Primer: Exchange Traded Funds (ETFs)

Analyzing Market Metrics and Fundamentals of Markets

September 2024

SIFMA Insights Primers

The primer series from SIFMA Insights breaks down important technical and regulatory nuances. By fostering an understanding of the marketplace, we set the scene to address complex issues arising in today's markets. The primer series can be found here: www.sifma.org/primers

In addition to this primer, the series includes the following reports: Capital Markets, Global Equity Markets Comparison, Capital Formation and Listings Exchanges, Equities, Options, and Fixed Income Markets and Electronic Trading.

In this primer: We analyze the U.S. exchange-traded funds (ETFs) market. U.S. domiciled ETFs have seen significant growth since 2000, growing to $8.1 trillion in net assets as of 2023, a 25.6% CAGR. Yet, the market is small compared to other U.S. markets: fixed income 6.7x greater; equities 6.0x; and MFs 3.1x. While smaller, ETFs have grown faster than MFs, which grew at a 5.6% since 2000. ETF trading volumes remain elevated to historical levels – 2.3 billion shares on average in 2023, -13.8% Y/Y – but down from the prior year. ETF volumes as a percent of total equity market volumes were 20.4%. In this report, we explain the fundamentals of ETFs – definitions, a comparison to other investment products, legal structures – as well as review the regulatory environment and exchange landscape. The report also details the creation/redemption process, crucial to the inner workings of ETFs.

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Executive Summary

Exchange-traded funds (ETF) are pooled investment vehicles holding an underlying basket of securities, whether it be equities, bonds, commodities, currencies, or hybrids. They trade intraday[1] on exchanges and other trading venues (similar to single stocks) and are priced based on market demand for their shares, typically driven by the underlying securities' prices[2]. ETFs can be broken out by asset class, region, investment style, or a number of other classifications, providing investors a multitude of choices to meet many different investment objectives.

ETFs differ from mutual funds (MF) in a variety of ways, in particular increased price transparency and intraday liquidity[3] from being traded on exchanges. ETFs may also provide greater tax efficiencies and, in general, lower total expense ratios (albeit this can vary by fund), compared to MFs with similar investment strategies. Morningstar estimates the average ETF costs half as much as the average mutual fund (0.50% vs 1.01%; can vary by fund). In light of their general cost efficiency, ETFs have shown strong demand from individual and institutional investors, both of which are cost sensitive. Although most ETFs are structured similarly, they can come in varying legal structures which can impact capital distributions (dividends) and tax implications. While there has always been individual investor appeal, ETF usage by institutional investors in portfolio management strategies continues to grow as well.

U.S. domiciled ETFs have seen significant growth since 2000, growing to $8.1 trillion in net assets as of 2023, a 25.6% CAGR. Yet, the U.S. domiciled ETF market is still small compared to other U.S. markets: fixed income markets are 6.7x greater than ETFs ($54.5 trillion outstanding); equities are 6.0x ETFs ($49.0 trillion market capitalization); and MFs are 3.1x ETFs ($25.5 trillion net assets). While smaller, ETFs have grown faster than MFs, which grew at a 5.6% CAGR since 2000.

The ETF creation/redemption process is a unique and important feature that distinguishes ETFs from other investment vehicles and contributes to an ETF's transparency and liquidity. The process is used to keep the market price of an ETF at/near its intrinsic value. The process involves authorized participants (AP) – typically a broker-dealer or market maker (MM) – which are approved by the ETF issuer to create and redeem ETF shares. APs/MMS facilitate the buying and selling of ETF shares which are traded on the secondary market. Additionally, the arbitrage process – which is facilitated by the creation/redemption process – keeps ETF prices aligned with their intrinsic values.

[1] Blue Ocean, an alternative trading system (ATS), offers 24-hour trading.
[2] Throughout this report, we use the terminology underlying securities to include a broad category of potential assets, such as: stocks, bonds, commodities and other investments.
[3] Liquidity is defined as ease with which an asset (ETF shares, MF shares, or single stocks) can be quickly and efficiently bought or sold in the market without significantly affecting its price.

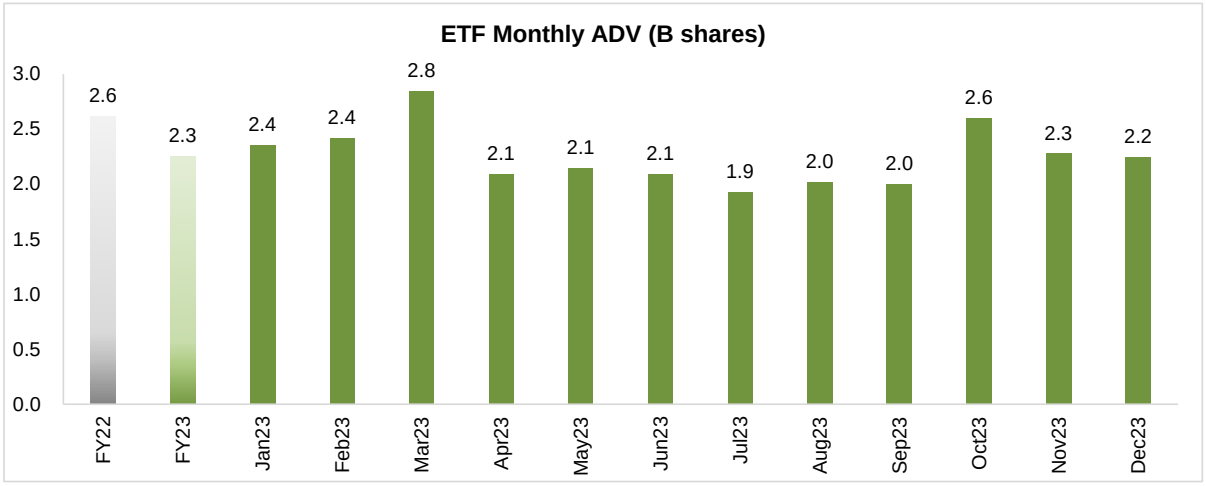
Market Metrics

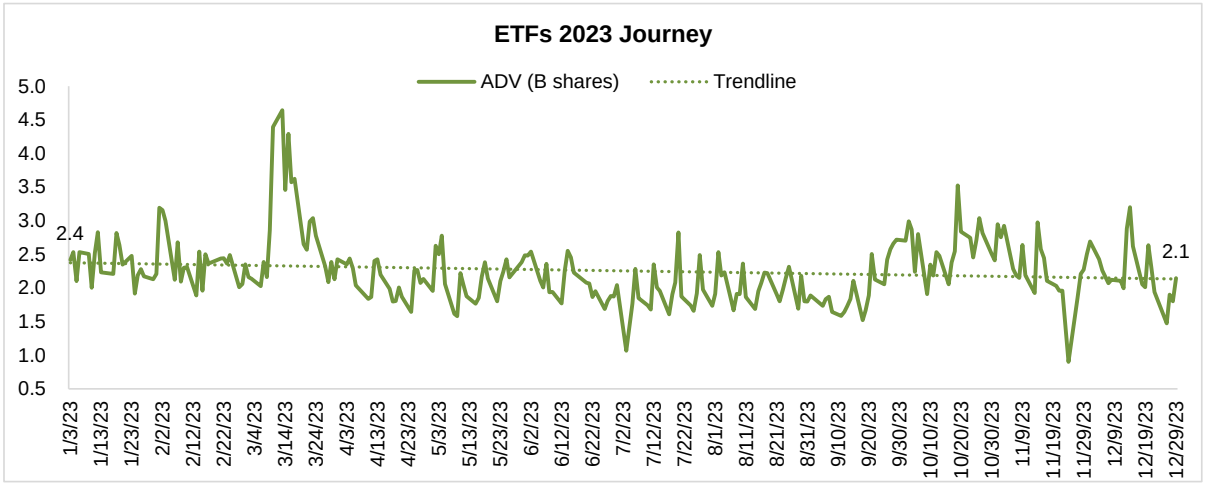
ETF volumes in 2023 remained elevated to historical levels – 2.3 billion shares average daily volumes (ADV), -13.8% Y/Y – but came down from last year. The overall trendline for ETF volumes in 2023 was essentially flat, with its spike – and peak level – in the first half of the year and a few more spikes later in the year. ETF volumes as a percent of total equity market volumes were 20.4%.

ETF ADV

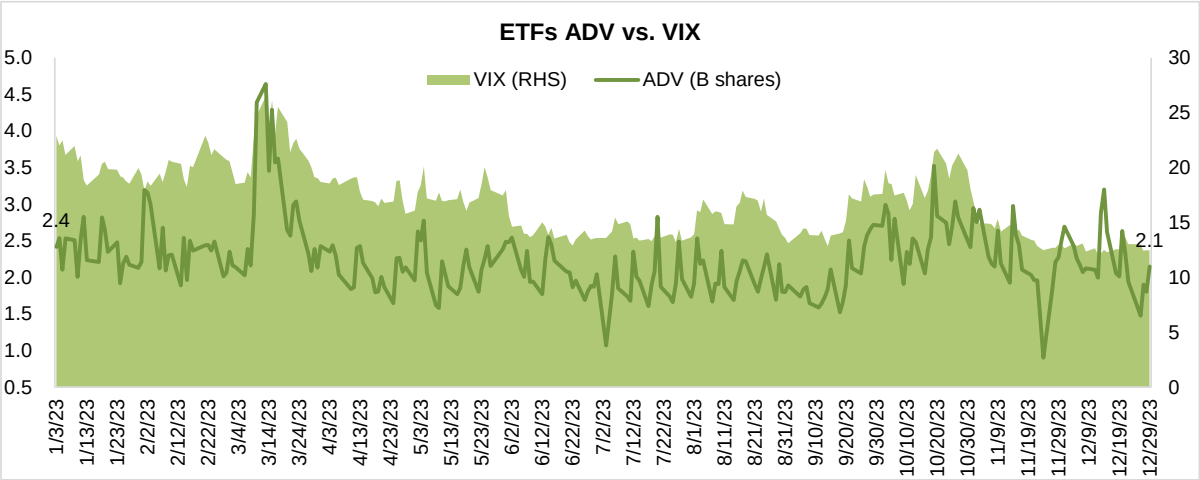
We highlight the following trends:

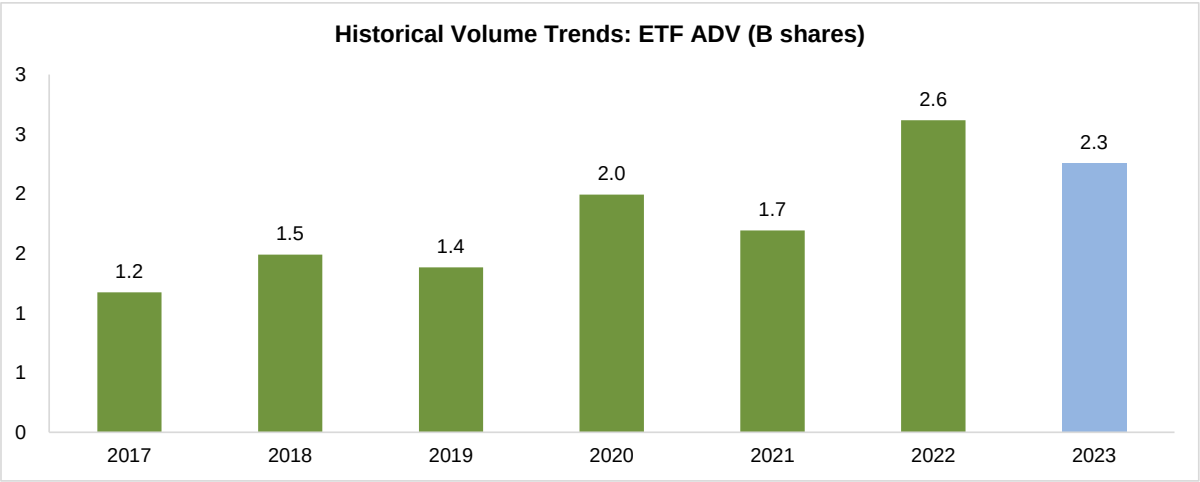
- 2023 average 2.3 billion shares
  - -13.8% Y/Y
  - Peak 4.6 billion shares on March 13
  - Trough 1.5 billion shares on December 26 (the day after Christmas, excludes half day trading days)
- 5-Year CAGR +8.6%





