



## CHAPTER

# 4

# US Exchange-Traded Funds

ETFs are a convenient, cost-effective tool for investors seeking to gain or shed exposure to broad markets, particular sectors or geographical regions, or specific investment strategies. Over the past decade, demand for ETFs has grown markedly as investors—both institutional and retail—increasingly turn to them as investment options. In the past 10 years, net share issuance of ETFs has totaled \$3.7 trillion. As investor demand has increased, sponsors have offered more ETFs with a greater variety of investment objectives. With \$7.2 trillion in total net assets at year-end 2021, the US ETF industry remained the largest in the world.

### IN THIS CHAPTER

- 67** What Is an ETF?
- 68** ETFs and Mutual Funds
- 69** ETF Total Net Assets
- 70** Origination of an ETF
- 73** How ETFs Trade
- 79** Demand for ETFs
- 83** Characteristics of ETF-Owning Households

## What Is an ETF?

An exchange-traded fund (ETF) is a pooled investment vehicle with shares that investors can buy and sell throughout the day on a stock exchange at a market-determined price. 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. ETFs have been available as an investment product for nearly 30 years in the United States. Most ETFs are structured as open-end investment companies, like mutual funds, and are governed by the same regulations. Other ETFs—primarily those investing in commodities, currencies, and futures—have different structures and are subject to different regulatory requirements.

## Evolution of the ETF Regulatory Framework

The first US ETF—a broad-based domestic equity fund tracking the S&P 500 index—was launched in 1993 after a fund sponsor received Securities and Exchange Commission (SEC) exemptive relief from several provisions of the Investment Company Act of 1940 that would not otherwise allow the ETF structure. As other fund sponsors wanted to bring new ETFs to market, they had to obtain their own specific exemptive relief orders from the SEC. Until 2008, the SEC only approved exemptive relief orders for ETFs that tracked specified indexes. These ETFs, commonly referred to as index-based ETFs, are designed to track the performance of their designated indexes or, in some cases, a multiple or an inverse (or a multiple of an inverse) of their indexes. At year-end 2021, there were 1,789 index-based ETFs—with \$6.8 trillion in total net assets—that were registered with the SEC under the Investment Company Act of 1940.

In early 2008, the SEC granted approval through exemptive relief orders to several fund sponsors to offer fully transparent, actively managed ETFs. Actively managed ETFs do not seek to track the return of a particular index. Instead, an actively managed ETF's investment adviser, like that of an actively managed mutual fund, creates a unique mix of investments to meet a particular investment objective and strategy. 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 year-end 2021, the market has grown to 719 actively managed 1940 Act ETFs with \$285 billion 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” (Rule 6c-11 under the Investment Company Act of 1940) in September 2019. The ETF rule enables any fund sponsor to offer ETFs that satisfy certain conditions (e.g., daily disclosure of all portfolio holdings, net asset value [NAV], market price, premium or discount, and bid-ask spread; as well as written policies and procedures regarding basket construction) without the expense and delay of obtaining exemptive relief from the SEC. The ETF rule also removes a competitive disadvantage that favored some ETF sponsors with older, more flexible forms of exemptive relief. Under the new rule, the vast majority of ETFs currently registered with the SEC are subject to identical requirements.

In 2019, the SEC also granted separate approval through the exemptive relief process 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, publicly disclose their full schedule of portfolio holdings at least quarterly. These new ETFs have been approved for use only in limited asset classes—primarily domestic equity—and must prominently disclose on their prospectuses, websites, and marketing materials that they are different from the more traditional ETFs allowed under the ETF rule. The first ETFs of this new type were launched in 2020, and by year-end 2021 there were 43 of these funds with \$5.6 billion in total net assets.

## ETFs and Mutual Funds

An ETF is a registered investment company that is similar to a mutual fund in that it offers investors a proportionate share in a pool of stocks, bonds, and other assets such as derivatives or bank loans. Like a mutual fund, an ETF is required to post the mark-to-market NAV of its portfolio at the end of each trading day and must conform to the main investor protection mechanisms of the Investment Company Act of 1940, including limitations on leverage, daily valuation and liquidity requirements, prohibitions on transactions with affiliates, and rigorous disclosure obligations. Also, like mutual funds, creations and redemptions of ETF shares are aggregated and executed just once per day at NAV. Despite these similarities, key features differentiate ETFs from mutual funds.

### Key Differences

One major difference is that retail investors buy and sell ETF shares on the secondary market (stock exchange) through a broker-dealer, much like they would any other type of stock. In contrast, mutual fund shares are not listed on stock exchanges, but are purchased and sold through a variety of distribution channels, including through investment professionals—full-service brokers, independent financial planners, bank or savings institution representatives, or insurance agents—or directly from a fund company or discount broker.

Pricing also differs between mutual funds and ETFs. Mutual funds are “forward priced,” which means that although investors can place orders to buy or sell mutual fund shares throughout the day, all orders placed during the day will receive the same price—the NAV—the next time it is computed. Most mutual funds calculate their NAV as of 4:00 p.m. eastern time because that is the time US stock exchanges typically close. In contrast, the market price of an ETF share is

continuously determined on a stock exchange. Consequently, the price at which investors buy and sell ETF shares on the secondary market may not necessarily equal the NAV of the portfolio of securities in the ETF. 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.

