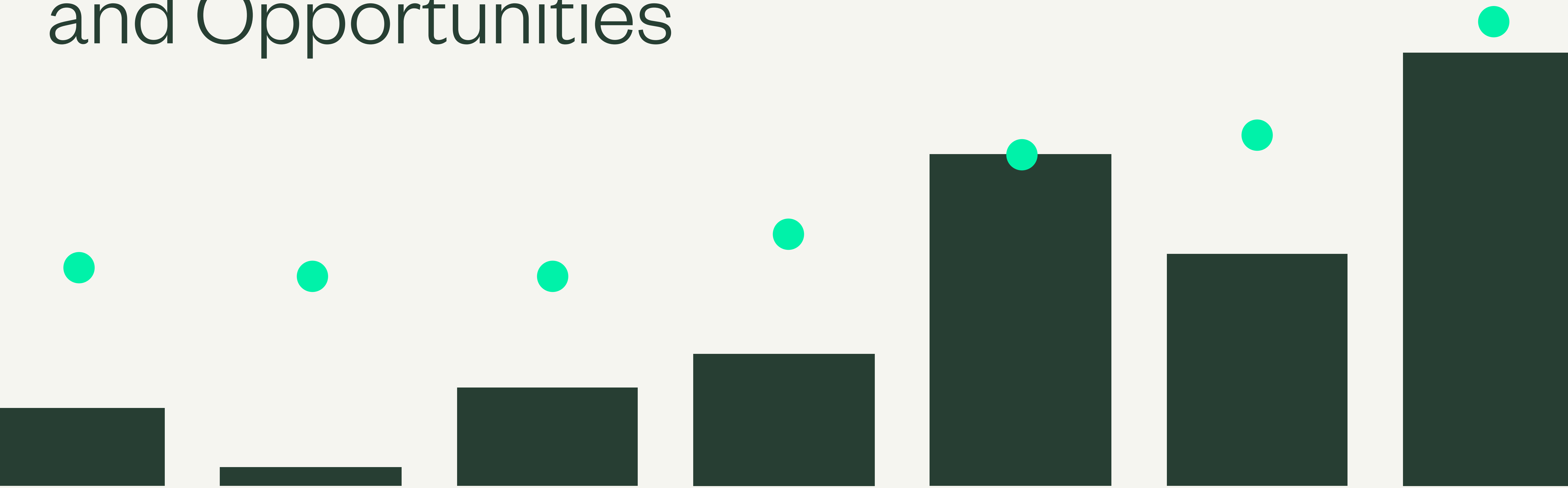
The ETF Impact Report 2023

Growth, Trends, and Opportunities



Client Ready

STATE STREET GLOBAL ADVISORS SPDR® | SPY

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To the Valued ETF Investor Community

Sue Thompson
Executive Vice President and
Head of Americas Distribution, SPDR ETFs,
State Street Global Advisors

A protracted era of low inflation, rock-bottom interest rates, and relative market peace is now squarely in the rearview. The outbreak of global market turbulence in 2022 has proven it's here to stay in 2023 — giving us good reason to take pause and evaluate whether our portfolios are positioned to weather the storm.

In the 30 years since SPY's launch sparked the ETF industry, ETF adoption has been on a surging growth trajectory that's endured market cycles of all stripes. In three short decades, ETFs have built a resilient track record that demonstrates their ability to deliver value in all kinds of markets — and proving particularly useful in times of volatility.

Today, you may find yourself on unsure footing. This is a familiar feeling to those of us who recall the Great Financial Crisis of 2008. Nonetheless, it's an important reminder that we should always be prepared for the inevitability of boom-and-bust market cycles. It's a moment to sharpen our focus on what works — and what doesn't — in the face of uncertainty.

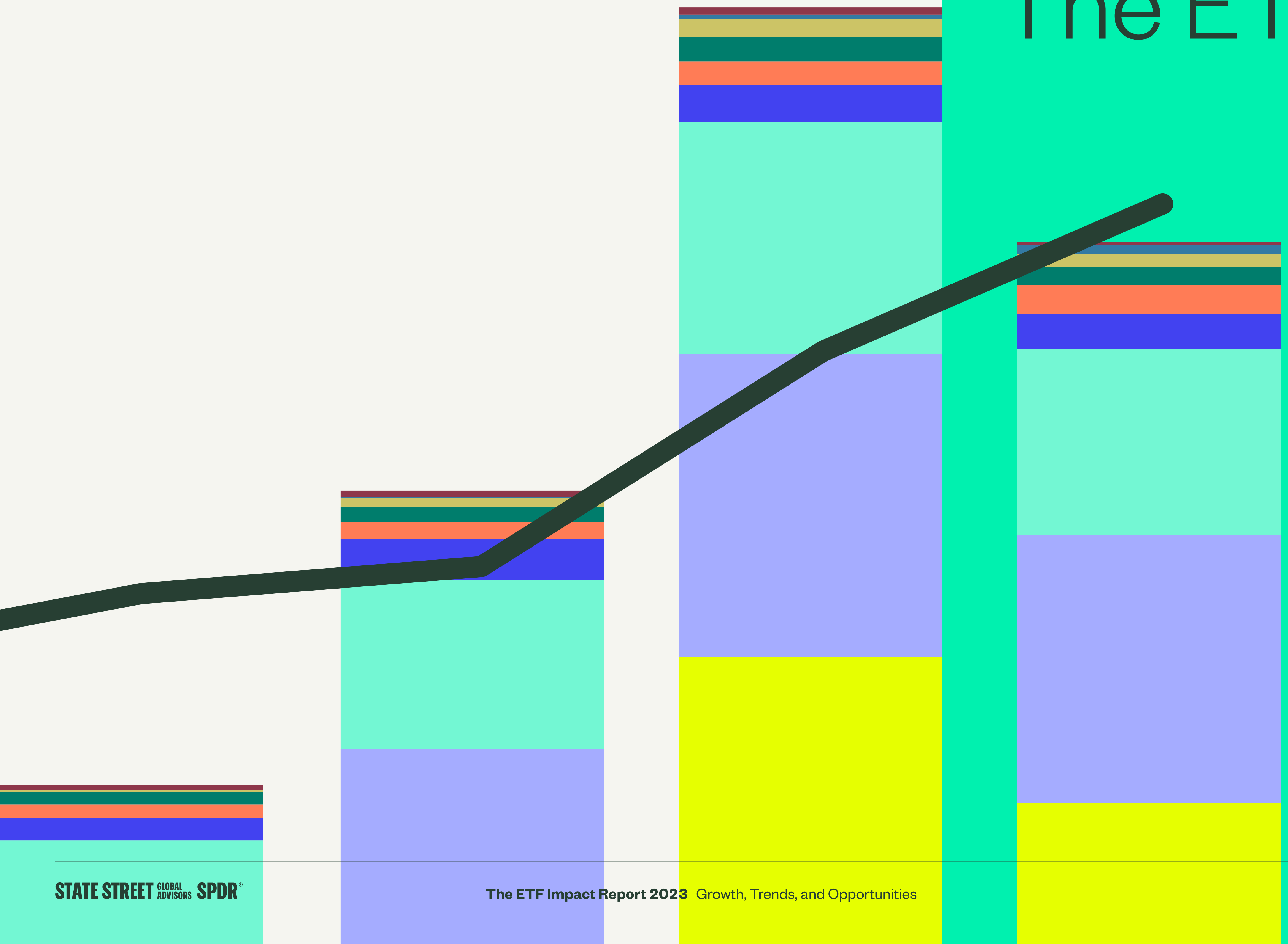
With this in mind, we've designed our ETF Impact Report 2023 to educate you on why the ETF's unique structure and advantages have made it the go-to investment vehicle in turbulent times. This report gives you a window into what's driving the industry's remarkable growth, opportunities now, and top ETF trends we anticipate for the future — arming you with practical ETF knowledge to help make the bumpy road ahead that much smoother.

