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. 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 $4.1 trillion. As investor demand has increased, sponsors have offered more ETFs with a greater variety of investment objectives. With $6.5 trillion in total net assets at year-end 2022, the US ETF industry remained the largest in the world.

IN THIS CHAPTER

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 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.

Learn More About ETFs

ETFs have proven to be a successful financial innovation among registered investment companies since the first one was created in 1993. The demand for ETFs has grown markedly as both institutional and retail investors have gravitated toward them because of their appealing features. For an introduction to the creation, operation, and evolution of the regulation of ETFs, as well as information about authorized participants (or APs) and the key similarities and differences between ETFs and mutual funds, see the ETF Resource Center available at **www.ici.org/etf**.

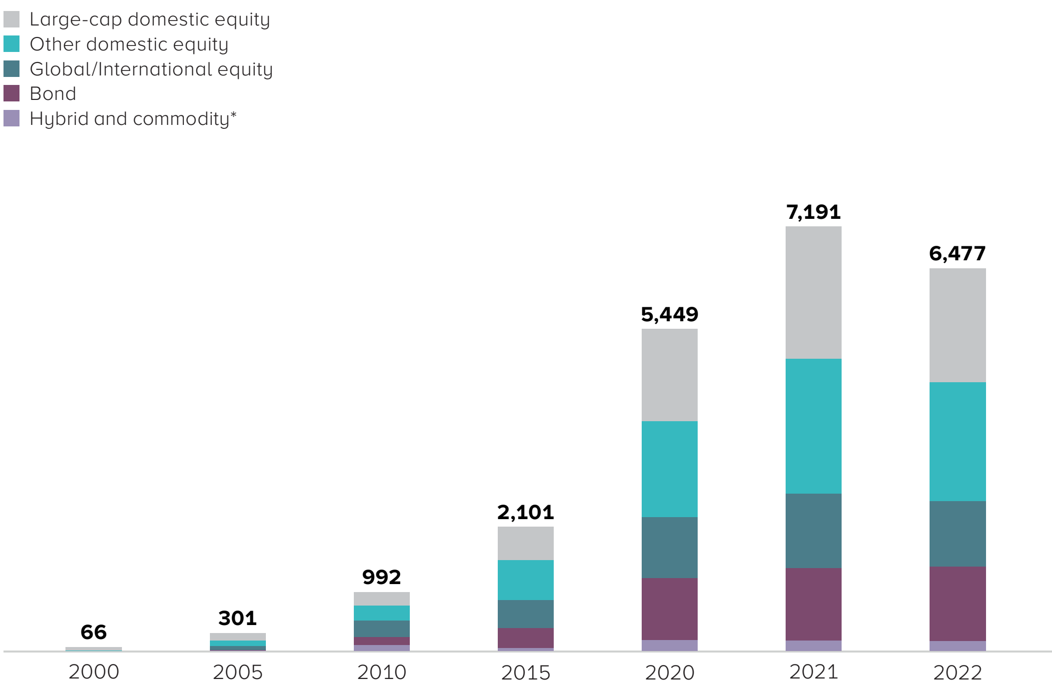
ETF Total Net Assets

At year-end 2022, the US ETF market—with 2,844 funds and $6.5 trillion in total net assets—remained the largest in the world, accounting for 72 percent of the $8.9 trillion in ETF net assets worldwide.* Within the United States, total net assets in ETFs accounted for 22 percent of assets managed by investment companies at year-end 2022 (see Figure 2.1). ETFs have been available for 30 years, and in that time, large-cap domestic equity ETFs have accounted for a substantial proportion of ETF net assets. At year-end 2022, net assets in large-cap domestic equity ETFs totaled $1.9 trillion, or 30 percent of ETF net assets. Bond ETFs, which have been fueled by strong investor demand over the past several years, accounted for $1.3 trillion (19 percent) of net assets.

FIGURE 4.1

Total Net Assets and Number of ETFs

Billions of dollars, year-end



Number of ETFs

80	**204**	**923**	**1,597**	**2,203**	**2,570**	**2,844**

* 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: The first bond, hybrid, and commodity ETFs were opened in 2002, 2007, and 2004, respectively.

* Based on ICI calculations of data from the International Investment Funds Association (IIFA).