Source: Cboe Global Markets, SIFMA estimates





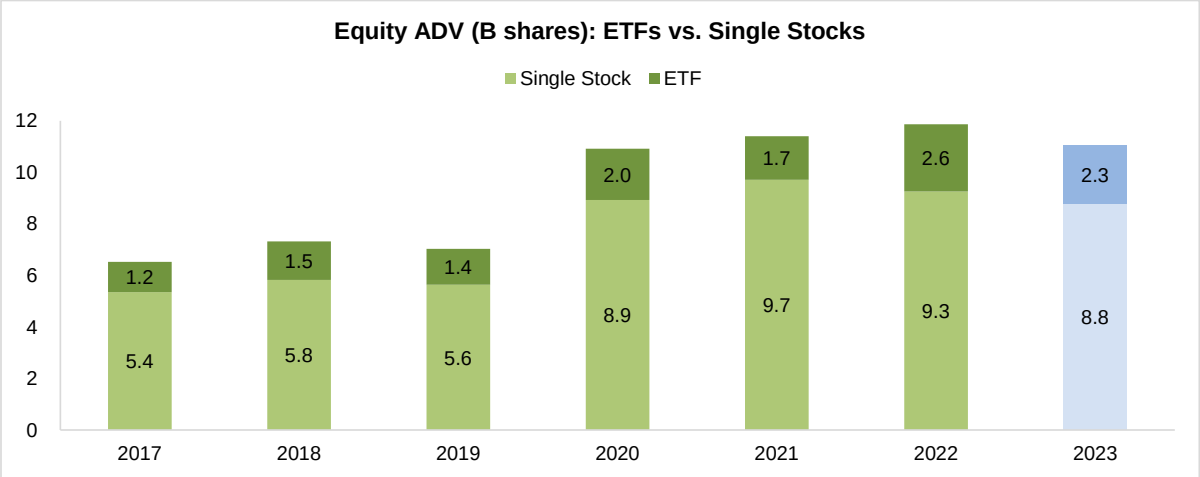
Source: Cboe Global Markets, SIFMA estimates

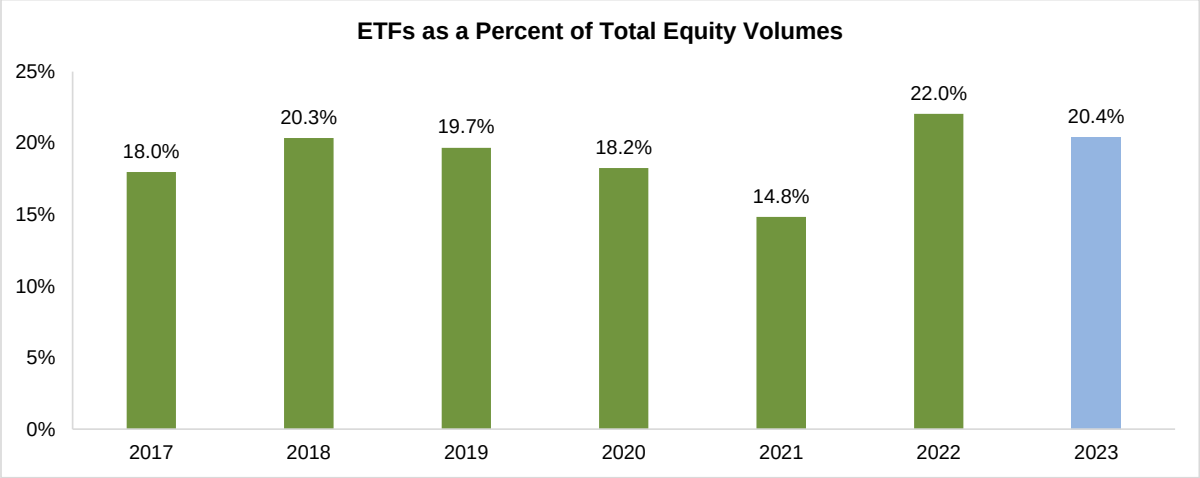
ETFs as a Percent of Total Equities

ETF shares trade in the secondary market on the U.S. equity markets, along with the underlying stocks used to create equity ETFs. On average in 2023, ETF ADV was 2.3 billion shares versus 8.8 billion shares for single stock equites.

We highlight the following ETF trends:

- ETF volumes -13.8% Y/Y, versus
  - Single stock -5.1%
  - Total equities -7.1%
- 20.4% of total equities volume in 2023, -1.6 pps Y/Y

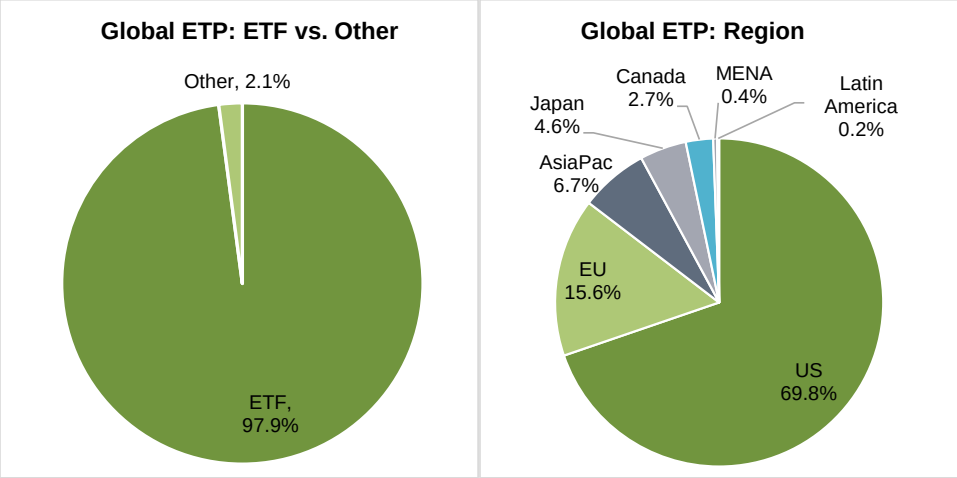




Source: Cboe Global Markets, SIFMA estimates

ETF Landscape

According to ETFGI research, there were $11.6 trillion in total exchange-traded products (ETP; portfolio exposure investment products which trade on exchanges, of which ETFs are one type) and $11.4 trillion in ETFs in 2023 – ETFs represented 97.9% of total global ETPs. Regionally, the U.S. represented 69.8% of total global ETP assets.

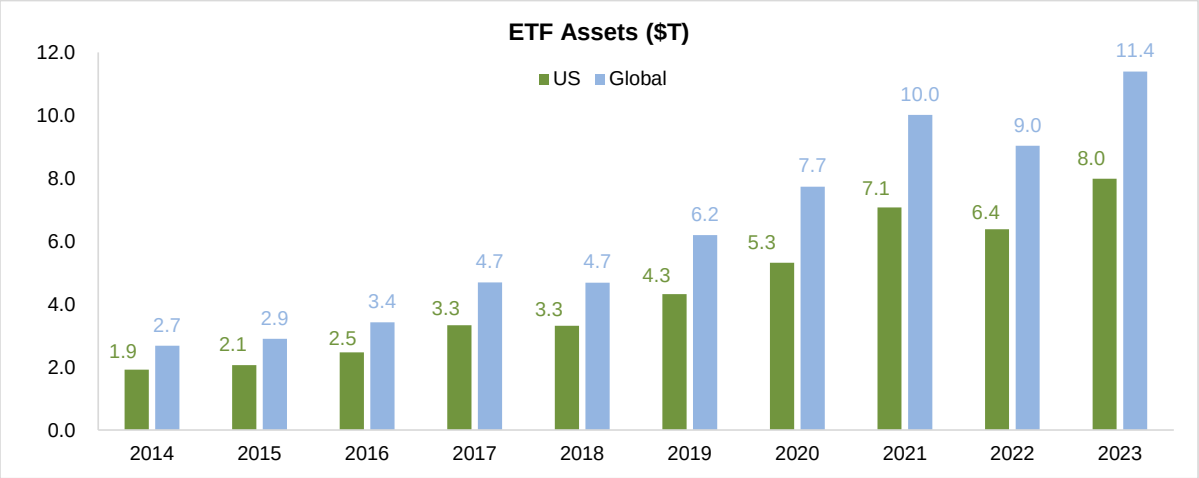


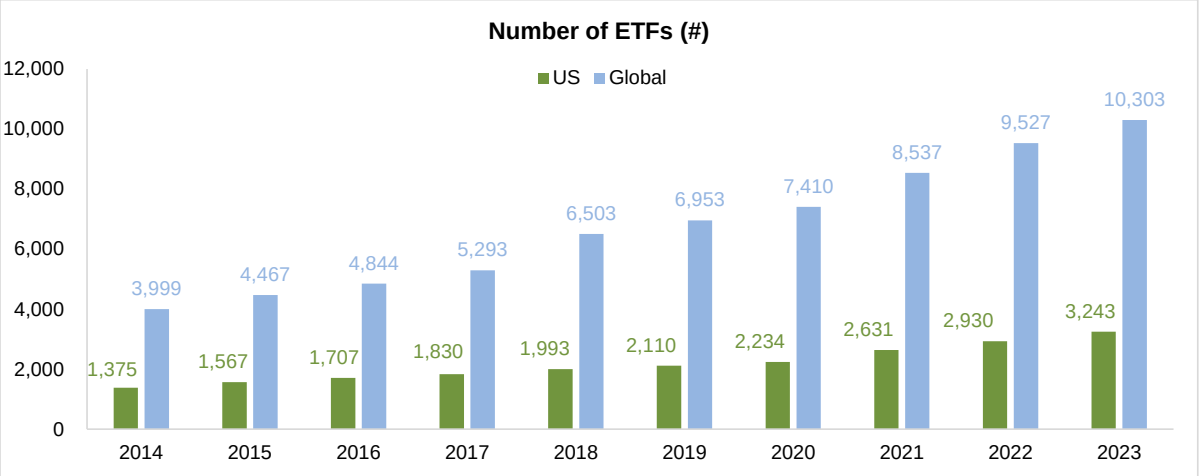
Source: ETFGI Research, SIFMA estimates

According to ETFGI research, the global ETF industry gathered $974.9 billion in net inflows in 2023 (+13.9 Y/Y), the second highest level of annual net inflows behind the $1.3 trillion in 2021. December 2023 marked the 55th month of consecutive net inflows. The U.S. ETF industry saw net inflows of $604.0 billion in 2023 (-0.5% Y/Y), the third highest on record after $919.8 billion in 2021. December 2023 marked the 20th month of consecutive net inflows.

We highlight the following trends on ETF assets and number of funds:

- US ETF assets $8.0 trillion; +25.1% Y/Y, +19.2% 5-year CAGR, +17.3% 10-year CAGR (US 70.1% of total global)
- US # ETFs 3,243; +10.7% Y/Y, +10.2% 5-year CAGR, +9.9% 10-year CAGR (US 31.5% of total global)
- Global ETF assets $11.4 trillion; +26.1% Y/Y, +19.5% 5-year CAGR, +17.6% 10-year CAGR
- Global # ETFs 10,303; +8.1% Y/Y, +9.6% 5-year CAGR, +11.1% 10-year CAGR

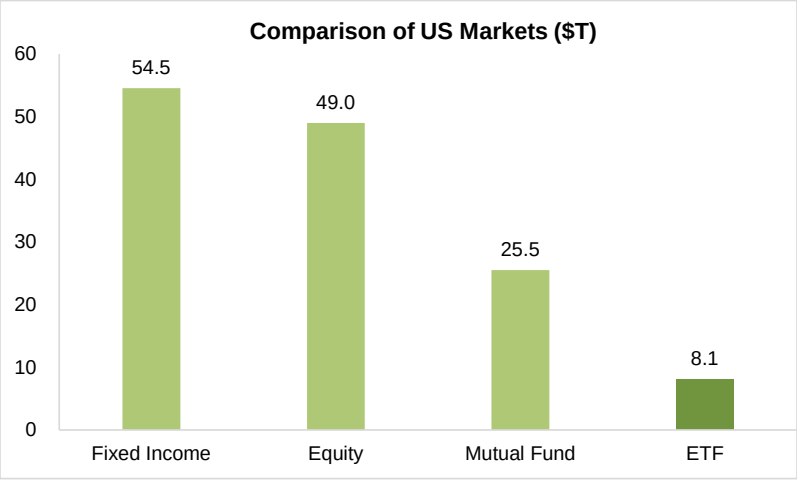




Source: ETFGI Research, SIFMA estimates

While there has been significant growth in the U.S. ETF market, the market is still small compared to other U.S. markets. As a comparison in 2023:

- Fixed income markets were 6.7x greater than ETFs
- Equities were 6.0x ETFs
- Mutual funds were 3.1x ETFs

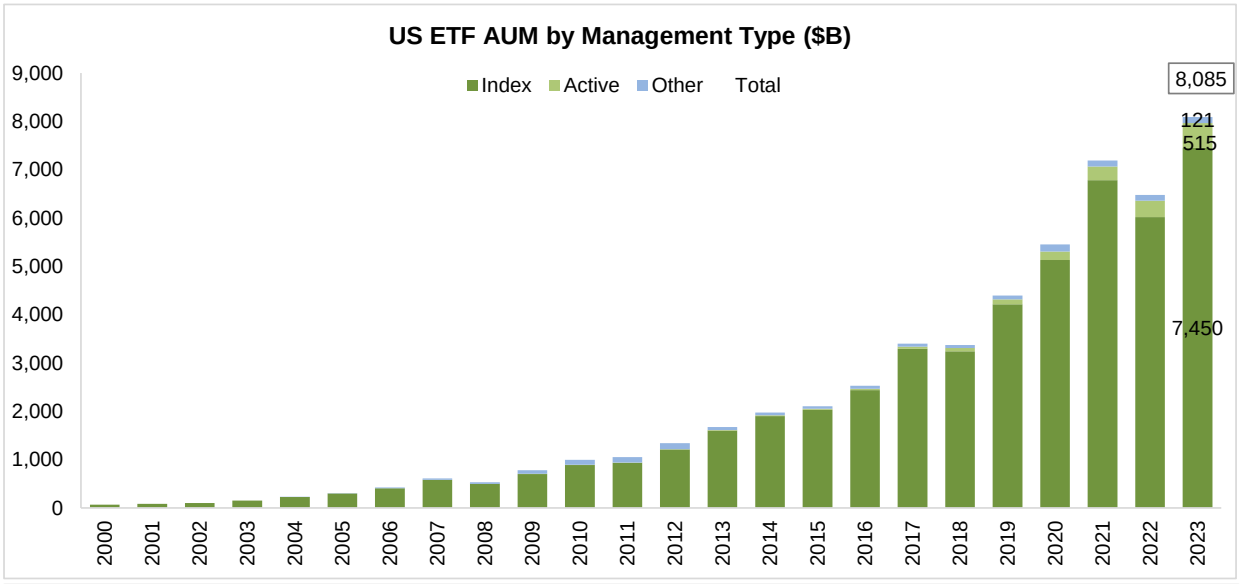


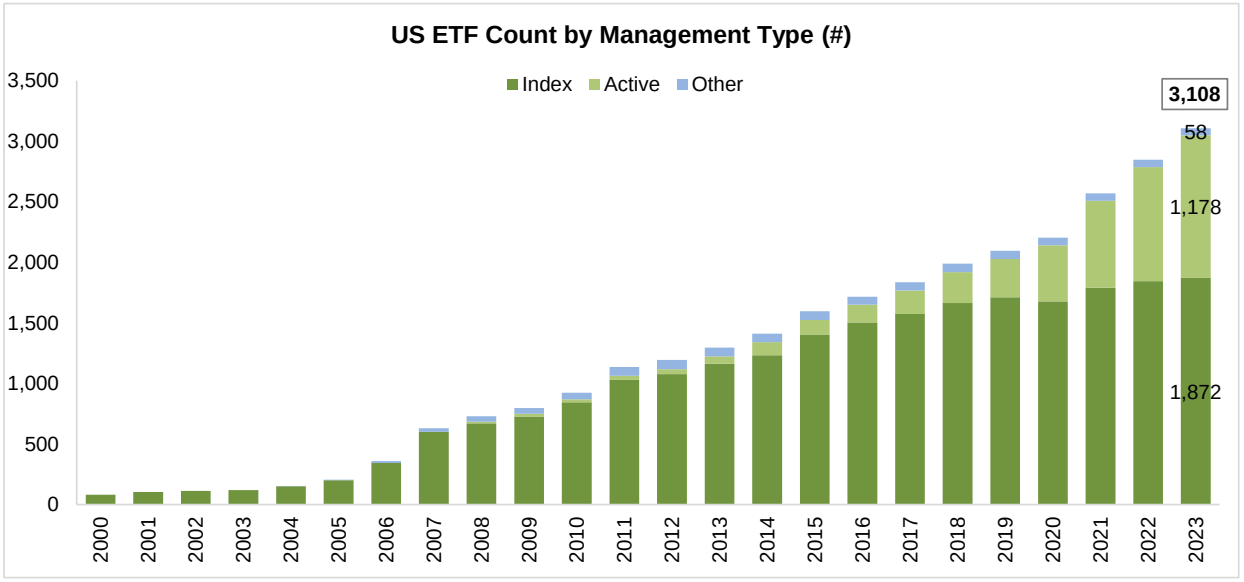
Source: Bank for International Settlements, World Federation of Exchanges, Investment Company Institute, SIFMA estimates
Note: As of 2023, except 3Q23 for fixed income.

US ETF AUM & Count

We highlight the following for ETF data in 2023:

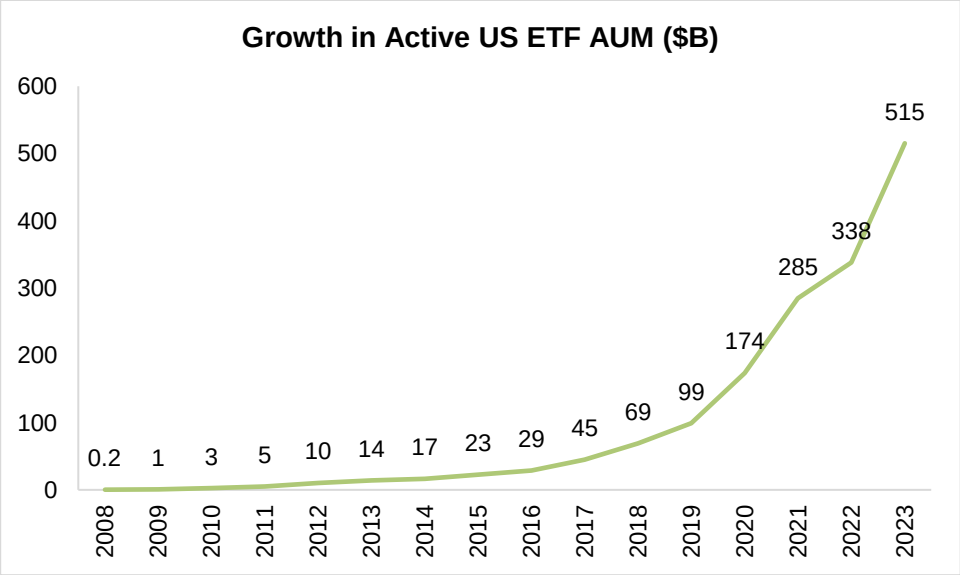
- Total AUM $8.1 trillion; +25.6% CAGR since 2000
- Total Count 3,108; +21.3% CAGR since 2000
- For AUM, index 92.1%, active 6.4%, other 1.5%
- For #, index 60.2%, active 37.9%, other 1.9%





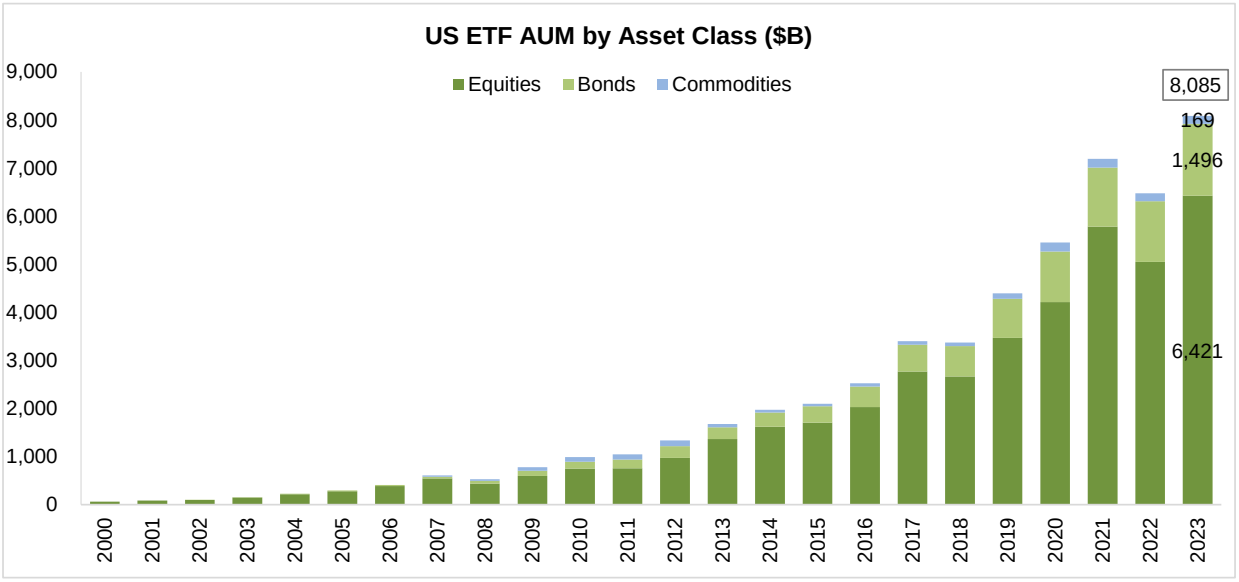
Source: Investment Company Institute, SIFMA estimates
Note: Other = non 1940 Act (not SEC registered). Firms may have data that differs from this publicly available source, as they have their own proprietary trading data.

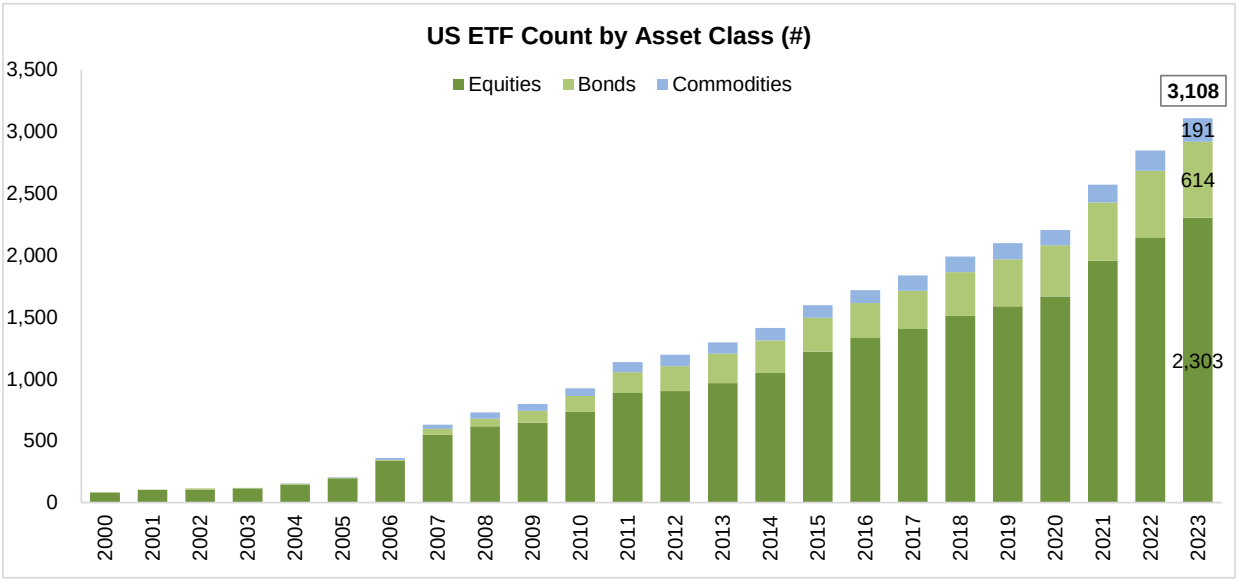
Looking further at the growth in actively managed ETFS, in 2023, U.S. Active ETF AUM was $515 billion, +66.5% CAGR since 2009.