As we celebrate the ETF's 30th birthday, on behalf of State Street SPDR ETFs, thank you for embracing this revolutionary investment product's potential. I believe its success story also belongs to you. You've brought its promise to life in ways we never could have imagined 30 years ago, and we can't wait to see what investors like you do next.

Sincerely,

Sue Thompson

A 90s Trend that Endures
The ETF



Fashion trends are cyclical, and the 1990s are back. Gen Z is now embracing baby tees, ripped jeans, and bike shorts just as Gen X did 30 years ago. In the investing world, another trend emerged in the 90s that still endures today: exchange traded funds (ETFs).

An Investing Era That Continues to Endure

30 Years Ago, the ETF Industry Was Born

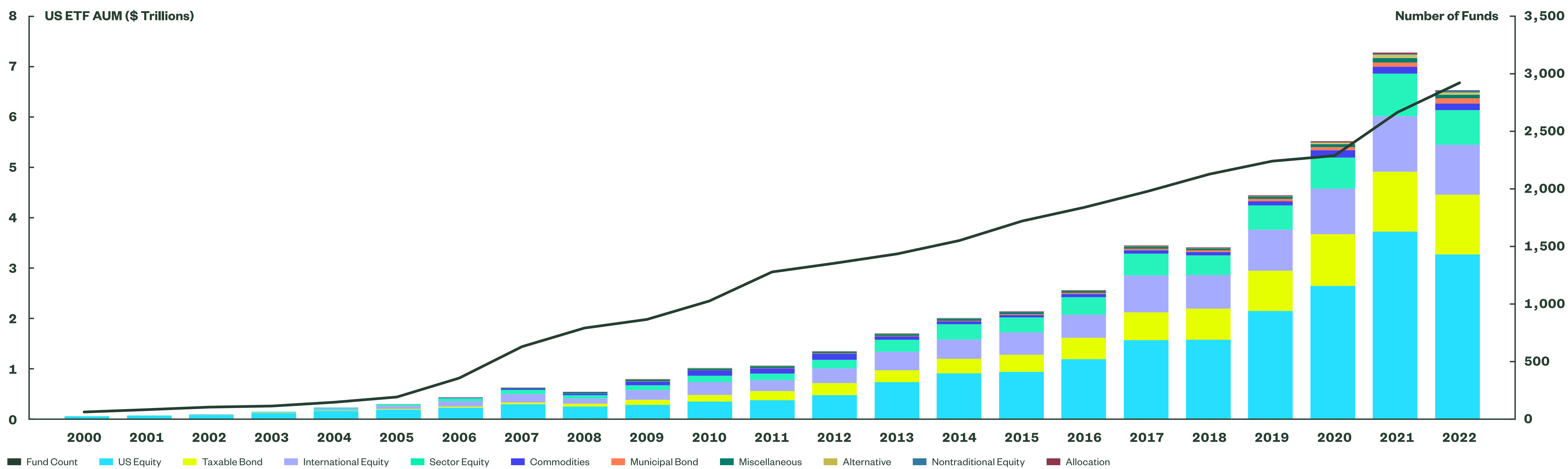
State Street Global Advisors launched the first US ETF in 1993 in response to the 1987 market crash — infamously known as "Black Monday." On that day, stock markets plummeted so abruptly that the damage is believed to have been more significant than the Great Depression. After regulators set out to determine what went wrong, SPDR® S&P 500® ETF Trust (SPY) emerged from the rubble as a new type of investment structure that could help avert future disaster.

Born out of crisis, SPY represented the first of its kind — a basket of securities that trades like a single stock — that has since proven it's built to weather market storms.

Over the past three decades, ETFs have endured periods of market strength and stress. And as volatility returned to global markets in 2022 and continues in 2023, ETFs are again demonstrating their value and resilience.

Figure 1

The Impressive Growth of the ETF, 2000 to 2022



Source: Morningstar, as of December 31, 2022. **Past performance is not a reliable indicator of future performance.**

ETFs Never Went Out of Style

Just like a 90s fashion trend, the present-day popularity of ETFs is hard to miss. But, unlike plaid flannel shirts and combat boots, ETFs didn't go out of vogue only to make a comeback 30 years later. Instead, their popularity has consistently grown over the years.

Since SPY's launch, ETFs have risen to prominence in the index investing landscape and beyond. ETF assets have soared in the US market, reaching $6.5 trillion in AUM[1] and growing at an annualized rate of 23.8% since 2000.[2] And the number of ETF offerings has risen to 2,988 funds (Figure 1).[3]

The Impressive Growth of ETFs: A 30-Year Timeline

The ETF market has come a long way since SPY was its sole offering. The path from SPY's launch to $6.5 trillion in US ETF AUM has been marked by several key industry developments (Figure 2).[4]

As the ETF market has grown and evolved, so too have the ways investors use ETFs. Today, ETFs have become key building blocks when making asset allocation decisions. They've allowed financial advisors to focus on investor outcomes with greater efficiency. And the surging popularity of ETFs has given rise to remarkable liquidity — making them powerful trading tools for investors.

Rave Reviews from ETF Owners

ETFs wouldn't be trending for three decades if investors didn't find great value in them. Our 2023 ETF Impact Survey, gauging individual investor sentiment in today's market volatility, found that the growing number of investors who have embraced ETFs have not been disappointed.

Nearly three-quarters of the ETF investors we surveyed said that ETFs have improved the overall performance of their portfolio, and more than two-thirds said ETFs have made them a better investor (Figure 3).