Secondary Market Trading in ETF Shares

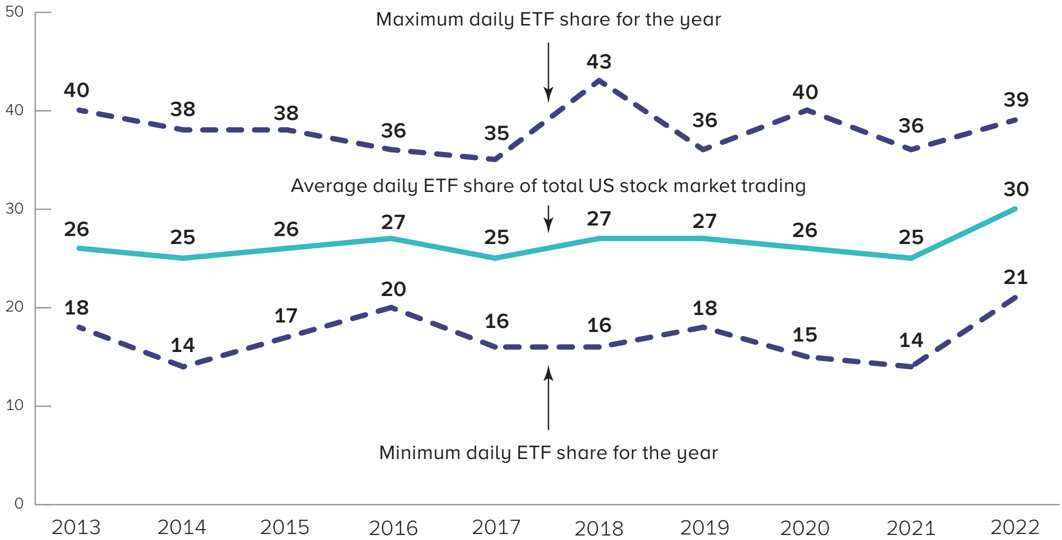
Many investors access ETFs through the secondary market (e.g., on an exchange). Although many large institutional investors can access ETFs in both the primary market (i.e., through creations and redemptions of ETF shares via an AP) and the secondary market, retail investors generally can access them 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 specific asset classes or investment strategies, diversify their portfolios, or hedge investment risks. Thus, these funds provide investors with an efficient means to transfer risk. Therefore, it is 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. But 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. In 2022, ETFs' share of trading volume somewhat increased and accounted for 30 percent of average daily total stock market trading (Figure 4.2), which was likely related to elevated market volatility.

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 in the past decade (Figure 4.2). More recently, in 2022, there was an abundance of concern over the increased volatility in equity and bond markets and the Federal Reserve's stance on monetary policy to combat rising inflation—with year-over-year inflation reaching a 40-year high in June. As such, ETF trading volume peaked at 39 percent of total stock market trading on June 13, 2022, one day before the Federal Reserve's June Federal Open Market Committee (FOMC) meeting.

FIGURE 4.2

ETF Secondary Market Trading Averaged 30 Percent of Daily US Stock Trading in 2022

Percentage of total US stock market trading volume, annual



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Date of maximum	Jun 20	Feb 3	Aug 24	Sep 13	Dec 1	Dec 24	Jan 2	Mar 3	Nov 26	Jun 13
Date of minimum	Feb 12	Jun 27	Jun 26	Jul 28	Jun 23	Jun 22	Nov 26	Dec 18	Jun 25	Dec 16

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

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, 86 percent of the total activity in ETFs occurred on the secondary market in 2022. Even for ETFs focused on narrower asset classes—such as emerging market equity, domestic high-yield bond, and emerging market bond—the bulk of the trading occurred on the secondary market (95 percent, 81 percent, and 88 percent, respectively).*

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 2022, domestic equity ETFs had a total of $5.2 trillion in primary market activity, which represented only 5.2 percent of the $99.8 trillion traded in company stocks during the year (Figure 4.3). Even in years with significant market volatility, such as 2018, 2020, and 2022, creations and redemptions of domestic equity ETFs accounted for only a modest share of trading in company stocks.

* Based on ICI calculations of data from Refinitiv.

FIGURE 4.3

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
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
2022	5.2	99.8	5.2

* Primary market activity is measured as the total of gross issuance and gross redemptions.
Sources: Investment Company Institute, Bloomberg, Refinitiv, and Cboe Exchange, Inc.