## ETF Total Net Assets

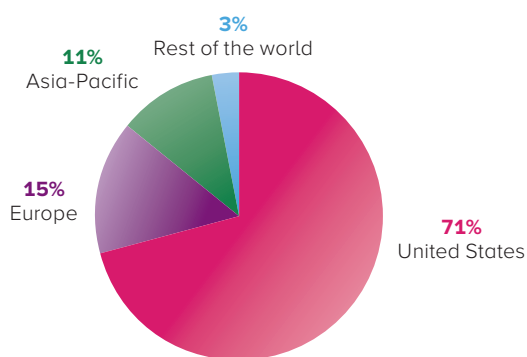
At year-end 2021, the US ETF market—with 2,570 funds and \$7.2 trillion in total net assets—remained the largest in the world, accounting for 71 percent of the \$10.1 trillion in ETF net assets worldwide (Figures 4.1 and 4.2). Within the United States, total net assets in ETFs accounted for 21 percent of assets managed by investment companies at year-end 2021.

The vast majority of assets in US ETFs are in funds registered with and regulated by the SEC under the Investment Company Act of 1940 (Figure 4.2). At year-end 2021, less than 2 percent of net assets were held in ETFs that are not registered with or regulated by the SEC under the Investment Company Act of 1940; these funds invest primarily in commodities, currencies, and futures. Non-1940 Act ETFs that invest in commodity or currency futures are regulated by the Commodity Futures Trading Commission (CFTC) under the Commodity Exchange Act and by the SEC under the Securities Act of 1933. Those that invest solely in physical commodities or currencies are regulated by the SEC under the Securities Act of 1933. At year-end 2021, there were 62 of these non-1940 Act ETFs with \$125 billion in net assets.

FIGURE 4.1

### The United States Has the Largest ETF Market

Percentage of total net assets, year-end 2021



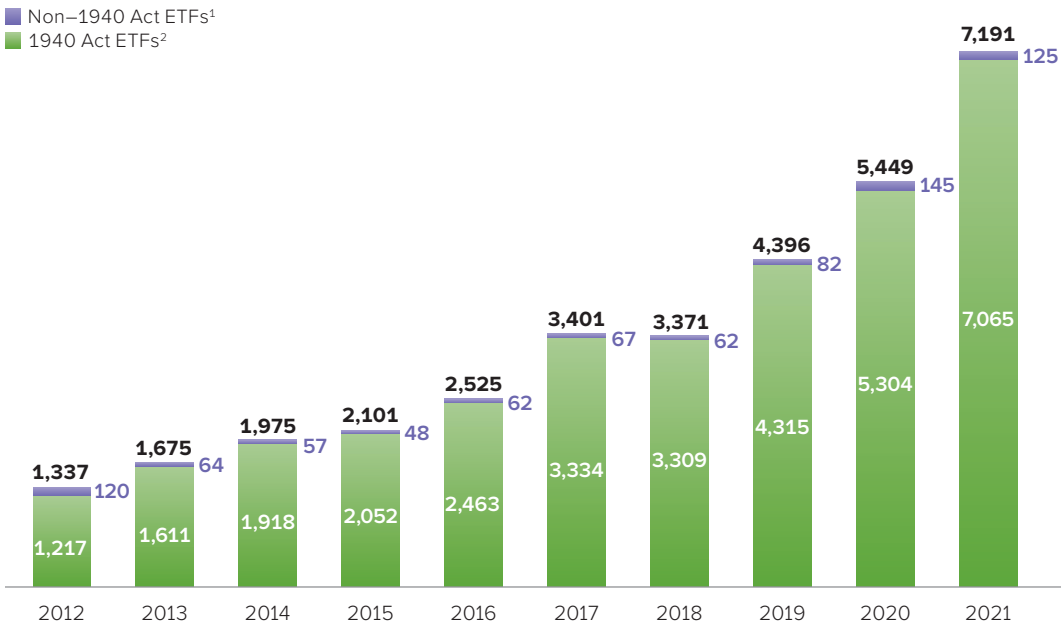
**Worldwide ETF total net assets: \$10.1 trillion**

Sources: Investment Company Institute and ETFGI

FIGURE 4.2

**Total Net Assets and Number of ETFs**

Billions of dollars, year-end



**Number of ETFs**

**1,195    1,295    1,412    1,597    1,717    1,836    1,989    2,096    2,203    2,570**

<sup>1</sup> The funds in this category are not registered under the Investment Company Act of 1940 and invest primarily in commodities, currencies, and futures.

<sup>2</sup> The funds in this category are registered under the Investment Company Act of 1940.

**Origination of an ETF**

An ETF originates with a sponsor—a company or financial institution—that chooses the investment objective of the ETF. In the case of an index-based ETF, the sponsor chooses both an index and a method of tracking its target index. Many early ETFs tracked traditional indexes, mostly those 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, as well as other fundamental factors, such as sales or book value. Others follow factor-based metrics—indexes that first screen potential securities 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.

Index-based ETFs track their target index in various ways. An index-based ETF may replicate its index (that is, it may invest 100 percent of its assets proportionately in all the securities in the target index) or it may invest in a representative sample of securities in the target index. Representative sampling is a practical solution for ETFs tracking indexes that contain thousands of securities (e.g., total stock market or broad-based fixed-income indexes), securities that have restrictions on ownership or transferability (e.g., certain foreign securities), or securities that are difficult to obtain (e.g., some fixed-income securities).