Source: Investment Company Institute, SIFMA estimates

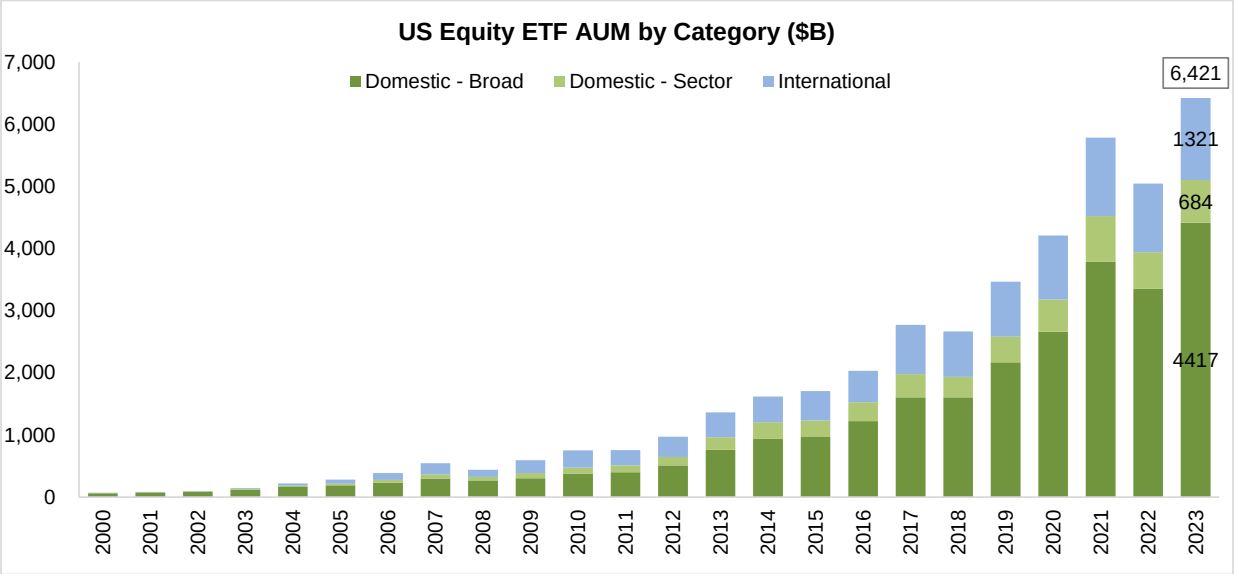
- For AUM, equities 79.4%, bonds 18.5%, commodities/other 2.1%
- For #, equities 74.1%, bonds 19.8%, commodities/other 6.1%

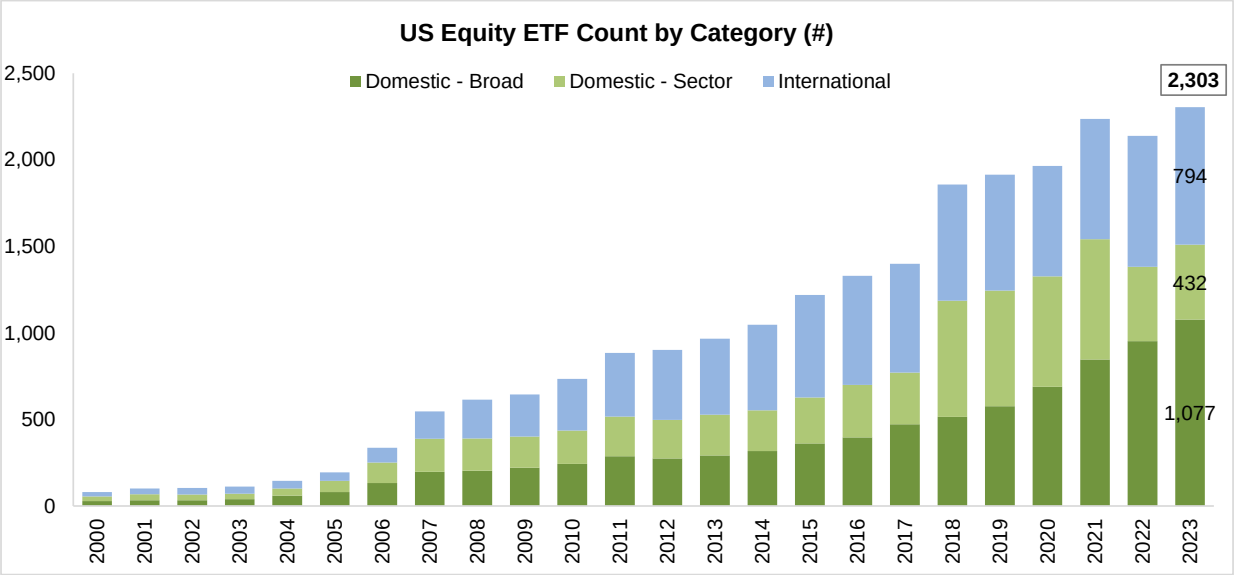




Source: Investment Company Institute, SIFMA estimates
Note: Commodities = commodities, currencies and futures plus other (hybrids). Firms may have data that differs from this publicly available source, as they have their own proprietary trading data.

- Equity AUM $6.4 trillion; +24.4% CAGR since 2000
- Equity Count 2,303; +19.8% CAGR since 2000
- For AUM, domestic – broad 68.8%, domestic – sector 10.6%, international 20.6%
- For #, domestic – broad 46.8%, domestic – sector 18.8%, international 34.5%





Source: Investment Company Institute, SIFMA estimates
Note: Domestic-broad = correlated with an entire market; domestic-sector = sector specific. Firms may have data that differs from this publicly available source, as they have their own proprietary trading data.

Defining Exchange-Traded Funds

ETFs Are One Type of ETP

Exchange-traded products (ETP) are portfolio exposure investment products which trade on exchanges. The most common ETPs include exchange-traded funds (ETF) and exchange-traded notes (ETN[4]). ETFs are pooled investment vehicles holding an underlying basket of securities – whether it be equities, bonds, commodities, currencies, or hybrids – and usually track an index. ETFs trade intraday on exchanges and other trading venues – similar to common stocks – and are priced based on market demand for their shares, typically driven by the underlying securities' prices.

ETNs Are Another Type of ETP

While also tracking an underlying index and trading on exchanges, ETNs differ from ETFs. To begin with, ETNs are structured investment products issued as senior unsecured debt notes and backed by the creditworthiness of the issuer. As such, ETNs possess credit risk – investors must trust that the issuer will make good on the return based on the performance of the underlying index. ETNs are similar to bonds but do not have interest payments, and ETN prices fluctuate like stocks.

While ETFs own the basket of securities in the index they track – for example, an ETF that tracks the S&P 500 will own all 503 stocks in the index – ETNs do not provide investors with ownership of the securities. Instead, an ETN represents a promise to pay a return at maturity reflecting the performance of the index. As such, repayment at maturity may be greater than or less than par value, making ETNs similar to debt securities.

History of ETFs

The first attempt at a pseudo ETF can be traced back to the 1989 launch of Index Participation Shares for the S&P 500 (these were eventually deemed similar to futures contracts and ordered to trade on futures exchanges). Then in 1990, the Toronto Stock Exchange launched Toronto 35 Index Participation Units (TIP 35), which was a warehouse receipt-based instrument tracking the TSE-35 Index.

Finally, State Street launched the first true ETF in the U.S. in 1993, the S&P 500 Trust ETF (SPY). At the writing of this report, the SPY had $505.5 billion AUM, 1.15x the second largest ETF in terms of AUM, the iShares Core S&P 500 ETF with $440.9 billion AUM.

[4] In 2024, spot bitcoin ETPs were approved by the SEC, broadening out the ETP category to include digital asset vehicles.

A Multitude of Choices

ETFs provide investors with a multitude of choices to meet many different investment objectives. (There are several hundred categories listed on etf.com.) Common language used when analyzing types of ETFs – or the ETF may be a combination of types – include, but are not limited to:

- **Index-Based** – According to Investment Company Institute 2023 data, 92.1% of all U.S. domiciled ETFs were index-based. Index-based ETFs track the performance of a reference index, with portfolio holdings (typically) fully transparent via a daily disclosure of basket securities or portfolio holdings. These ETFs can replicate every security in the index, investing all of its assets proportionately. Or the ETF can sample an index by holding a representative selection of index securities (or non-index securities with similar performance attributes) and/or weighting its holdings differently. Sampling is often more practical for large indexes, such as total stock market or bond indexes.
- **Actively Managed** – Actively managed ETFs pursue an investment objective and policy – for example, follow a specific sector in the stock market – with the securities selected by a portfolio manager. As they do not follow a specific index, style drift can occur with actively managed ETFs, whereby the fund strays from its investment objective either due to market cap appreciation or a change in portfolio managers, etc. This means an investor may not be investing in the strategy they thought they were. While this is most common in actively managed MFs, it may potentially occur in other ETFs.
- **Fund of Funds** – An investment strategy where an ETF invests in other funds.
- **Asset Class** – Equities, fixed income, commodities, currency, alternatives, or hybrids; with each broad category having multiple subcategories as well.
- **Region** – Based on the broad market of domestic securities only; based on a sector of domestic securities only; international securities; country specific (U.S., Australia, U.K, etc.); or regional groupings (developed, emerging, etc.).
- **Sectors/Groups/Industries** – Financials, healthcare, retail, infrastructure, merger arbitrage, trend following, environment, artificial intelligence, etc.

- **Investment Style** – These can include, among others:
    - Broad market (attempts to represent 100% of total market cap)
    - Market cap (large, mid, small)
    - High dividend yield
    - Volatility (linked to volatility futures, the VIX)
    - Smart beta (rules-based strategies aiming to deliver better risk-adjusted returns than traditional market-cap-weighted indexes)
    - Alpha seeking (attempt to outperform the market)
    - Leveraged[5] – Use derivatives and debt to produce a return that is a multiple of the underlying index or single stock
    - Inverse[3] – Use derivatives to profit from a decline in the value of an underlying benchmark or single stock (like a short position on a stock)

[5] Most leveraged and inverse ETFs reset daily, i.e. they are designed to achieve their stated objectives on a daily basis, or other specified time period.

ETFs versus Other Investment Products

Investors have many types of products to choose from:

- Individual securities
    - Stocks
    - Bonds
- Derivatives/commodities
- Investment funds
    - **Open-end funds** – A diversified portfolio of pooled investor money that can issue unlimited shares, with a fund sponsor selling/redeeming shares directly to investors. Shares are priced daily based on their net asset value (NAV). Open-end funds accept a constant flow of new investment capital, issuing new shares and buying back its own shares on demand. These funds are the bulk of the investment options in company-sponsored retirement plans, such as 401(k) plans. Types of open-end funds are:
        - **ETFs** (most are open-end funds but can be structured as UITs)
        - **Mutual funds** (MF; most are open-end funds) – A portfolio of stocks, bonds, or other securities purchased with the pooled capital of investors. A professional fund manager decides which investments to buy and sell and sets the mix of investments. The funds' assets and objective(s) are detailed in the prospectus.
    - **Closed-end funds** (CEF) – A type of mutual fund that issues a fixed number of shares through one initial public offering to raise capital for its initial investments. Shares are then bought/sold on a stock exchange, but no new shares are created and no new money flows into the fund. Examples may include municipal bond funds or global investment funds.
    - **Unit investment trusts** (UIT) – An investment company that offers a fixed portfolio, typically of stocks and bonds, as redeemable units to investors for a specific period of time to provide capital appreciation and/or dividend income.

Investors may also select investments based on the style of a select fund, such as investment objective, etc. In addition to fund specific factors, there are many moving pieces that go into an investment decision. Investors look not just at the investment product itself. Rather, they think through their own objectives in totality, and different investors will need unique investment products to meet their own individual needs.

In this report, we assess similarities and differences between ETFs and MFs – among the most common investment vehicles in the U.S. – showing comparisons to single stocks where applicable.

- **Similarities** – Both ETFs and MFs hold baskets of underlying securities and are most commonly structured as open-end funds. They both post mark-to-market NAVs at the end of the trading day.
- **Differences** – ETFs differ from MFs in a variety of ways, in particular ETFs typically have greater price transparency and intra-day liquidity[6] since they are traded on exchanges. ETFs may also provide greater tax efficiencies and, in general, lower total expense ratios (albeit this can vary by fund) compared to MFs with similar investment strategies. Morningstar estimates the average ETF costs half as much as the average mutual fund (0.50% vs 1.01%; can vary by fund).

Common similarities and differences between ETFs and MFs are summarized below:

(These are generalizations, and some types of funds within each category could stray from these points. For example: there are no-load MFs, some MFs do not have redemption fees, and some MFs may not have investment minimums.)