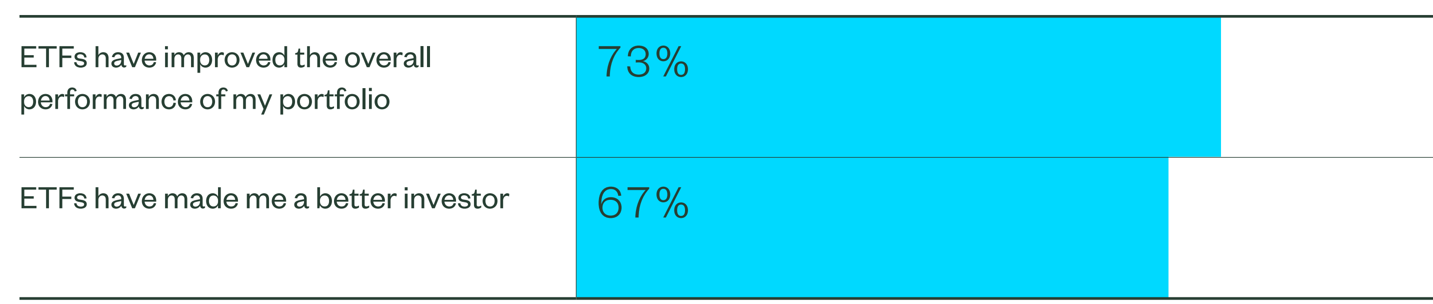
Figure 2

Key Events That Led to the ETF Industry Boom

1990s	**1993**	SPY, the first US-listed ETF, is created by State Street Global Advisors in partnership with S&P and the American Stock Exchange
	1995	The first mid-cap ETF launches into market
	1996	ETFs offer exposure to global markets with the first international market ETF
	1998	The first family of sector ETFs makes their debut
2000s	**2002**	The first bond ETF is introduced, giving ETF investors access to fixed income securities
	2004	Investors can access the gold bullion market through physically backed gold ETFs
	2008	The SEC approves actively managed ETFs
	2009	The first convertible securities ETF launches
2010s	**2010**	ETFs pass $1 trillion in AUM, with 1,100 US ETFs in market[5]
	2013	The first actively managed senior loan ETF makes its industry debut
	2015	The first factor-based bond ETF takes flight
	2019	ETFs climb to $4 trillion in AUM, surpassing 2,400 ETFs[6]
2020s	**2023**	US ETFs grow to top $6.5 trillion in AUM, with just under 3,000 ETFs in market[7]

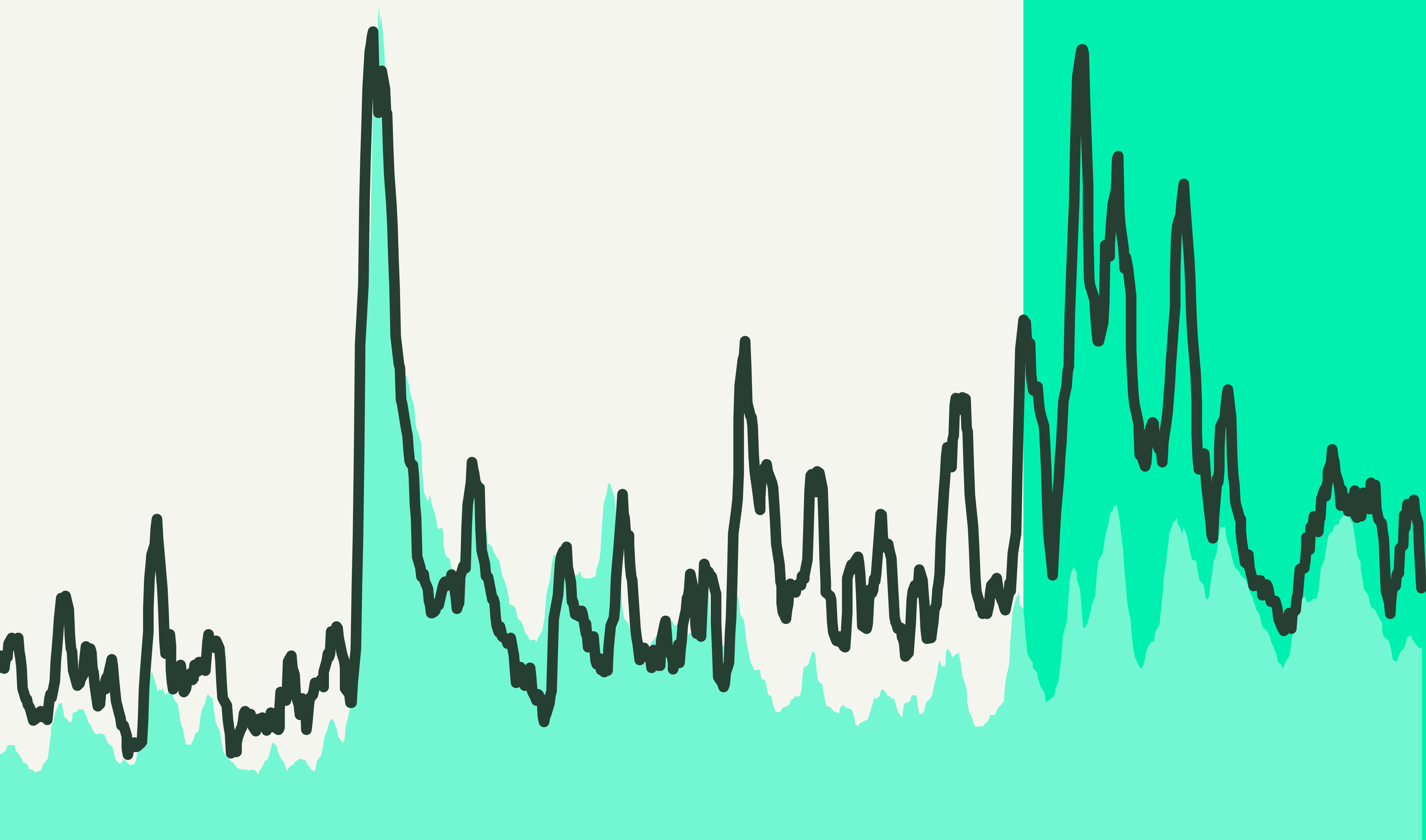
Figure 3

ETFs Get High Marks from Investors



Source: State Street Global Advisors, as of December 12, 2022. State Street Global Advisors, in partnership with Prodege and A2B, conducted a study surveying more than 1,000 individual investors. Read more about the details.

ETF Benefits What's Behind the Industry Boom



In the financial market, ETFs are like skyscrapers in a real estate boom — ascending to new heights and casting shadows of opportunity on investors. With their sturdy foundations of diversification, liquidity, and transparency, ETFs have reshaped the investment landscape with their innovative design.