The sponsor of an actively managed ETF determines the investment objective of the fund and may trade securities at its discretion, much like an actively managed mutual fund. For instance, the sponsor may try to achieve an investment objective such as outperforming a segment of the market or investing in a particular sector through a portfolio of stocks, bonds, or other assets.

## Creation and Redemption of ETF Shares—Primary Market Activity

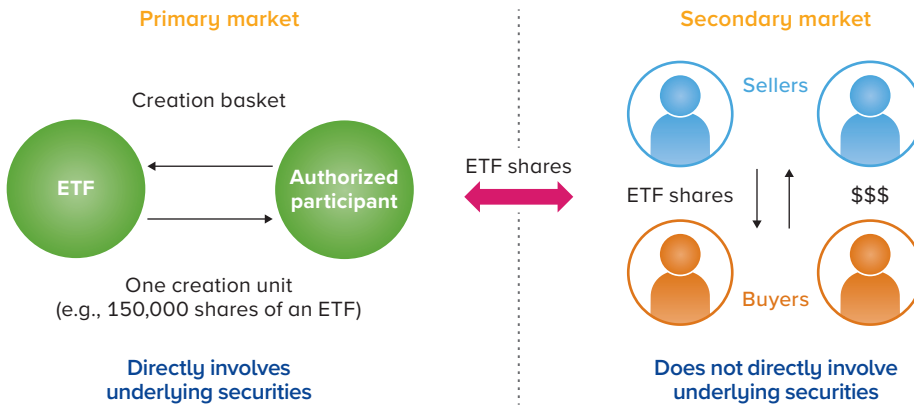
The creation or redemption of ETF shares—activity directly involving the ETF's underlying securities—is categorized as primary market activity. The creation and redemption mechanism in the ETF structure allows the number of shares outstanding in an ETF to expand or contract based on demand (Figure 4.3). 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.

### Creation

ETF shares are created when an authorized participant, or AP (see page 74), submits an order for one or more creation units. A creation unit consists of a specified number of ETF shares, generally ranging from 25,000 to 250,000 shares. The ETF shares are delivered to the AP when the specified creation basket is transferred to the fund. The fund 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 fund 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.

FIGURE 4.3

### Creation of ETF Shares



Note: The creation basket represents a specific list of securities, cash, and/or other assets.

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 a stock exchange, in a “dark pool” (private exchange), 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.

### Redemption

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 fund. 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.

## How ETFs Trade

The price of an ETF share on a stock 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 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 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 fund 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.

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**Glossary of Exchange-Traded Funds and Other Related Financial Terms**

[www.ici.org/files/2019/bro\\_etf\\_glossary.pdf](http://www.ici.org/files/2019/bro_etf_glossary.pdf)



## What Is an AP?

An authorized participant (AP) is typically a large financial institution that enters into a legal contract with an ETF distributor to create and redeem shares of the fund. In addition, APs are US-registered, self-clearing broker-dealers that can process all required trade submission, clearance, and settlement transactions on their own account; they are also full participating members of the National Securities Clearing Corporation (NSCC) and the Depository Trust Company (DTC).

APs play a key role in the primary market for ETF shares because they are the only investors allowed to interact directly with the fund. 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, hedge funds, and proprietary trading firms.

Over the years, policymakers have expressed concern that APs will step away from their role in facilitating creations and redemptions of ETF shares during periods of market stress, which would have knock-on effects in the secondary market for ETF shares. To investigate this concern, ICI conducted a member survey to assess the activity of APs during the March 2020 stress period and compared the experience with a more "normal" period in March 2019. In short, APs facilitated a significantly higher volume of ETF creations and redemptions for more ETFs during March 2020 than in March 2019. Rather than pulling back, on average, more APs participated in ETF primary market activity during the crisis in March 2020 (Figure 4.4). For example, across all ETF asset classes, there was a daily average of 2.0 active APs per ETF during the March 2020 period compared with a daily average of 1.6 active APs per ETF in the March 2019 period.

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**The Role and Activities of Authorized Participants of Exchange-Traded Funds**

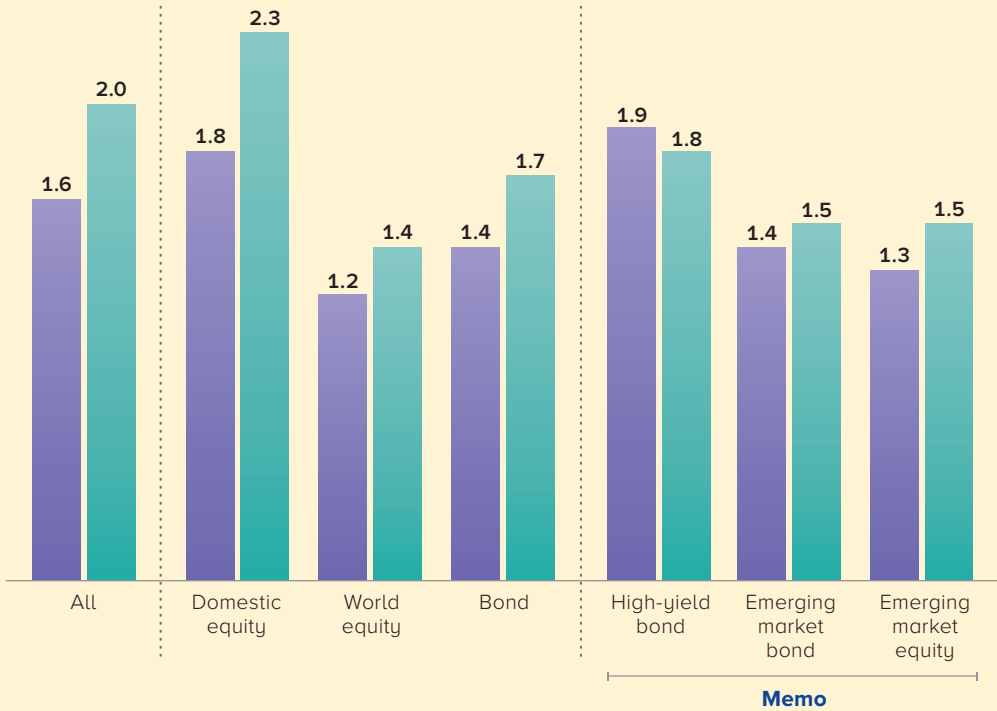
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FIGURE 4.4