Demand for ETFs

In recent years, 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, and financial advisers are investing more of their retail clients' assets in ETFs (see Figure 3.11). Although down from 2021's record high, net issuance of ETF shares (including reinvested dividends) in 2022 was a robust $609 billion, even with steep losses in stock and bond markets (Figure 4.4).

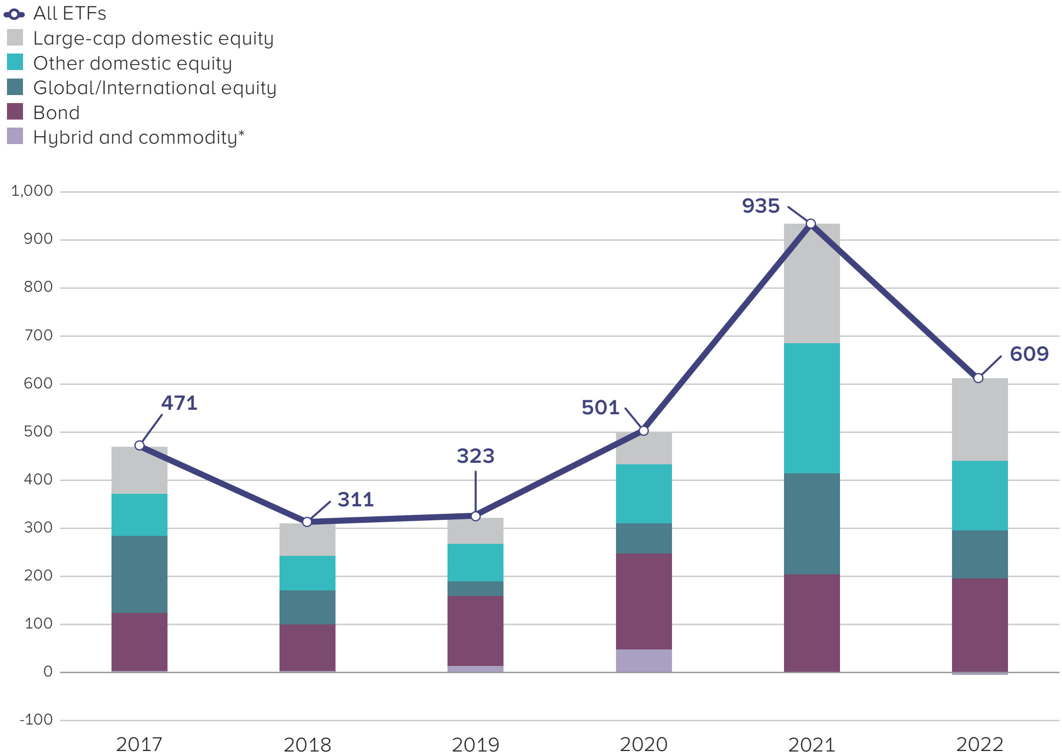
Net issuance of domestic equity ETFs was $317 billion in 2022, down from $519 billion in 2021, and net issuance of global/international equity ETFs fell from $211 billion to $100 billion. The drop-off in demand for these two categories likely reflected the poor performance of worldwide stock prices—US stocks were down 19 percent* and international stocks lost 16 percent.† Demand for global/international equity ETFs was also likely tamped down by an appreciation in the value of the US dollar, which generally decreases the attractiveness of international investments to US investors. Despite losses of 12 percent (including interest income) on US bonds,‡ demand for bond ETFs remained fairly steady, with net issuance totaling $197 billion in 2022 versus $203 billion in 2021. In 2022, net issuance of bond ETFs was more concentrated in low duration funds—an estimated 42 percent of the bond ETF net issuance went to funds with durations of two years or less.§

* As measured by the Wilshire 5000 Total Market Index.
† As measured by the MSCI ACWI Ex USA Index (expressed in US dollars).
‡ As measured by the S&P US Aggregate Bond Index.
§ Based on ICI calculations of data from Morningstar Direct.

FIGURE 4.4

Net Share Issuance of ETFs Declined in 2022

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.