Traits That Make ETFs Unique

A Best-of-Both-Worlds Structure

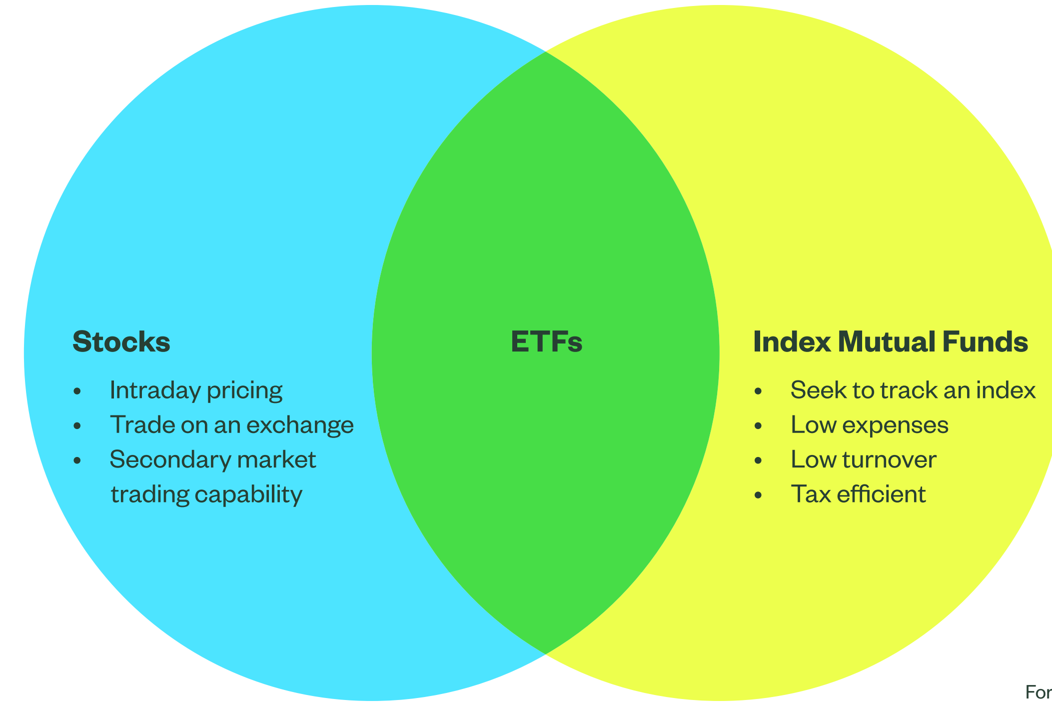
When the first smartphone was unveiled, it revolutionized modern technology. But its design wasn't built on a single novel idea — instead, it was an invention that brought the best of several worlds together: a phone, an MP3 player, the internet, and more.

ETFs are a similarly revolutionary mashup invention: they're funds that trade like stocks while offering the diversification benefits of mutual funds. An ETF is a basket of securities that seeks to provide exposure to a broad or specific market segment. But unlike mutual funds, ETFs can be bought and sold in a single trade on an exchange throughout the day — just like stocks.

ETFs generally track the performance of an index and typically charge lower fees than mutual funds. In one trade, they offer diversified, low-cost, transparent, and tax-efficient exposure to a basket of securities.

Figure 4

ETFs Can Offer the Best of Both Worlds



For illustrative purposes only.

How ETFs Compare to Mutual Funds and Individual Stocks

	ETFs	Index Mutual Funds	Individual Stocks
Track an Index	Yes	Yes	No
Provide Diversification	Yes	Yes	No
Average Net Expense Ratio	0.57%	0.84%	N/A
Pricing	Market Price	Closing Net Asset Value (NAV)	Market Price
Intraday Trading	Yes	No	Yes
Minimum Investment	No minimum required	Some require minimums	No minimum required*
Tax Treatment	Low impact on shareholder's level	High impact on shareholder's level	Impact on individual level only

Source: Morningstar Direct. Data as of March 7, 2023. Oldest share class of mutual fund used.
* The brokerage through which you purchase individual stocks may have a minimum account requirement.

ETF Advantages Fueling Growth

For any invention to be defined as revolutionary, it needs to offer a unique combination of features that differentiate it from products that existed before. ETFs offer several such attributes, like the ability to easily access precise and diversified exposure in a single trade. They're also cost effective, transparent, and tax efficient due to their unique creation and redemption mechanism.

While each of these advantages make ETFs attractive investment vehicles, the liquidity they offer is especially useful amid today's market volatility.

Figure 5

ETFs Have Several Key Advantages

Diversification Exposure to broad or specific market segments	**Transparency** Daily disclosure of underlying portfolio holdings and intraday pricing	**Cost and Tax Efficiency** Structure leads to low management fees/operating expenses — and the creation and redemption process helps with tax efficiency
Flexibility Trading techniques can include limit orders, stop-loss orders, and buying on margin	**Precision** Allows investors to target exposures to match changing portfolio goals and economic environments	**Liquidity** Easy to buy and sell, and can also support large institutional trades

Certain securities may trade in limited volume or may not have an active trading market. Therefore, there is the risk that it may not be possible to sell the investment at a particular time for an acceptable price. Diversification does not ensure a profit or guarantee against loss. There can be no assurance that a liquid market will be maintained for ETF shares. Diversification does not ensure a profit or guarantee against loss.

The Unique Structure Behind ETF Liquidity

Combining the diversification benefits of a mutual fund and the liquidity of stocks into one product was anything but straightforward — it required a new and innovative vehicle structure.