### Authorized Participants Increased Their Activity Across a Wide Range of ETF Asset Classes in March 2020

Daily average number of active APs per ETF; March 11–March 29, 2019, and March 9–March 27, 2020

■ 2019  
■ 2020



Source: Investment Company Institute survey of ETF sponsors. See *Report of the COVID-19 Market Impact Working Group*, "Experiences of US Exchange-Traded Funds During the COVID-19 Crisis."

## Secondary Market Trading in ETF Shares

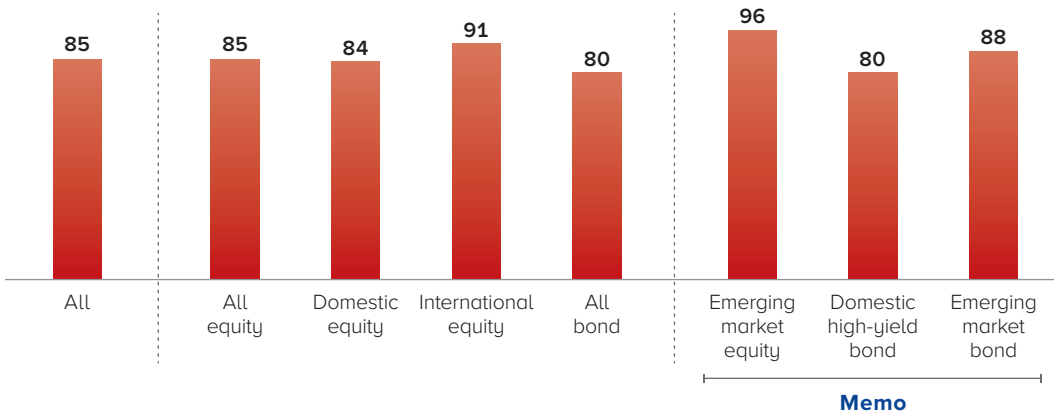
ETF investors trading in the secondary market (e.g., on an exchange) do not interact with the ETF directly and, for the most part, do not create transactions in the underlying securities, because only the ETF shares are changing hands. Although many large institutional investors can access these funds in both the primary and secondary markets, retail investors generally can access them only in the secondary market. ETF investors trading in the secondary market generally are not motivated by arbitrage. They are using ETFs to gain or reduce exposure to particular asset classes or investment strategies. Thus, these funds provide investors with an efficient means to transfer risk.

Across all ETFs, most activity is conducted in the secondary market (trading ETF shares) rather than the primary market (creations and redemptions of ETF shares through an AP). On average, 85 percent of the total activity in ETFs occurred on the secondary market in 2021 (Figure 4.5). Even for ETFs focused on narrower investment objectives—such as emerging market equity, domestic high-yield bond, and emerging market bond—the bulk of the trading occurred on the secondary market (96 percent, 80 percent, and 88 percent, respectively).

FIGURE 4.5

### Most ETF Activity Occurs on the Secondary Market

Percentage of secondary market activity<sup>1</sup> relative to total activity,<sup>2</sup> 2021



<sup>1</sup> Secondary market activity is measured as total dollar volume of ETF shares traded in each category.

<sup>2</sup> Total activity is measured as the sum of primary market and secondary market activity. Primary market activity is measured as the total of gross issuance and gross redemptions of ETF shares in each category.