	ETF	ETN	MF	Single Stock
Ability to Track Index	X	X	X	
Diversification	X	X	X	
Provide Investment Product Options	X	X	X	
Professional Management	X		X	
Exchange Traded	X	X		X
Price Transparency, as defined by:				
Intraday Trading	X	X		X
Intraday Pricing	X	X		X
Total Expenses*				
Sales Charges/Loads		X	X	
Investment Minimums			X	
Operating Expenses (management fees, other)	X	X	X	
Redemption Fees			X	
Tax Efficiency	X			X

Note: *Other than management fees, not every fund has every listed expense. Tax efficiencies can be dependent upon fund structure (discussed in more detail below).

[6] Liquidity is defined as ease with which an asset (ETF shares, MF shares, or single stocks) can be quickly and efficiently bought or sold in the market without significantly affecting its price.

Further details on similarities and differences between ETFs and MFs include:
(These are generalizations, and some types of funds within each category could stray from these points.)

- **Strategy** – Both are a collection of underlying securities, built around a specific investment objective or strategy. Actively managed ETFs and MFs strive to utilize a manger's expertise to outperform market benchmarks or select index(s). Most MFs (and some ETFs) are actively managed, requiring an investment style objective (albeit managers have some leeway in security selection). Conversely, index-based ETFs and MFs seek to match, or track, benchmark performance as close to exactly as possible.
- **Diversification** – Investors can get diversification in their portfolio via MFs or ETFs, which differs from investing in single individual stocks (albeit a portfolio or basket of stocks can provide diversification).
- **Transparency** – ETFs are traded intraday on exchanges or other trading venues (similar to stocks), which brings increased price transparency through intraday pricing and trading capabilities, and most are required to disclose portfolio holdings daily. MFs are not traded on an exchange, and their shares are only issued at the current day's closing price, or NAV, with holdings generally disclosed quarterly. Given the lengthy disclosure time horizon, managers of actively managed mutual funds can experience style drift, or a divergence from a fund's investment style or objective.
- **Pricing** – ETF shares are traded intraday on exchanges or other trading venues (secondary market), like individual stocks, whereas MFs are purchased through the fund company or financial intermediaries (primary market). MFs are forward priced – all orders received during the day are transacted at the same price, the NAV (which is reset only when it is next computed, typically 4:00 PM ET to match the close of U.S. equities trading). In the primary market, ETFs operate similarly to MFs, via authorized participants (discussed later in this report). Yet, ETF shares (secondary market) are continuously traded on exchanges and other trading venues and priced at market-determined rates. Investors may transact at different prices, which may vary from end-of-day NAV.
- **Liquidity** – Liquidity can be described as the ease with which an asset (ETF shares, MF shares, stocks) can be quickly and efficiently bought or sold in the market without significantly affecting its price, which is enhanced by price transparency and ease of execution (speed, ability to fill the entire order). With increased price transparency and continuous pricing brought on by intraday exchange trading, ETFs are typically considered more liquid than MFs on an intraday basis (MFs do have end of day liquidity).
- **Total Expenses** – Part of an investment decision will be around costs, and total expenses may vary widely among both types of funds and within each category of funds. Some ETF transactions include trading commissions (transaction costs), like a stock, which are paid directly by investors to the broker. MFs do not have trading commissions. Rather, MF expenses may include sales charges (loads) or redemption fees, paid directly by investors. ETFs and MFs have expense ratios, equal to operating costs divided by the average dollar AUM. This ratio is calculated annually at the fund's fiscal year end, with the largest and most variable piece typically representing the management fee. Both MFs and ETFs have management fees. Other fees in the expense ratio include (not every ETF or MF will have all these fees): custodial and administrative, index licensing, legal and accounting, marketing (12b-1 fees), acquired fund fees if investing in other funds, etc. The expense ratio is subtracted from the fund itself, lowering the return on investment.

Typically, actively managed funds carry higher expense ratios than index-based strategies, which is why ETFs generally have lower expense ratios (92.1% of U.S. ETFs were index-based in 2023).

- **Taxes**[7] – For investments held in taxable accounts, ETFs can be more tax efficient than MFs. As almost all ETFs are index-based, there is generally less turnover of the underlying securities which generates fewer taxable capital gains than actively managed funds (which most MFs are). Since ETFs generally utilize an in-kind creation/redemption process, participants exchange ETF shares for a basket of securities, rather than cash, from the ETF. ETF managers do not have to sell holdings to meet redemptions, sales which could trigger net capital gains that could be allocated to fund shareholders. ETF investors with taxable accounts can incur taxable capital gains when the ETF creates and redeems shares to rebalance its holdings. ETFs (and stocks) may also generate taxable capital gains when an investor sells shares.

  MF investors redeem shares directly from the fund, sometimes requiring the manager to sell appreciated securities to meet the redemption, and potentially incurring net capital gains. Net capital gains are passed to other current investors, even if the gains are attributed to prior periods of ownership. (These general guidelines may not be not universal.) Additionally, most mutual funds make annual distributions in December to meet excise tax requirements. Distributions can come in the form of earnings (managers must distribute at least 98% of any net income earned during the calendar year) and capital gains (managers must distribute at least 98.2% of net short-term and net long-term capital gains during the November 1 of the prior year and October 31 of the current year period). If a mutual fund under-distributes either type, the fund faces a 4% excise tax on the portion under distributed, which is shared across all shareholders.

  MFs can be tax efficient if the fund avoids these excise taxes, contains built-in losses, or its managers minimize turnover, and ETF shareholders can't avoid capital gains taxes on the overall appreciation of their investment. The difference is ETFs have more tools available to manage and minimize taxable capital gains that are passed to ETF holders. ETFs have a structural advantage by virtue of the in-kind creation and redemption process.

[7] The tax impact on an individual investor will depend on many factors, including the presence of other losses and if investing through a tax favored retirement account. This document is intended for general informational purposes only and is not intended to serve as tax advice to any individual or entity. Readers should consult with a qualified tax professional before taking action based on the information presented here.

ETF Legal Structures

ETFs can come in varying legal structures, which can impact capital distributions (dividends) and tax implications. The common types of legal structures include:

- **Open-End Funds (OEF)** – The vast majority of ETFs are structured this way. Dividends and interest received by the ETF can be immediately reinvested; derivatives, portfolio sampling, and (sometimes) securities lending can be utilized.
- **Unit Investment Trusts (UIT)** – Used by a small number of ETFs tracking broad asset classes, these ETFs generally hold a static investment portfolio and must fully replicate the indexes they track. There are no boards of directors or investment advisors managing the portfolio, and these funds have less investment flexibility than open-end ETFs. UITs do not reinvest dividends and are not permitted to lend securities in the portfolios or use derivatives.
- **Grantor Trusts** – These ETFs typically invest in physical commodities or currencies. Grantor trusts must hold a fixed portfolio and consider investors direct shareholders in the underlying basket of investments.
- **Partnerships** – One of the least common types of ETFs, these structures are unincorporated business entities (similar to statutory trusts or limited partnerships) electing to be taxed as a partnership. These ETFs can include different types of investments, such as futures, providing exposure to currencies or commodities that are hard to store physically (ex: natural gas, oil).

ETF Creation/Redemption Process

Terminology & Functionality

The ETF creation/redemption process is a unique and important feature that distinguishes ETFs from other investment vehicles and contributes to an ETF's transparency and liquidity. The process is used to keep the market price of an ETF at/near its intrinsic value. The process involves authorized participants (AP) – typically a broker-dealer or market maker (MM) – which are approved by the ETF issuer to create and redeem ETF shares. APs/MMS facilitate the buying and selling of ETF shares which are traded on the secondary market. Additionally, the arbitrage process – which is facilitated by the creation/redemption process – keeps ETF prices aligned with their intrinsic values.

To set the scene for this discussion, we lay out some useful terminology:

- **Primary Market** – The creation/redemption process between the AP/MM and the ETF increases or decreases the number of ETF shares available to the market based on investor demand.
- **Secondary Market** – ETF shares then trade on exchanges and other trading venues like single stock equities. Trading is intraday, and prices fluctuate based on market supply and demand characteristics, just as with stocks. Intraday ETF share prices may vary from intrinsic values. Investors – both individual and institutional – interact here, never interacting with the ETF itself. Investors pay the spread between the bid (offer to buy) and ask (price a seller will accept).
- **Arbitrage Process** – When the price of an ETF share does not equal its intrinsic value – which is primarily determined by the market prices of the securities held in the ETF's portfolio – a premium/discount exists. To realign price with the intrinsic value, APs/MMs will buy/sell ETF creation units and capture the profit. This is the arbitrage process.

Primary Market

The creation/redemption process is used to manage the number of ETF shares outstanding, those available for trading in the secondary market. In the creation process, an AP/MM will deliver a specified basket of underlying securities which mirror the ETF's underlying index or strategy, typically composed of the actual securities held by the ETF or representative securities. This is called the creation basket.

The AP/MM delivers the creation basket – also referred to as creation units, consisting of large blocks of securities, typically ranging from 25,000 to 200,000 – to the ETF issuer in an in-kind transfer[8], where the actual underlying securities are exchanged for newly created ETF shares in an agreed-upon quantity. This increases the supply of outstanding ETF shares. It is common for APs/MMs to have already sold the ETF shares short, and they are creating in order to flatten their position and make delivery on those short sales.[9] The ETF shares are listed on a stock exchange, allowing investors – individual and institutional – to buy and sell them throughout the trading day.

In the redemption process – the reverse process – the ETF issuer provides APs/MMs with a specified number of underlying securities. This is called the redemption basket. The AP/MM then delivers ETF shares to the ETF issuer, which then cancels the redeemed shares. This decreases the supply of outstanding ETF shares in the market.

The creation/redemption process is a dynamic process, happening throughout the day typically in response to what is occurring in the secondary market as APs/MMs are calling in creations or redemptions. Calling is the process where an AP/MM submits an order to create or redeem a specified number of units of the fund to the issuer, usually via the custodian's portal (an AP/MM may do this for itself, or on behalf of another market maker that is not an AP or does not want to act as an AP for a given creation or redemption.) The issuer typically accepts the order, although there are instances where the issuer can decide not to accept an order. This must happen before the fund's stated creation/redemption cutoff time. Once the issuer has accepted a creation/redemption order, the AP/MM knows it is locked in on that trade and has collapsed its risk, assuming the creation/redemption was risk reducing (which it usually is). We do note that the bookkeeping for the creation/redemption process is performed only once per day. At this time, the issuer – through its custodian – adjusts the shares outstanding and prepares to settle the creations and redemptions.

[8] The in-kind transfer is done to maintain the tax efficiency of the ETF. However, sometimes operational considerations outweigh any tax-related benefit from in-kind transfers and the issuer opts for cash creation or redemption.
[9] APs do not receive compensation from the ETF sponsor and are not legally obligated to create or redeem shares. This differs from the role of a market maker in single-stock equities, which has legal obligations to consistently take the other side of a trade.

Secondary Market

In the secondary market, ETF shares trade on exchanges and other trading venues, just like single stock equities. Trading is intraday, and prices fluctuate based on market supply and demand characteristics. Intraday ETF share prices may vary from intrinsic values. The price of an ETF share is a function of supply and demand. A supply/demand imbalance can occur, causing the price of the ETF share to deviate somewhat from the price per share of its underlying securities (large deviations tend to be short lived).[10]

This creates a premium/discount in the ETF shares. When this premium/discount gets large enough[11], APs/MMs will buy/sell ETF shares. This changes the price of and therefore demand for ETF shares and the underlying securities. This price change narrows the price gap between the ETF share and the price of the underlying securities.

- **Premium** – If the ETF is trading at a premium to the price of the underlying securities, investors can sell shares in the ETF and/or buy the underlying securities. This should reduce the ETF share price and/or raise the price of the underlying securities.
- **Discount** – If the ETF is trading at a discount to the price of the underlying securities, investors can buy shares in the ETF and/or sell the underlying securities. This should increase the ETF share price and/or lower the price of the underlying securities.

For the most part, the price of an ETF share remains similar to its intrinsic value, which is primarily determined by the market prices of the securities held in the ETF's portfolio. Part of this is attributed to the transparency around ETF portfolio holdings, a daily disclosure of basket securities or portfolio holdings. A portfolio composition file (PCF) is published each business day, describing the makeup of the creation/redemption baskets. It specifically lists the names and quantity of each underlying security in the basket. These details provide transparency to market participants, who can follow price movements of the ETF shares and compare this to the price of the underlying securities.