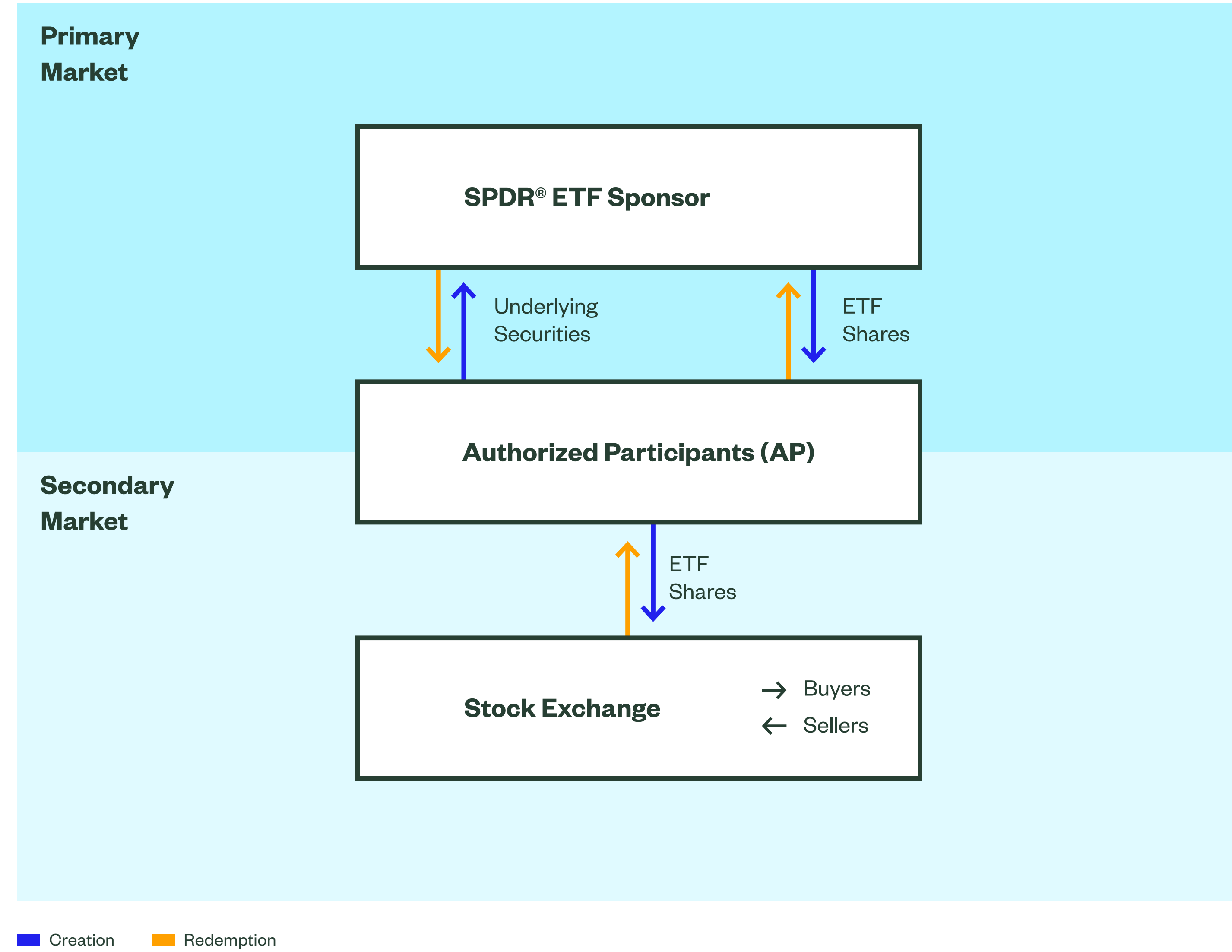
What makes ETFs unique — and especially relevant now — is that they're structured in a way that supports their liquidity via two trading markets: the primary and the secondary market.

In the secondary market, ETF liquidity is provided by the buying and selling of ETFs on the exchange. This can be enhanced by the primary market liquidity of the ETF's underlying securities, which is sometimes even greater than an ETF's secondary market liquidity.

These two layers of ETF liquidity stem from the creation and redemption mechanism, where ETF shares are created or redeemed in the primary market in exchange for the underlying securities. When demand increases, more ETF shares can be created. When demand decreases, ETF shares can be redeemed by reversing this process.

Figure 6

How the Creation and Redemption Process Works



Source: State Street Global Advisors. For illustrative purposes only.

ETF Liquidity Continues to Grow

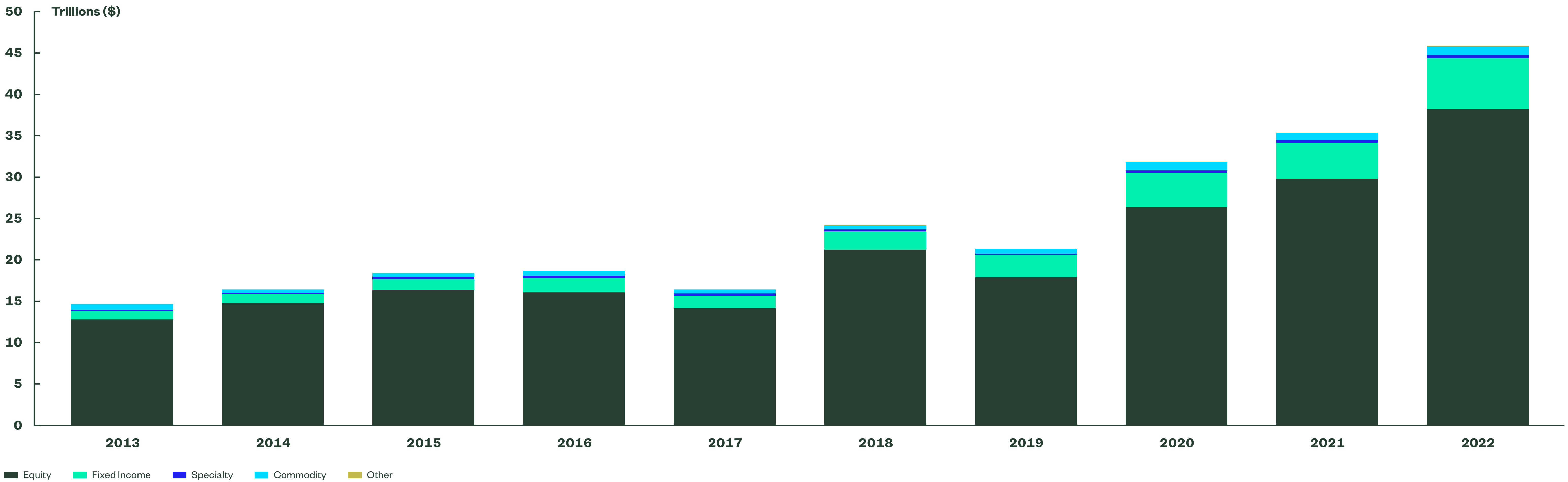
ETF trading volumes demonstrate how they've become a go-to liquidity vehicle in the secondary market. ETFs represented 32% of trading volume on US exchanges in 2022[8] — a figure that's risen steadily over the past four years.

Did You Know? As a liquidity leader, SPDR ETFs accounted for 35.8% of all notional trading volume of US-listed ETFs in 2022.

Source: Bloomberg Finance L.P., as of January 6, 2023.

Figure 7

ETF Trading Volumes Increase Year Over Year



Source: Bloomberg Finance, L.P., as of December 31, 2022, calculations per SPDR Americas Research.

Investors Turn to ETF Liquidity for Market Stress Management

When it comes to managing stress, everyone has a go-to strategy. For some it's meditation, yoga, or a soothing cup of tea. Others find that a hike outdoors or a high-intensity workout can help them feel better equipped to navigate stressful times.