Sources: Investment Company Institute and Bloomberg

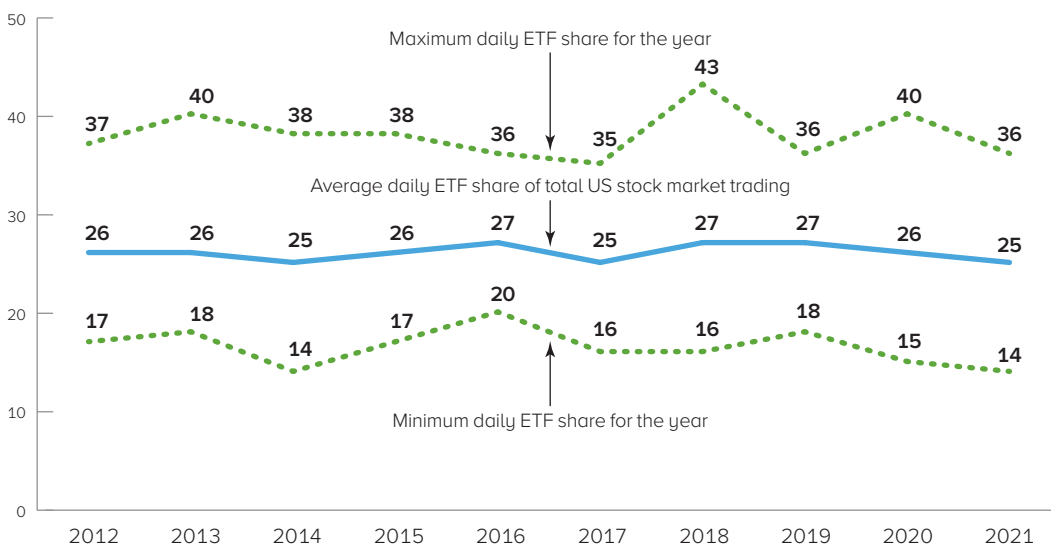
Investors use ETFs for a variety of reasons, such as acquiring or shedding exposure to specific asset classes and investment strategies, diversifying their portfolios, and hedging investment risks. It is, therefore, not surprising that ETF secondary market trading volumes (as measured by the value of shares traded) are a substantial share of total trading on US stock exchanges and other venues. On a daily basis, ETF trading volume accounted for an average of 25 percent of total stock market trading in 2021 (Figure 4.6). Also, despite tremendous growth in ETFs in the past decade, their average daily share of total stock market trading has remained relatively flat—fluctuating in a narrow range between 25 and 27 percent.

During periods of market turbulence, ETF secondary market trading volumes rise—both in absolute terms and as a share of total stock market trading—as investors, especially institutional investors, turn to ETFs to quickly and efficiently transfer and hedge risks. For example, in late 2018, stock market volatility jumped, largely reflecting market participants’ concerns about slowing global growth and intensifying trade tensions. On December 24, 2018, when the S&P 500 index neared bear market territory following its September peak, ETF trading volume accounted for 43 percent of total stock market trading—its highest share during 2018 (Figure 4.6). During the financial market stress brought on by the COVID-19 crisis, ETF trading volume surged—reaching 40 percent of total stock market trading on March 3, 2020, as investors quickly sought to reposition their exposures in the face of the looming pandemic.

**FIGURE 4.6**

**ETF Secondary Market Trading Averaged 25 Percent of Daily US Stock Trading in 2021**

Percentage of total US stock market trading volume, annual



**Date of maximum**

Dec 31    Jun 20    Feb 3    Aug 24    Sep 13    Dec 1    Dec 24    Jan 2    Mar 3    Nov 26

**Date of minimum**

Sep 21    Feb 12    Jun 27    Jun 26    Jul 28    Jun 23    Jun 22    Nov 26    Dec 18    Jun 25

Sources: Investment Company Institute, Bloomberg, and Cboe Exchange, Inc.

Most ETF secondary market trades represent investors exchanging shares of ETFs among themselves; unlike primary market activity, these trades do not affect the ETF's underlying securities. In 2021, domestic equity ETFs had a total of \$4.9 trillion in primary market activity, which represented only 4.6 percent of the \$106.3 trillion traded in company stocks during the year (Figure 4.7). Even during 2018—a year with multiple episodes of heightened stock market volatility—creations and redemptions of domestic equity ETFs accounted for only 5.4 percent of the \$65.1 trillion traded in company stocks that year. It is important to note that in the past decade, only a small fraction of company stock trading volume has been attributable to ETFs. And in 2020, even with the market turmoil surrounding the COVID-19 public health crisis, domestic equity ETFs had just \$4.2 trillion in primary market activity, which represented only 4.7 percent of the \$88.9 trillion traded in company stocks during the year.

FIGURE 4.7

### Domestic Equity ETFs Have Had Minimal Impact on Underlying US Stocks

Annual

	Domestic equity ETF primary market activity* Trillions of dollars	Value of company stock traded Trillions of dollars	Domestic equity ETF primary market activity as a share of company stock traded Percent
2012	\$1.7	\$38.7	4.4%
2013	1.9	41.2	4.6
2014	2.3	48.7	4.6
2015	2.5	51.3	4.9
2016	2.2	49.7	4.4
2017	2.2	51.3	4.2
2018	3.5	65.1	5.4
2019	2.9	59.4	5.0
2020	4.2	88.9	4.7
2021	4.9	106.3	4.6

\* Primary market activity is measured as the total of gross issuance and gross redemptions.

Sources: Investment Company Institute, Bloomberg, and Cboe Exchange, Inc.