Additionally, intraday trading consistently shows changes in the ETF share price, allowing investors to attempt to profit from discrepancies between the price of the ETF share and price of the underlying securities. Intraday indicative values (IIV) are calculated real time, estimating ETF values. These are disseminated regularly during the day, and APs, market makers or institutional investors can also make their own real time assessments.

Arbitrage Process

When the price of an ETF share does not equal its intrinsic value – which is primarily determined by the market prices of the securities held in the ETF's portfolio – premiums/discounts exist. As noted above, APs will then buy/sell ETF shares to realign the ETF price with its intrinsic value. The AP captures a profit driven by the price misalignment. This is called the arbitrage process.

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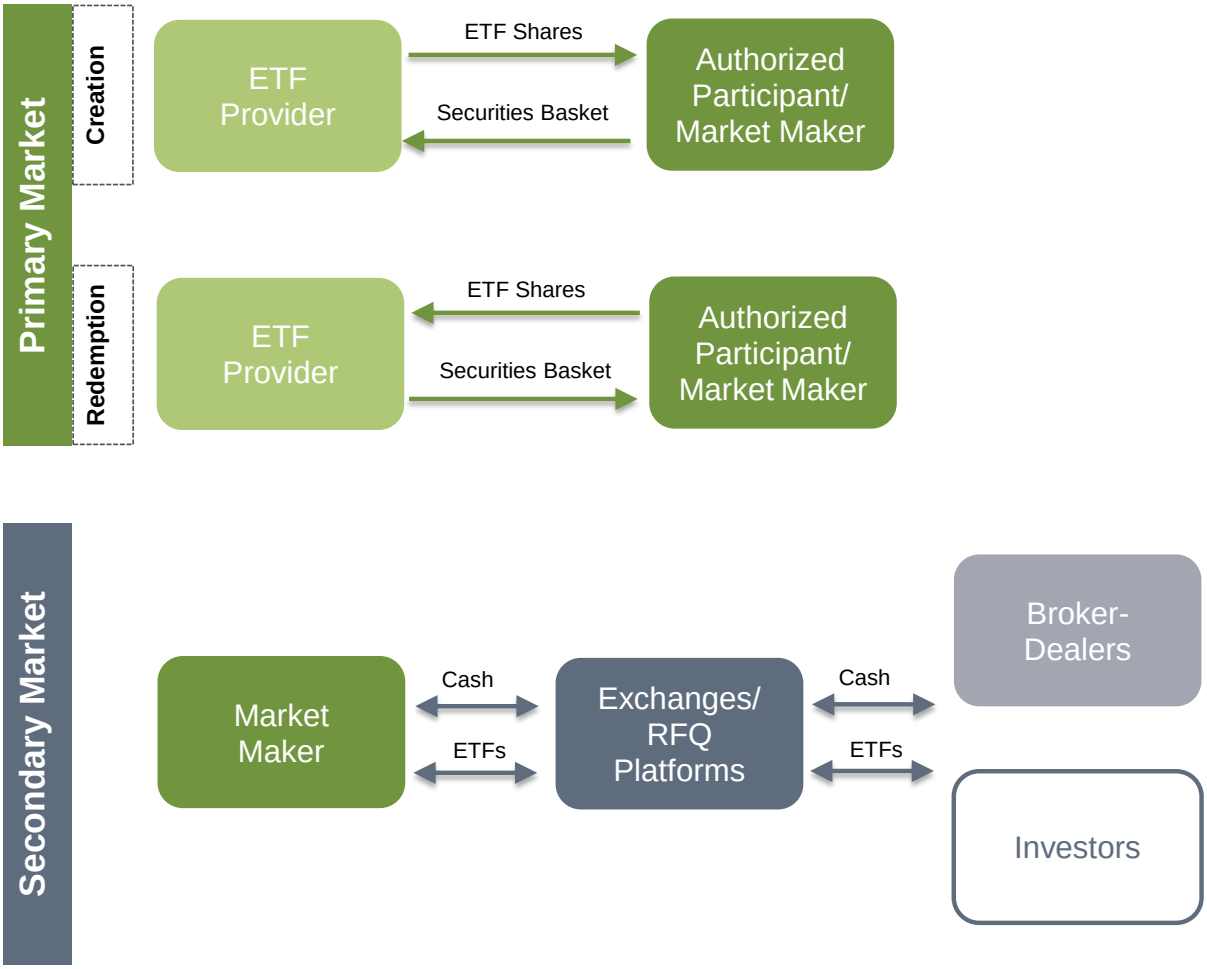
[10] The difference in values between the ETF and its underlying securities can also be created by timing differences. For example, with non-U.S. stock ETFs, market hours to buy/sell the underlying securities can vary from the U.S. stock market where the ETFs trade. Or, in the case of bond ETFs, the underlying bond is valued at the bid whereas the ETF can be valued at the bid, ask, or anywhere in between.

[11] If the premium or discount is small – especially to the point where the all-in costs of doing the arbitrage exceed the amount of profit that would be gained – market makers might not trade.

Mapping the Process



Note: The securities basket includes the underlying shares. ETFs may trade off exchange as well. A market maker can also be an authorized participant, but it does not have to be the authorized participant on the ETF it is trading in the secondary market. RFQ platforms are trading platforms using request for quote protocols, enabling institutional investors looking to trade an ETF at a set quantity, etc. to send out a request for a quote to a large number of market makers at the same time, then trading at a price individually offered by a market maker. Investors can trade directly with market makers in the over-the-counter (OTC) market, including via RFQ platforms.

ETF Liquidity

Liquidity can be described as the ease with which an asset can be quickly and efficiently bought or sold in the market without significantly affecting its price. In single-stock equities, for example, liquidity is about the breadth and depth of trading volumes, which is enhanced by price transparency and ease of execution (speed, ability to fill the entire order). As an ETF is not a common stock, liquidity requires a different discussion than one just on volumes. ETFs are highly liquid, but liquidity is not just measured by volumes on exchanges or other trading venues. (We note that the liquidity of the ETF fund may be different than liquidity of the underlying securities the ETF holds.) Understanding liquidity requires understanding the unique nature of and interaction between the ETF primary and secondary markets and the key participants in each.

In the secondary market, where the price of an ETF share traded on exchanges is a function of supply and demand determining market value, liquidity is associated with the breadth and depth of trading volumes of ETF shares, as with single stocks. However, in the primary market function as described above, there is also the arbitrage process, which can inherently increase volumes. Liquidity, therefore, is associated with the efficiency of the creation/redemption process[12], or the ease and cost of aggregating a creation basket. This process is more representative of the price of the underlying securities, which are delivered in baskets to create ETF shares (as shown above), rather than the ETF shares themselves.

Liquidity in the primary and secondary markets is not equal nor indicative of the other. Yet, the two have a direct relationship. The easier an AP can access and trade the underlying securities, the more efficiently it can create/redeem ETF shares to meet investor demand, thereby impacting volumes. According to a Blackrock iShares report, from 3/1/22 to 2/28/23, there were 59 contracted APs – those with an effective agreement in place with an ETF issuer, even if the AP does not regularly create or redeem ETF shares – and 39 active APs – has created or redeemed shares of an ETF within the fund's most recent fiscal year – in the U.S. listed ETF universe. On average, there were 24 contracted APs per ETF and 5 active APs. Given differences in trading volumes, larger funds with higher AUM will be supported by a larger number of APs than smaller or niche funds (these funds may have limited or no primary market activity). This buffer of sorts – more contracted than active APs – enables APs to readily step in and execute should another AP cease execution, even if this AP had not previously been active in a fund.

Should an AP cease to create/redeem ETF shares, another AP may enter the market seeking the potential profit from the arbitrage process described above. In the unlikely scenario all APs stop acting for an ETF, the supply of ETF shares becomes fixed in the short run (the creation/redemption process halts), and the ETF trades similarly to CEFs. The ETF share price would still be determined on exchanges and other trading venues, based on supply and demand characteristics, and the ETF may trade at a premium/discount to the price of the underlying securities. This creates an incentive for APs to jump back in the process to capitalize on the arbitrage opportunity. APs again begin the process of changing the supply of ETF shares.

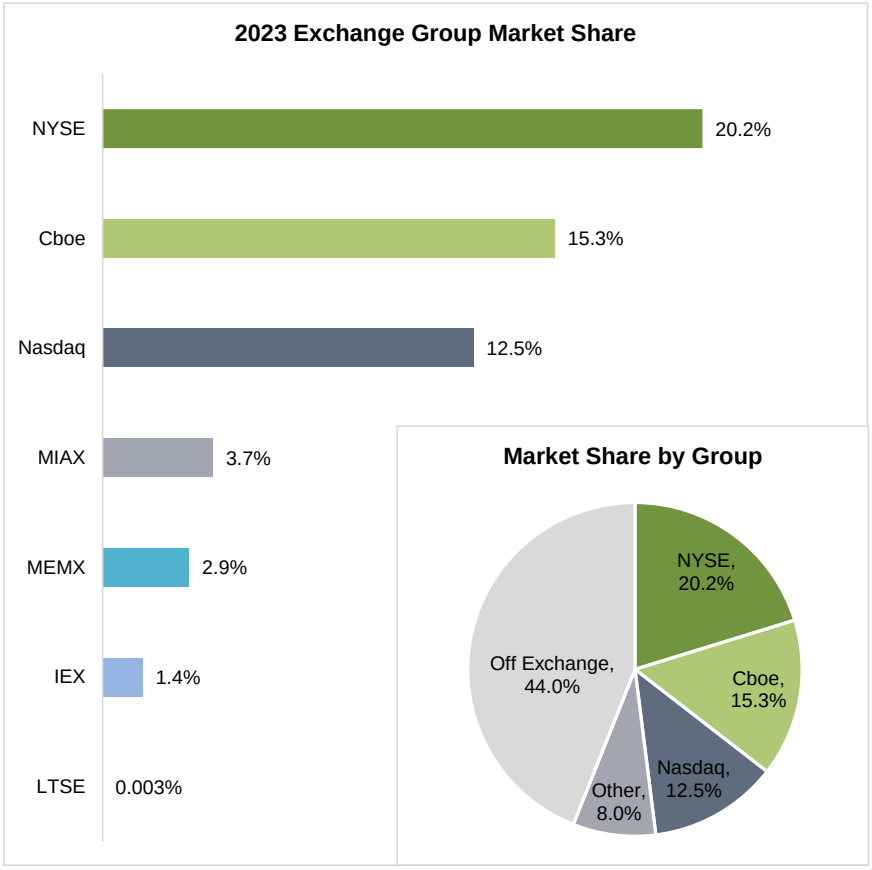
As shown by this cycle, APs generally keep the arbitrage process functioning efficiently to meet market demand and liquidity needs. For example, an Investment Company Institute survey of ETF sponsors looked at APs during the COVID turmoil. The daily average number of active APs per ETF from March 9–March 27, 2020, actually increased to 2.0 from 1.6 a year earlier.

[12] The majority of ETFs do not have any primary market activity on most trading days; some larger ETFs have daily creations and redemptions, but these ETFs generally have more active APs.

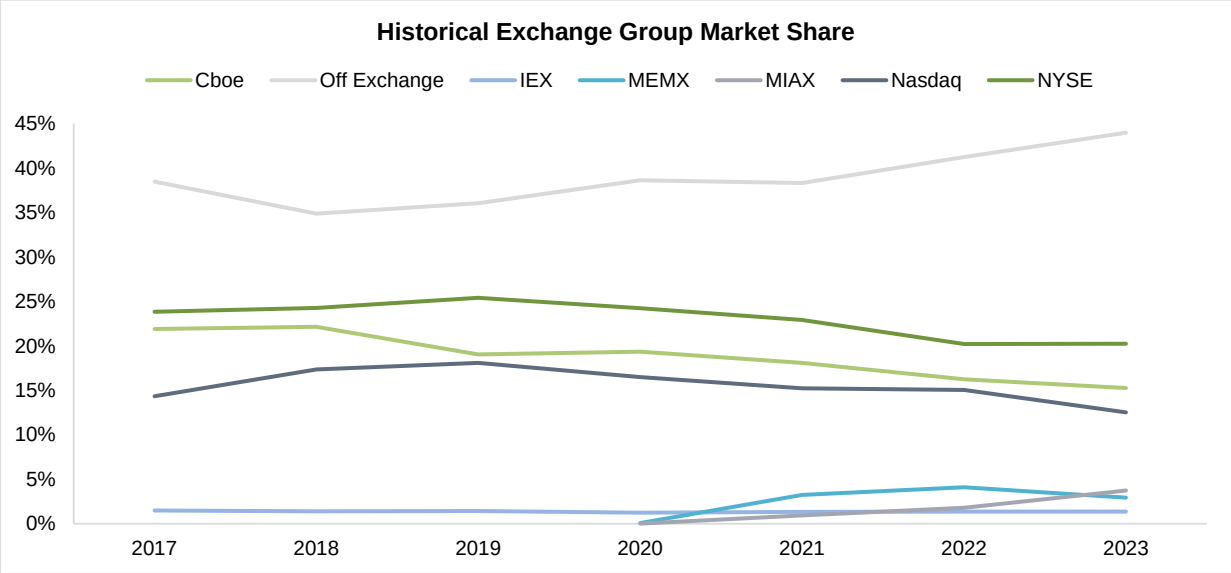
Market Landscape

Market Share by Exchange

Within ETF trading, the top two exchanges hold around a 20% and 15% market share, followed by 12.5% at the number three exchange. Off-exchange trading represents around 44% of the total.