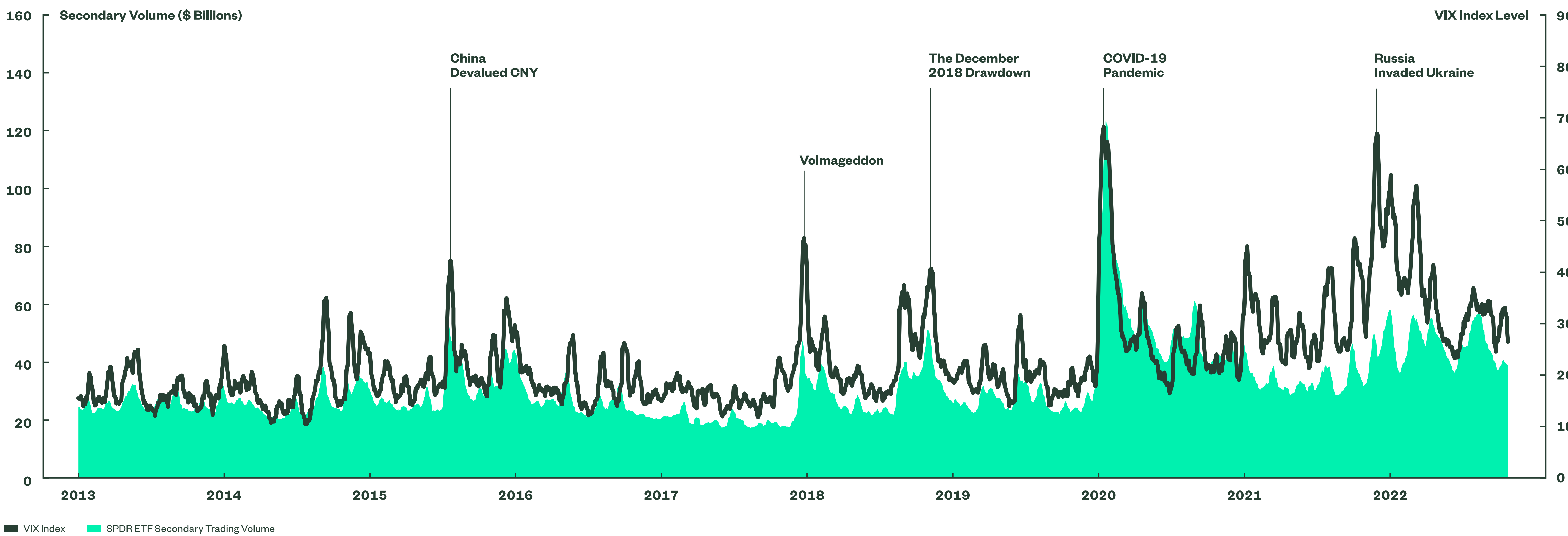
In the investing world, investors have made it clear that ETFs are a particularly useful strategy in times of market stress.

One need look no further than past bouts of market turbulence to see the value of ETF liquidity in volatile markets. Volatility levels have spiked on several occasions since the Great Financial Crisis (GFC) of 2008, and SPDR ETF secondary trading volume has skyrocketed in lockstep.

These historical trading volumes show how investors have tended to turn to ETFs as valuable liquidity tools during times of market stress.

Figure 8

ETF Trading Volumes Spike with Market Volatility



Source: Bloomberg Finance, L.P., as of December 31, 2022, calculations per SPDR Americas Research.

How ETFs Passed the Banking Crisis Test

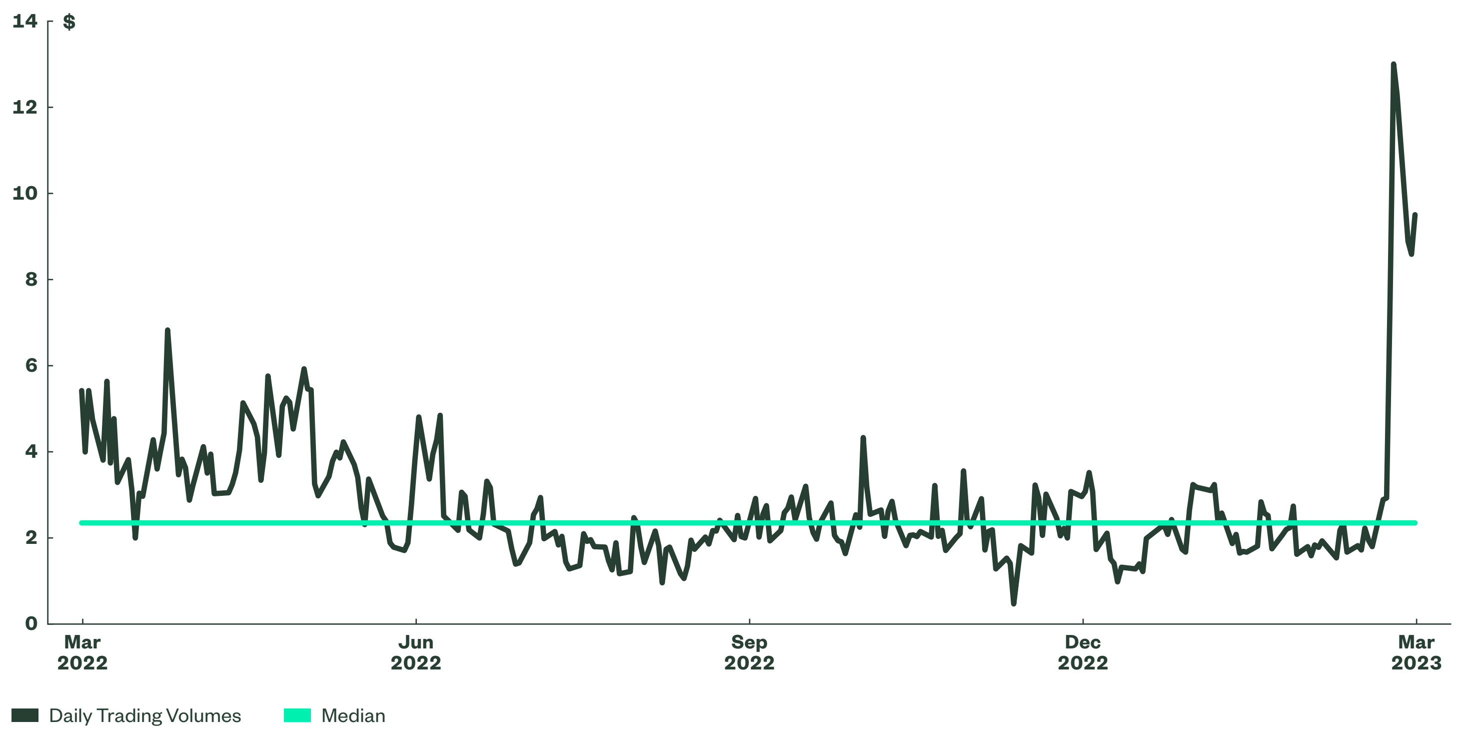
The March 2023 banking crisis offers a recent example of how investors have relied on ETFs in volatile markets. From March 8–16, financial sector ETF trading volumes were significantly above average, soaring beyond $13 billion on March 13. The only other time trading volumes were this elevated was during the GFC, when volumes spiked higher than $30 billion (Figure 9).[9]

The banking crisis also highlights how ETFs can provide additive liquidity to the underlying market during volatile times. This is because they're traded in the secondary market between willing buyers and sellers at a fair market price that doesn't always require touching the underlying portfolio.