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**Experiences of US Exchange-Traded Funds During the COVID-19 Crisis**

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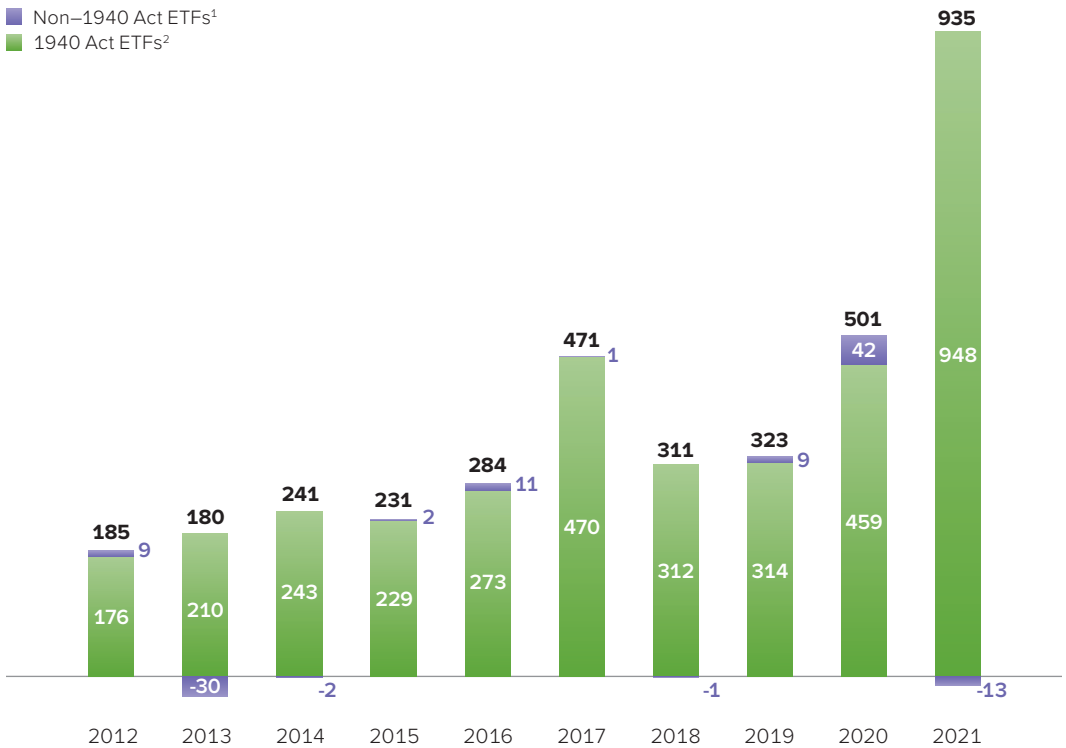
## Demand for ETFs

In the past decade, demand for ETFs has grown as institutional investors have found ETFs to be a convenient vehicle for participating in, or hedging against, broad movements in the stock market. Increased awareness of these investment vehicles by retail investors and their financial advisers also has influenced demand for ETFs. For 2021 as a whole, net share issuance of ETF shares (including reinvested dividends) surged to a record \$935 billion, up from 2020's robust \$501 billion (Figure 4.8).

FIGURE 4.8

### Net Share Issuance of ETFs Surged in 2021

Billions of dollars, annual



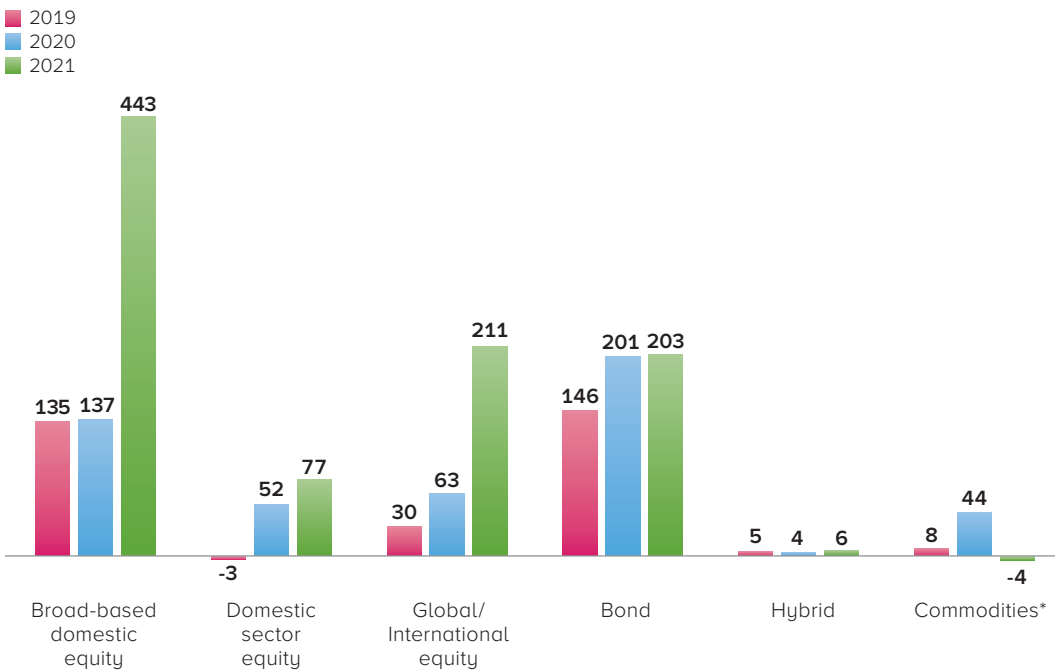
<sup>1</sup> The funds in this category are not registered under the Investment Company Act of 1940 and invest primarily in commodities, currencies, and futures.

<sup>2</sup> The funds in this category are registered under the Investment Company Act of 1940.

Note: Data for net share issuance include reinvested dividends.