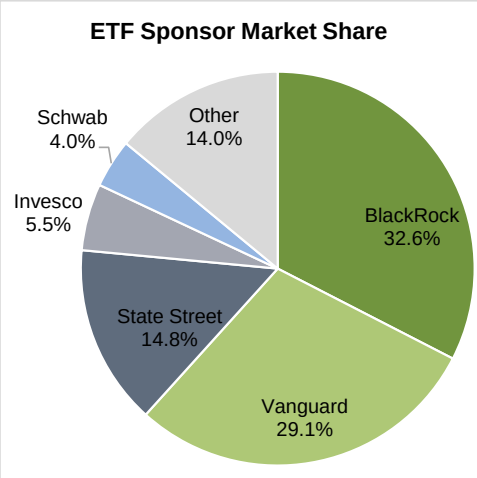
Source: Cboe Global Markets, SIFMA estimates



Source: Cboe Global Markets, SIFMA estimates

Market Share by Sponsor

Regarding market share for ETF sponsors, the top three firms held 76.5% of the total AUM. After the next few players, market shares drop off quickly.



Source: etf.com, SIFMA estimates
Note: Other includes 227 sponsors.

ETF Regulation

History of Required Exemptive Relief

The ETF legal structures discussed above are regulated by the SEC and subject to the Securities Act of 1933 and the Securities Exchange Act of 1934. Historically, OEFs and UITs were also regulated under the Investment Company Act of 1940 ('40 Act). On the commodities side, partnerships are usually regulated as commodity pools by the CFTC, while grantor trusts are not regulated by the CFTC.

The majority of ETFs are registered with the SEC and operate under the same rules as MFs. Until Rule 6c-11 took effect in December 2020, in order to register under the '40 Act, ETFs had to first receive exemptive relief from certain provisions which apply to other funds, such as MFs. MFs can only sell and redeem shares at NAV and must redeem any shares presented by a shareholder (not exchange traded). ETFs operate differently and therefore previously needed exemptive relief from certain provisions of the '40 Act, including:

- **Creation and Redemption** – Relief to enable the creation/redemption process. ETFs only redeem securities (a) to authorized participants (APs), not shareholders; and (b) in creation units, not individual shares.

  Under the '40 Act, redeemable securities can be redeemed by any shareholder for the share of the issuer's current net assets.

- **Exchange Trading** – ETF shares trade on exchanges at market prices rather than NAV. Relief was granted only to ETFs complying with conditions facilitating the arbitrage process (daily disclosure of portfolio holdings, intraday indicative value disclosure, listed on an exchange, etc.).

  Under the '40 Act, redeemable securities must be sold at NAV.

- **In-Kind Transactions with Affiliates** – ETFs required relief to enable the creation/redemption process. Otherwise, APs for an early-stage ETF could be considered affiliated persons, triggering certain prohibitions.

  Under the '40 Act, affiliated persons (own at least 5% of the issuer's outstanding voting securities) of a fund are prohibited from buying securities from or selling them to a fund.

- **Redemption Proceeds Delivery Time** – ETFs required relief when trading in foreign markets, given differences in market hours and potential market holiday schedules.

  Under the '40 Act, funds cannot postpone the completion of redemption requests for more than seven days.

- Additionally, most ETFs obtained exemptive relief to permit other funds to invest in ETFs in excess of prescribed limits.

The core investor protections on risks and conflicts of interest under the '40 Act always applied to ETFs.

Regulations

Securities Act of 1933

https://www.govinfo.gov/content/pkg/COMPS-1884/pdf/COMPS-1884.pdf

Catalyst: The stock market crash of 1929

Objective: (1) Ensure transparency in financial statements to assist investors in making informed decisions; (2) prohibit deceit, misrepresentation and other fraud in the sale of securities.

Details:

Also known as the Securities Act or Truth in Securities Act, this was the first federal law used to regulate the stock market and the first major law on the sale of securities, which had historically been governed by state laws. Importantly, the act created a uniform set of rules to protect investors against fraud.

The Securities Act required companies to register with the SEC prior to going public, providing relevant financial and other information in a prospectus and registration statement. Information required included: corporate description of properties and businesses; management information; financial statements certified by an independent account; and a description of the security being offered. Some exemptions from the registration requirement existed (private offerings to a limited number of persons or institutions; offerings of limited size; intrastate offerings; and securities of municipal, state, and federal governments).

Securities Exchange Act of 1934

https://www.govinfo.gov/content/pkg/COMPS-1885/pdf/COMPS-1885.pdf

Catalyst: The stock market crash of 1929

Objective: (1) Create the SEC to regulate the securities industry; (2) establish self regulation; (3) regulate trading of securities.

Details:

Also known as the Exchange Act, this law empowered the SEC with broad authority over all aspects of the securities industry. It tasked the agency to register, regulate, and oversee brokerage firms, transfer agents, and clearing agencies as well as the nation's securities self-regulatory organizations (SROs). This act identified and prohibited certain types of conduct and provided the SEC with disciplinary powers over regulated entities and persons associated with them. The Exchange Act also enabled the SEC to require periodic reporting of information by publicly traded companies. Further, the act established supervised exchange self regulation[13], with direct and flexible requirements for exchanges. On the direct side, exchanges must: register with the SEC; restrict broker-dealer borrowing; and prohibit manipulative practices. Additionally, exchanges have discretion in monitoring their markets, relying on self-regulation (the flexible aspect).

[13]While self-regulation dates back to the Buttonwoods Agreement, and early stock exchanges formed constitutions and by laws on their own, this was the first version of supervised self-regulation.

Investment Company Act of 1940

https://www.govinfo.gov/content/pkg/COMPS-1879/pdf/COMPS-1879.pdf

Catalyst: The stock market crash of 1929

Objective: (1) Require investment company registration; (2) regulate product offerings issued by investment companies in public markets.

Details:

Also known as the '40 Act, it regulates the organization of companies, including mutual funds, engaging primarily in investing, reinvesting, and trading in securities, whose own securities were offered to the investing public. It was designed to minimize conflicts of interest by requiring disclosure of these companies' financial condition and investment policies to investors when stock is initially sold, and on a regular basis thereafter. The focus of the disclosures is on: fund details; investment objectives; and investment company structure and operations.

Rule 6c-11

https://www.sec.gov/files/rules/final/2019/33-10695.pdf

Catalyst: To match changes in the markets, facilitate greater competition and innovation

Objective: Permit ETFs to operate within the Investment Company Act of 1940 without an exemptive order.

Details:

In September 2019, the SEC adopted Rule 6c-11 of the Investment Company Act of 1940 to permit ETFs satisfying certain requirements to organize and operate without the expense and delay of obtaining an exemptive order. The objective was to ease regulatory burdens of bringing ETFs to market and create a level playing field for ETF sponsors. This includes: rescinding prior exemptive orders and allowing custom creation/redemption baskets.

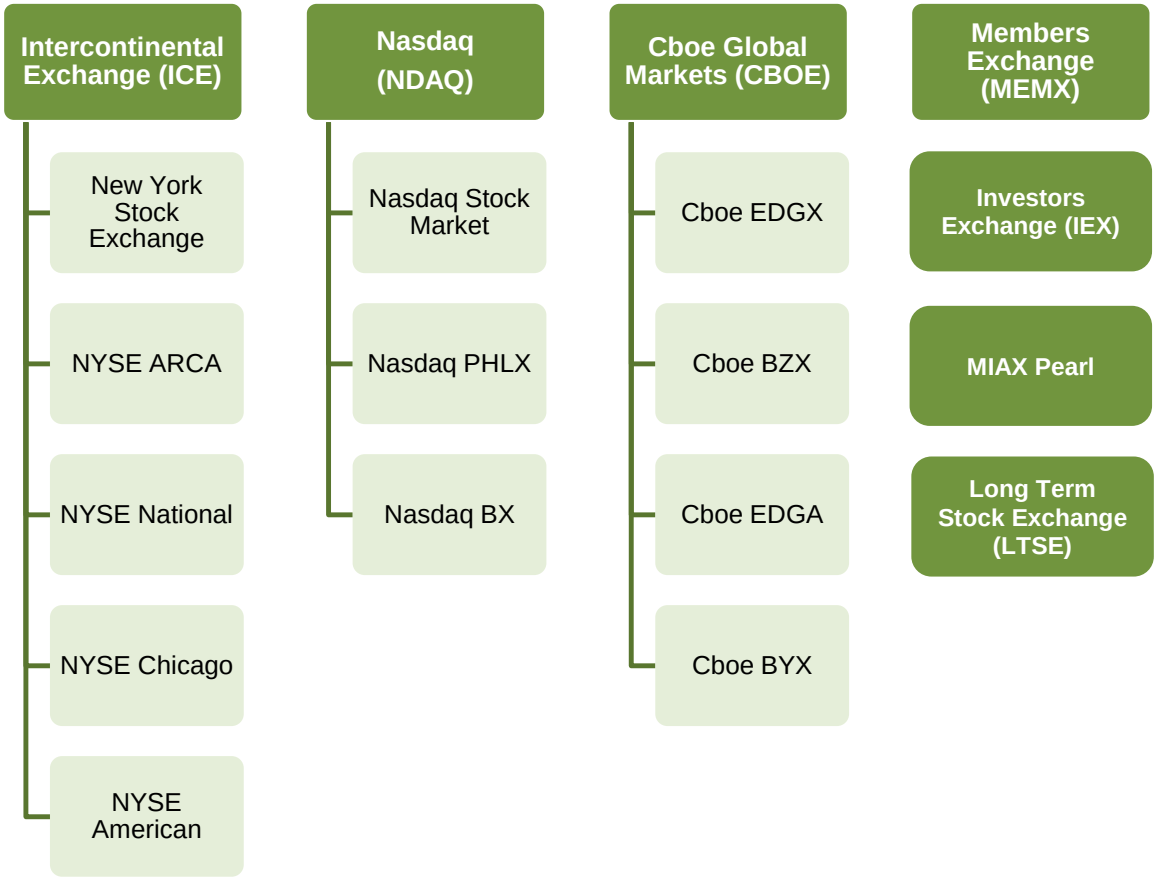
Highlights of conditions in the proposed rule include:

- **Transparency** – ETF sponsors would be required to provide daily portfolio transparency on its website.
- **Custom Baskets Policies and Procedures** – An ETF sponsor may use custom baskets (those not reflecting a pro-rata representation of the fund's portfolio or differing from the initial basket used in transactions on the same business day) if they have written policies and procedures setting forth detailed parameters for the construction and acceptance of custom baskets. The rule also requires an ETF to comply with certain recordkeeping requirements.
- **Website Disclosure** – The proposed rule would require daily website disclosures (historical premiums/discounts, bid-ask spreads and information on creation/redemption baskets).

Rule 6c-11 is applicable to ETFs organized as open-end funds, not ETFs organized as UITs, ETFs structured as a share class of a multi-class fund, or leveraged or inverse ETFs.

Appendix: Exchange Landscape

ETFs trade on equity exchanges, with volumes reported within total equity volumes.



Note: Volumes also trade off exchange.