This additive liquidity can be measured by comparing secondary market trading volumes to primary market transactions. As the banking crisis unfolded, secondary financial sector ETF trading spiked relative to primary activity, signaling that investors were able to effectively "meet on exchange" and transact, even as the underlying securities were facing extreme uncertainty (Figure 10).

Figure 9

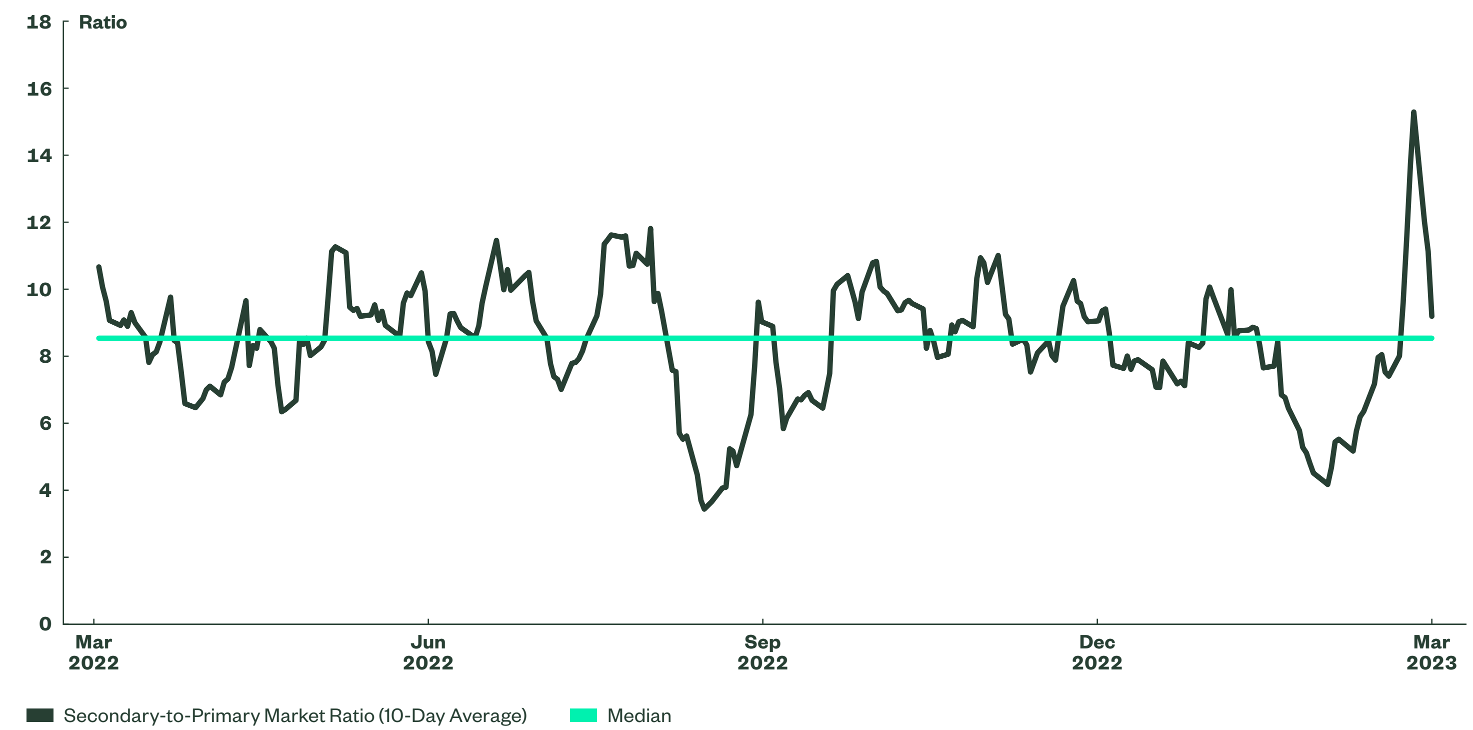
Financial Sector ETF Volumes Surge to Levels Not Seen Since the GFC



Source: Bloomberg Finance L.P., as of March 17, 2023, based on SPDR Americas Research calculations based on US-listed ETFs with the sector classification of Financials. **Past performance is not a reliable indicator of future performance.**

Figure 10

Financial Sector ETFs Provide Additive Liquidity to Underlying Market



Source: Bloomberg Finance L.P., as of March 17, 2023, based on SPDR Americas Research calculations based on US-listed ETFs with the sector classification of Financials. **Past performance is not a reliable indicator of future performance.**

The ETF Market Today

A dynamic and transformative force, ETFs have captivated seasoned investors and newcomers alike. And with new ETF trends emerging amid today's macro and market challenges, investors are turning to these products to weather the volatility.

A Landscape That Continues to Evolve

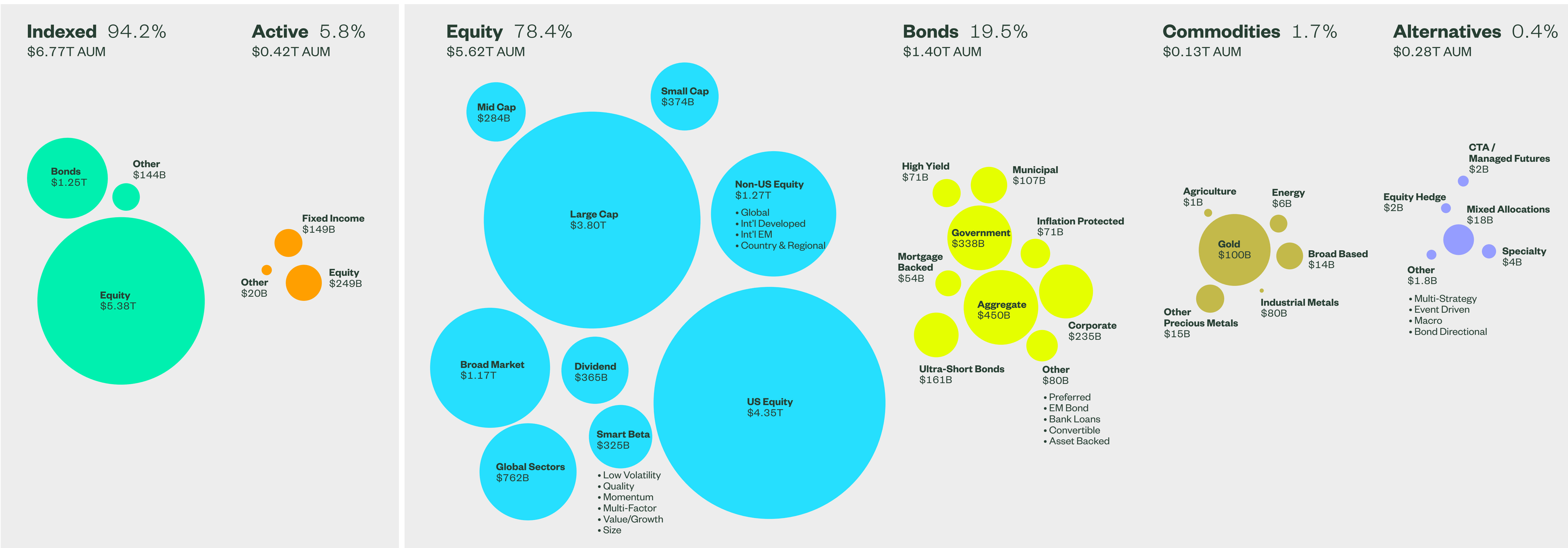
A Snapshot of Today's ETF Market

No two investors are identical in their needs and objectives, and designing bespoke portfolios requires as many tools as possible to target precise outcomes. So, when it comes to ETFs, there's no such thing as too many options. And every day, the ETF market continues to reach new heights in terms of its breadth and size.