In 2021, net share issuance of ETFs increased across nearly all asset classes (Figure 4.9). Demand for bond ETFs, likely boosted by the aging of Generation X and the Baby Boom Generation, remained high in 2021, with net share issuance totaling \$203 billion. Net share issuance of broad-based domestic equity ETFs rose sharply in 2021, with \$443 billion in net new shares issued, up from \$137 billion in 2020 and \$135 billion in 2019. Demand for global/international equity ETFs, which totaled \$211 billion for 2021, picked up as well. Upward revisions to the outlook for gross domestic product (GDP) growth in the United States and improved economic conditions in other countries across the world likely helped fuel the increase in demand for equity ETFs. Two additional trends continued to contribute to flows into equity ETFs: fee-based advisers' increased use of ETFs in client portfolios (Figure 3.17), and conversions of mutual funds to the ETF structure.

**FIGURE 4.9**  
**Net Share Issuance of ETFs by Investment Classification**  
 Billions of dollars, annual



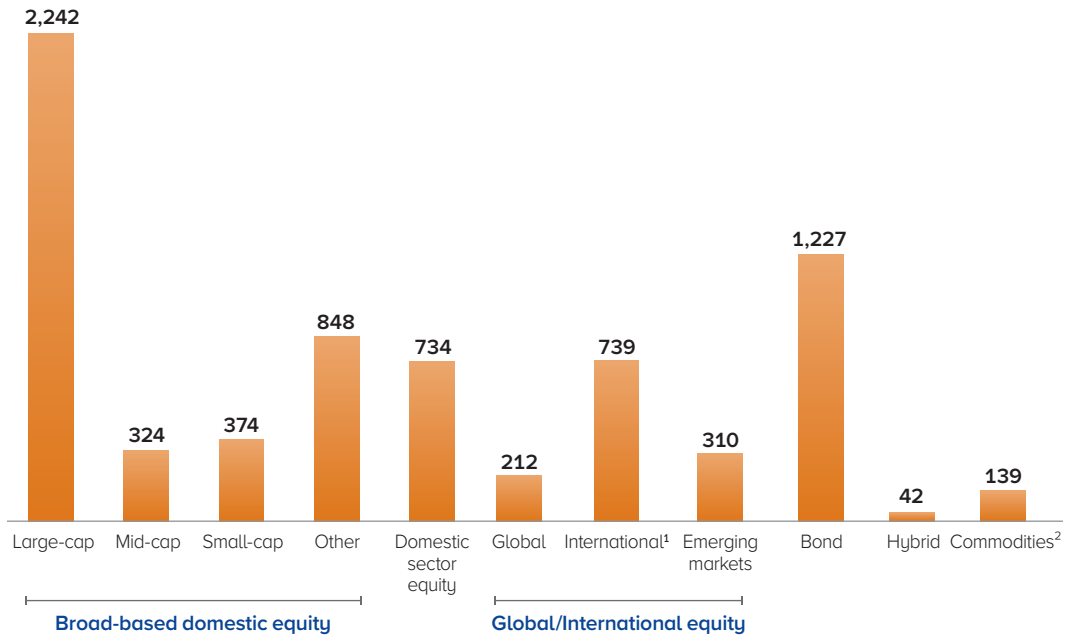
\* Commodity ETFs include funds—both registered and not registered under the Investment Company Act of 1940—that invest primarily in commodities, currencies, and futures.  
 Note: Data for net share issuance include reinvested dividends.

ETFs have been available for nearly 30 years, and in that time, large-cap domestic equity ETFs have accounted for the largest proportion of ETF net assets. At year-end 2021, net assets in large-cap domestic equity ETFs totaled \$2.2 trillion, or 31 percent of ETF net assets (Figure 4.10). Fueled by strong investor demand, bond ETFs held 17 percent (\$1.2 trillion) of ETF net assets. International equity ETFs accounted for \$739 billion, or 10 percent of ETF net assets.

**FIGURE 4.10**

**Total Net Assets of ETFs Were Concentrated in Large-Cap Domestic Stocks**

Billions of dollars, year-end 2021



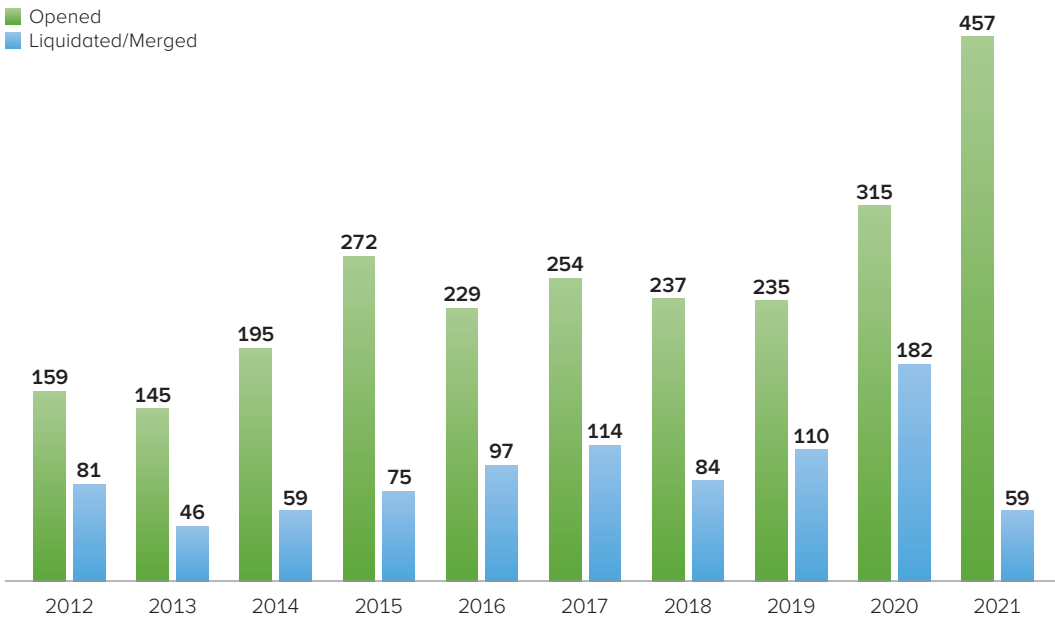
<sup>1</sup> This category includes international, regional, and single country ETFs but excludes emerging market ETFs.

