have continued to evolve in the marketplace. This primer is intended to be a helpful resource for directors of ETFs as they perform their oversight responsibilities, as well as for directors who do not currently oversee ETFs but wish to become more familiar with them.

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