Appendix: Capital Markets Terms to Know

Statistics	
Y/Y	Year over Year
Q/Q	Quarter over Quarter
M/M	Month over Month
W/W	Week over Week
D/D	Day over day
YTD	Year to Date
QTD	Quarter to Date
MTD	Month to Date
WTD	Week to Date
BPS	Basis Points
PPS	Percentage Points
CAGR	Compound Annual Growth Rate
RHS	Right hand side (for charts)

Other	
AUM	Assets Under Management
DCM	Debt Capital Markets
ECM	Equity Capital Markets

Regulators	
North America	
FINRA	Financial Industry Regulatory Authority (United States)
SEC	Securities and Exchange Commission (United States)
CSC	Canadian Securities Administrators
European Union	
ESMA	European Securities and Markets Authority
AMF	Autorité des marchés financiers (France)
BaFin	Federal Financial Supervisory Authority (Germany)
FINMA	Swiss Financial Market Supervisory Authority (Switzerland)
United Kingdom	
FCA	Financial Conduct Authority
AsiaPac	
ASIC	Australian Securities and Investments Commission
CSRC	China Securities Regulatory Commission
SFC	Securities and Futures Commission (Hong Kong)
SEBI	Securities and Exchange Board of India
FSA	Financial Services Agency (Japan)
MAS	Monetary Authority of Singapore

Trading	
ADV	Average Daily Trading Volume
Algo	Algorithm (algorithmic trading)
ATS	Alternative Trading System
Best Ex	Best Execution
BPS	Basis Points
CLOB	Central Limit Order Book
D2C	Dealer-to-Client
D2D	Dealer-to-Dealer
ECN	Electronic Communication Network
ETP	Electronic Trading Platforms
HFT	High-Frequency Trading
IDB	Inter-Dealer Broker
IOI	Indication of Interest
MM	Market Maker
OTC	Over-the-Counter
SDP	Single-dealer platform
Bid	An offer made to buy a security
Ask, Offer	The price a seller is willing to accept for a security
Spread	The difference between the bid and ask price prices for a security, an indicator of supply (ask) and demand (bid)
NBBO	National Best Bid and Offer
Locked Market	A market is locked if the bid price equals the ask price
Crossed Market	A bid is entered higher than the offer or an offer is entered lower than the bid
Opening Cross	To determine the opening price of a stock, accumulating all buy and sell interest prior to the market open
Closing Cross	To determine the closing price of a stock, accumulating all buy and sell interest prior the market close

Order Types	
AON	All or none; an order to buy or sell a stock that must be executed in its entirety, or not executed at all
Block	Trades with at least 10,000 shares in the order
Day	Order is good only for that trading day, else cancelled
FOK	Fill or kill; must be filled immediately and in its entirety or not at all
Limit	An order to buy or sell a security at a specific price or better
Market	An order to buy or sell a security immediately; guarantees execution but not the execution price
Stop	(or stop-loss) An order to buy or sell a stock once the price of the stock reaches the specified price, known as the stop price

Post Trade	
DTCC	The Depository Trust and Clearing Corporation
CSD	Central Securities Depository
CCP	Central Counterparty Clearing House
CP	Counterparty
IM	Initial Margin
VM	Variation Margin
MPR	Margin Period at Risk
T	Trade Date
T+1	Settlement Date

Investors	
Institutional	Asset managers, endowments, pension plans, foundations, mutual funds, hedge funds, family offices, insurance companies, banks, etc.; fewer protective regulations as assumed to be more knowledgeable and better able to protect themselves
Individual	Self-directed or advised investing

Equities	
EMS	Equity Market Structure
NMS	National Market System
Reg NMS	Regulation National Market System
SIP	Security Information Processor; aggregates all exchange's best quotes, sent back out to the market in one data stream
PFOF	Payment For Order Flow
Tick Size	Minimum quote increment of a trading instrument
CAT	Consolidated Audit Trail
SRO	Self Regulatory Organization

ETFs/Funds	
AP	Authorized Participant
PCF	Portfolio Composition File
NAV	Net Asset Value
IIV	Intraday Indicative Value
ETF	Exchange-Traded Fund
ETP	Exchange-Traded Product
MF	Mutual Fund
OEF	Open-End Fund
CEF	Closed-End Fund
UIT	Unit Investment Trust

Options	
Call	The right to buy the underlying security, on or before expiration
Put	The right to sell the underlying security, on or before expiration
Holder	The buyer of the contract
Writer	The seller of the contract
American	Option may be exercised on any trading day on or before expiration
European	Option may only be exercised on expiration
Exercise	To put into effect the right specified in a contract
Underlying	The instrument on which the options contract is based; the asset/security being bought or sold upon exercise notification
Expiration	The set date at which the options contract ends, or ceases to exist, or the last day it can be traded
Stock Price	The price at which the underlying stock is trading, fluctuates continuously
Strike Price	The set price at which the options contract is exercised, or acted upon
Premium	The price the option contract trades at, or the purchase price, which fluctuates constantly
Time Decay	The time value portion of an option's premium decreases as time passes; the longer the option's life, the greater the probability the option will move in the money
Intrinsic Value	The in-the-money portion of an option's premium
Time Value	(Extrinsic value) The option premium (price) of the option minus intrinsic value; assigned by external factors (passage of time, volatility, interest rates, dividends, etc.)
In-the-Money	For a call option, when the stock price is greater than the strike price; reversed for put options
At-the Money	Stock price is identical to the strike price; the option has no intrinsic value
Out-of-the-Money	For a call option, when the stock price is less than the strike price; reversed for put options

Equity Capital Formation	
IPO	Initial Public Offering; private company raises capital buy offering its common stock to the public for the first time in the primary markets
SPAC	Special Purpose Acquisition Company; blank check shell corporation designed to take companies public without going through the traditional IPO process
Bought Deal	Underwriter purchases a company's entire IPO issue and resells it to the investing public; underwriter bears the entire risk of selling the stock issue
Best Effort Deal	Underwriter only guarantees the issuer it will make a best effort attempt to sell the shares to investors at the best price possible; issuer can be stuck with unsold shares
Secondary	(Follow-on) Issuance of shares to investors by a public company already listed on an exchange
Direct Listing	(Direct placement, direct public offering) Existing private company shareholders sell their shares directly to the public without underwriters. Often used by startups or smaller companies as a lower cost alternative to a traditional IPO. Risks include, among others, no support for the share sale and no stock price stabilization from the underwriter after the share listing.

Underwriting	
Underwriting	Guarantee payment in case of damage or financial loss and accept the financial risk for liability arising from such guarantee in a financial transaction or deal
Underwriter	Investment bank administering the public issuance of securities; determines the initial offering price of the security, buys them from the issuer and sells them to investors.
Bookrunner	The main underwriter or lead manager in the deal, responsible for tracking interest in purchasing the IPO in order to help determine demand and price (can have a joint bookrunner)
Lead Left Bookrunner	Investment bank chosen by the issuer to lead the deal (identified on the offering document cover as the upper left hand bank listed)
Syndicate	Investment banks underwriting and selling all or part of an IPO
Arranger	The lead bank in the syndicate for a debt issuance deal
Greenshoe	Allows underwriters to sell more shares than originally planned by the company and then buy them back at the original IPO price if the demand for the deal is higher than expected, i.e. an over-allotment option

Documentation	
Pitch	Sales presentation by an investment bank to the issuer, marketing the firm's services and products to win the mandate
Mandate	The issuing company selects the investment banks to underwrite its offering
Engagement Letter	Agreement between issuer & underwriters clarifying: terms, fees, responsibilities, expense reimbursement, confidentiality, indemnity, etc.
Letter of Intent	Investment banks' commitment to the issuer to underwrite the IPO
Underwriting Agreement	Issued after the securities are priced, underwriters become contractually bound to purchase the issue from the issuer at a specific price
Registration Statement	Split into the prospectus and private filings, or information for the SEC to review but not distributed to the public, it provides investors adequate information to perform their own due diligence prior to investing
The Prospectus	Public document issued to all investors listing: financial statements, management backgrounds, insider holdings, ongoing legal issues, IPO information and the ticker to be used once listed
Red Herring Document	An initial prospectus with company details, but not inclusive of the effective date of offering price, filed with the SEC
Tombstone	An announcement that securities are available for sale. (Also a plaque awarded to celebrate the completion of a transaction or deal)

Process	
Roadshow	Investment bankers take issuing companies to meet institutional investors to interest them in buying the security they are bringing to market
Non-Deal Roadshow	Research analysts and sales personnel take public companies to meet institutional investors to interest them in buying a stock or update existing investors on the status of the business and current trends
Pricing	Underwriters and the issuer will determine the offer price, the price the shares will be sold to the public and the number of shares to be sold, based on demand gauged during the road show and market factors
Stabilization	Occurs for a short period of time after the IPO if order imbalances exist, i.e. the buy and sell orders do not match; underwriters will purchase shares at the offering price or below to move the stock price and rectify the imbalance
Quiet Period	(Cooling off period) The SEC mandates a quiet period on research recommendations, lasting 10 days (formerly 25 days) after the IPO

SEC Filings	
Reg S-K	Regulation which prescribes reporting requirements for SEC filings for public companies
Reg S-X	Regulation which lays out the specific form and content of financial reports, specifically the financial statements of public companies
Form S-1	Registration statement for U.S. companies (described above)
Form F-1	Registration statement for foreign issuers of certain securities, for which no other specialized form exists or is authorized
Form 10-Q	Quarterly report on the financial condition and state of the business (discussion of risks, legal proceedings, etc.), mandated by the SEC
Form 10-K	More detailed annual version of the 10Q, mandated by the SEC
Form 8-K	Current report to announce major events shareholders should know about (changes to business & operations, financial statements, etc.), mandated by the SEC
EGC	Emerging Growth Company; qualified companies may choose to follow disclosure requirements that are scaled for newly public

Fixed Income	
CUSIP	Committee on Uniform Securities Identification Procedures; a nine character security identifier
FICC	Fixed Income, Currencies and Commodities
FI	Fixed Income
TRS	Total Return Swap

Rates Markets	
UST	U.S. Treasury Securities
FRN	Floating Rate Note
T-Bill	U.S. Treasury Bill
T-Note	U.S. Treasury Note
T-Bond	U.S. Treasury Bond
TIPS	Treasury Inflation Protected Securities
Repo	Repurchase Agreement; also have reverse repos
Agency	Federal Agency Securities
FAMC	Farmer Mac/Federal Agricultural Mortgage Corporation
FCS	Farm Credit System
FHLB	Federal Home Loan Banks
FHLMC	Freddie Mac/Federal Home Loan Mortgage Corporation
FNMA	Fannie Mae/Federal National Mortgage Association
GNMA	Ginnie Mae/Government National Mortgage Association
TVA	Tennessee Valley Authority

Credit Markets	
Corporates	Corporate Bonds
HY	High Yield Bond
IG	Investment Grade Bond
Munis	Municipal Securities
GO	General Obligation Bond
Revenue	Revenue Bond

Securitized Products	
MBS	Mortgage-Backed Security
CMO	Collateralized Mortgage Obligation
CMBS	Commercial MBS
RMBS	Residential MBS
ABS	Asset-Backed Securities (auto, credit card, home equity, student loans, etc.)
CDO	Collateralized Debt Obligation

Money Markets (MM)	
CP	Commercial Paper
ABCP	Asset-Backed Commercial Paper
MMF	Money Market Funds

SIFMA Insights Research Reports

SIFMA Insights: www.sifma.org/insights

- Ad hoc reports on timely market themes
- Annual Market Structure Compendiums: Equity and Fixed Income
- COVID Related Market Turmoil Recaps: Equities; Fixed Income and Structured Products

Monthly Market Metrics and Trends: www.sifma.org/insights-market-metrics-and-trends

- Statistics on volatility and equity and listed options volumes
- Highlights an interesting market trend

Market Structure Primers: www.sifma.org/primers

- Capital Markets: An Overview of Capital Markets and the Role of Financial Institutions
- Global Equity Market Comparison
- Capital Formation & Listings Exchanges
- Equities
- Options
- ETFs
- Fixed Income & Electronic Trading

Conference Debriefs

- Insights from market participants into top-of-mind topics
- Pre-Conference Survey Comparison, compares survey results across various conferences

Equity Market Structure Analysis

- The ABCs of Equity Market Structure: How US Equity Markets Work and Why
- Analyzing the Meaning Behind the Level of Off-Exchange Trading, Part II
- Analyzing the Meaning Behind the Level of Off-Exchange Trading
- Why Market Structure and Liquidity Matter

Top of Mind with SIFMA Insights

- Podcasts with market participants on key market and economic themes, including reference guides defining terms and providing charts on the topics discussed on the podcast

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