<sup>2</sup> Commodity ETFs include funds—both registered and not registered under the Investment Company Act of 1940—that invest primarily in commodities, currencies, and futures.



Strong investor demand for ETFs has led to a substantial increase in the number of ETFs created by fund sponsors, with 2,498 new ETFs offered to investors in the past decade (Figure 4.11). Over the same period, 907 ETFs were liquidated or merged with another fund. In any given year, fund sponsors will liquidate or merge ETFs that have failed to attract sufficient demand. In 2021, 457 ETFs—most of which were domestic equity ETFs—were launched. Meanwhile, 59 ETFs were liquidated or merged, as sponsors eliminated some global/international equity ETFs from their lineups.

**FIGURE 4.11**  
**Number of ETFs Entering and Exiting the Industry**



Note: Data include ETFs that invest primarily in other ETFs.

## Characteristics of ETF-Owning Households

About 11 percent of US households (13.9 million) held ETFs in 2021. Of households that owned mutual funds, an estimated 19 percent also owned ETFs. ETF-owning households tended to include investors who owned a range of equity and fixed-income investments. In 2021, 98 percent of ETF-owning households also owned equity mutual funds, individual stocks, or variable annuities (Figure 4.12). Fifty-one percent of households that owned ETFs also held bond mutual funds, individual bonds, or fixed annuities, and 42 percent owned investment real estate.

FIGURE 4.12

### ETF-Owning Households Held a Broad Range of Investments

Percentage of ETF-owning households holding each type of investment, 2021

<b>Equity mutual funds, individual stocks, or variable annuities (total)</b>	<b>98</b>
<b>Bond mutual funds, individual bonds, or fixed annuities (total)</b>	<b>51</b>
<b>Mutual funds (total)</b>	<b>79</b>
Equity	74
Bond	42
Hybrid	40
Money market	46
<b>Individual stocks</b>	<b>85</b>
<b>Individual bonds</b>	<b>20</b>
<b>Fixed or variable annuities</b>	<b>25</b>
<b>Investment real estate</b>	<b>42</b>

Note: Multiple responses are included.

Some characteristics of ETF-owning households are similar to those of households that own mutual funds and those that own stocks directly. For instance, households that owned ETFs—like households owning mutual funds and those owning individual stocks—tended to have household incomes above the national median (Figure 4.13). ETF-owning households, however, also exhibit some characteristics that distinguish them from other households. For example, ETF-owning households tended to be younger and more likely to own individual retirement accounts than households that own mutual funds and those that own individual stocks.

**FIGURE 4.13**

**Characteristics of ETF-Owning Households**

2021

	All US households	Households owning ETFs	Households owning mutual funds	Households owning individual stocks
<b>Median</b>				
Age of head of household <sup>1</sup>	52	45	51	49
Household income <sup>2</sup>	\$65,000	\$125,000	\$104,900	\$113,000
Household financial assets <sup>3</sup>	\$100,000	\$375,000	\$320,000	\$375,000
<b>Percentage of households</b>				
<b>Household primary or co-decisionmaker for saving and investing</b>				
Married or living with a partner	55	60	70	67
College or postgraduate degree	39	55	57	56
Employed (full- or part-time)	60	74	75	73
Retired from lifetime occupation	29	22	24	24
<b>Household owns</b>				
IRA(s)	37	72	66	59
DC retirement plan account(s)	47	68	84	68

<sup>1</sup> Age is based on the sole or co-decisionmaker for household saving and investing.

<sup>2</sup> Total reported is household income before taxes in 2020.

<sup>3</sup> Household financial assets include assets in employer-sponsored retirement plans but exclude the household's primary residence.

ETF-owning households also exhibit more willingness to take investment risk (Figure 4.14). Fifty-four percent of ETF-owning households were willing to take substantial or above-average investment risk for substantial or above-average gain in 2021, compared with 26 percent of all US households and 38 percent of mutual fund–owning households. This result may be explained by the predominance of equity ETFs, which make up 80 percent of ETF total net assets (Figure 4.10). Investors who are more willing to take investment risk generally may be more likely to invest in equities.

**FIGURE 4.14**

**ETF-Owning Households Are Willing to Take More Investment Risk**

Percent, 2021

**Level of risk willing to take with financial investments**

- Substantial risk for substantial gain
- Above-average risk for above-average gain
- Average risk for average gain
- Below-average risk for below-average gain
- Unwilling to take any risk