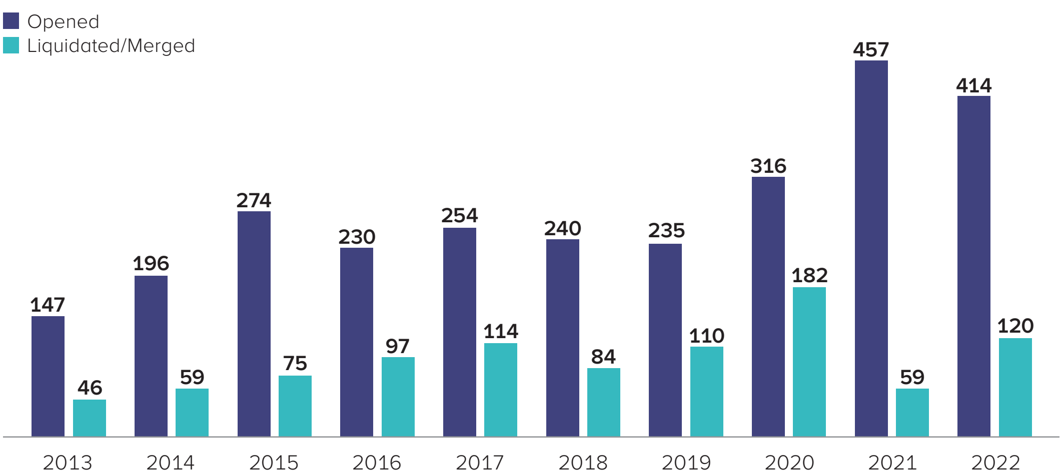
Note: Data for net share issuance include reinvested dividends.

Overall demand for ETFs in 2022 may have also been boosted due to tax loss harvesting—a strategy that allows investors to offset capital gains with capital losses to reduce or minimize their tax liability. Because tax loss harvesting involves selling a security at a loss, some investors tend to replace the security that was sold with a similar one to maintain the portfolio's allocation structure and its associated risk profile. These transactions, however, must comply with the wash-sale rule, which disallows claimed losses on the sale of a security if that same security or a substantially identical one is bought within 30 days. As a result, some investors may have chosen to buy ETFs with similar but not substantially identical investment exposure to replace the securities they sold to avoid violating the wash-sale rule.

Strong investor demand for ETFs has led to a substantial increase in the number of ETFs created by fund sponsors, with 2,763 new ETFs offered to investors in the past decade (Figure 4.5). Over the same period, 946 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 2022, 414 ETFs—mostly equity ETFs—were launched. Meanwhile, 120 ETFs were liquidated or merged as sponsors eliminated some sector equity ETFs and global/international equity ETFs from their lineups.

FIGURE 4.5

Number of ETFs Entering and Exiting the Industry



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

Characteristics of ETF-Owning Households

About 12 percent of US households (16.1 million) held ETFs in 2022 (see Figure 7.1). 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.

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 4.6). 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 (IRAs) than households that own mutual funds and those that own individual stocks.

ETF-owning households also exhibit more willingness to take investment risk (Figure 4.6). Fifty-two percent of ETF-owning households were willing to take substantial or above-average investment risk for substantial or above-average gain in 2022, compared with 24 percent of all US households and 34 percent of mutual fund–owning households. This result may be explained by the predominance of equity ETFs, which make up 78 percent of ETF total net assets. Investors who are more willing to take investment risk generally may be more likely to invest in equities.

FIGURE 4.6

Characteristics of ETF-Owning Households

2022

	All US households	Households owning ETFs	Households owning mutual funds	Households owning individual stocks
Median				
Age of head of household[1]	52	51	54	53
Household income[2]	$69,000	$125,000	$100,000	$125,000
Household financial assets[3]	$87,500	$465,000	$250,000	$375,000
Percentage of households				
Household primary or co-decisionmaker for saving and investing				
Married or living with a partner	64	72	71	72
College or postgraduate degree	39	66	54	61
Employed (full- or part-time)	56	65	64	64
Retired from lifetime occupation	32	33	34	33
Household owns				
IRA(s)	42	81	67	69
DC retirement plan account(s)	57	76	81	79
Household's willingness to take financial risk				
Substantial risk for substantial gain	5	10	6	7
Above-average risk for above-average gain	19	42	28	37
Average risk for average gain	39	38	47	44
Below-average risk for below-average gain	11	6	11	8
Unwilling to take any risk	26	4	8	4

[1] Age is based on the sole or co-decisionmaker for household saving and investing.

[2] Total reported is household income before taxes in 2021.

[3] Household financial assets include assets in employer-sponsored retirement plans but exclude the household's primary residence.