Through both active and passive management, ETFs can offer cost-effective exposure to nearly every asset class, from core broad US equities to complex emerging market debt. As a result of this democratization, a wide range of investors can now access hard-to-reach markets once only available to the largest institutions.

Figure 11

ETFs Have Wide Investment Reach



Source: Bloomberg Finance L.P. as of June 12, 2023 based on SPDR Americas Research Calculations. The information contained above is for illustrative purposes only.

ETF Flows: Defensive Swings After a 2022 Home Run

Although both stocks and bonds had double digit negative returns, 2022 was a home run for ETF flows. With over $615 billion of inflows, 2022 marked the second-best year for ETF flows ever. In fact, seven market segments had record-setting inflows in 2022, with many reflecting how investors were positioning their portfolios for volatile markets and a rising rate environment.

However, as choppy markets continued into 2023, investors largely left their bats on their shoulders, too afraid to swing amid the volatility. In Q1 2023, ETF inflows were 6% below their historical average — primarily driven by US equity outflows.

When investors did swing, it was a defensive slap at the ball, as bond funds, led by ultra-short government bond exposures, dominated flow totals. But a hit is still a hit. Bond ETFs took in $53 billion, 114% above their historical 10-year average for a first quarter. Meanwhile, equity ETFs posted flows 47% below their typical Q1 figure, led by outflows in US equity exposures.

$53B

The amount of bond ETF inflows in Q1 2023

114%

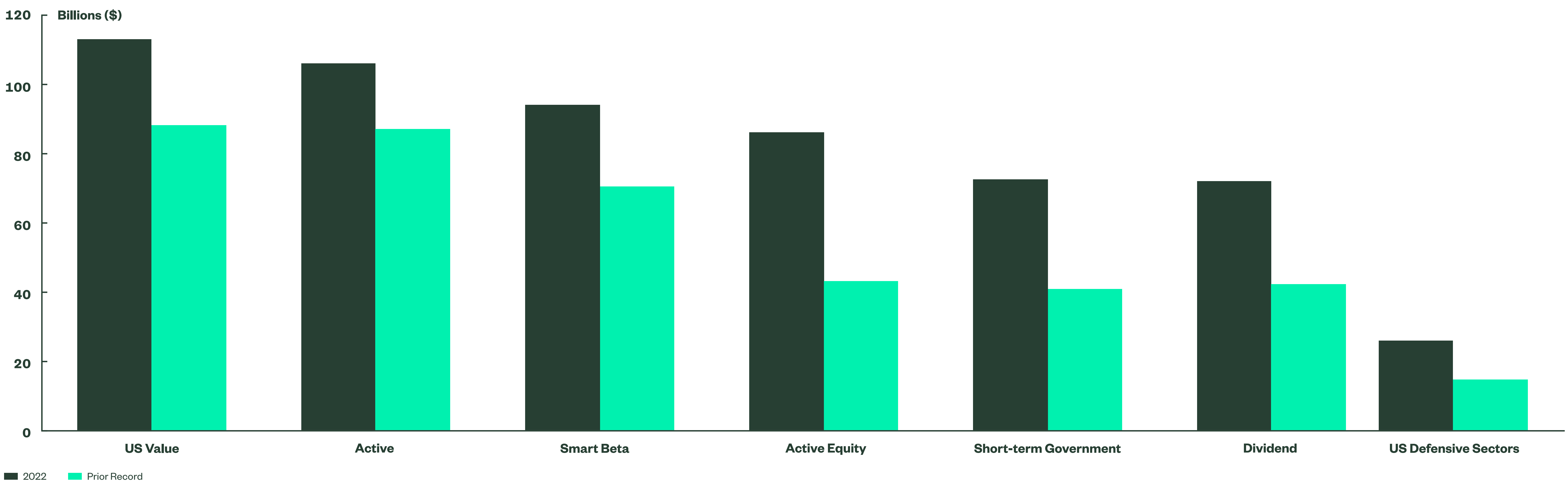
Above bond ETFs' historical 10-year Q1 average

Source: State Street Global Advisors, as of March 31, 2023, based on calculations per SPDR Americas Research.

As US equities struck out, non-US equities fared better as momentum toward overseas allocations has been gathering steam since late 2022. The strong quarterly inflows were led by multiple non-US geographical regions, as all areas, except for global funds, had inflows. In fact, regional funds, led by ETFs focused on Europe, posted their ninth-best flows for any three-month period ever this quarter.

Figure 12

Record Category Annual ETF Flows



Source: Bloomberg Finance, L.P., State Street Global Advisors, as of December 31, 2022. **Past performance is not a reliable indicator of future performance.**

What's Trending in ETFs

Five major ETF themes are emerging from today's uncertain macroeconomic backdrop.

1 Low-Cost ETFs

In the face of uncertainty, investors are more sensitive than ever to fund costs. This has spurred continued growth in low-cost ETF assets, with more investors using them as efficient, liquid, and diversified building blocks for the core of their portfolios.

2 Active ETFs

Offering both the potential benefit of active security selection and ETF tax efficiency, active ETF assets have grown to $394 billion — and the majority of ETF issuers report plans to develop active ETFs in 2023.[10]

3 Fixed Income ETFs

Aggressive rate hikes from the Federal Reserve (Fed) and other global central banks have reset rates, dislodging the bond market from a low-rate, near-zero yield era. With negative yielding debt falling from $15 trillion at the start of 2022 to $0,[11] bond investors now have plenty of new yield opportunities. In response to rising demand, the bond ETF market has grown to 577 funds,[12] giving investors a broad selection of exposures.

4 Dividends

Balancing today's market turbulence with the potential for future upside requires an investment strategy that plays both defense and offense. This has more investors turning to dividend payers, as they consistently return value to shareholders but aren't as heavily allocated to defensive market segments as low volatility strategies.

5 ETF Model Portfolios

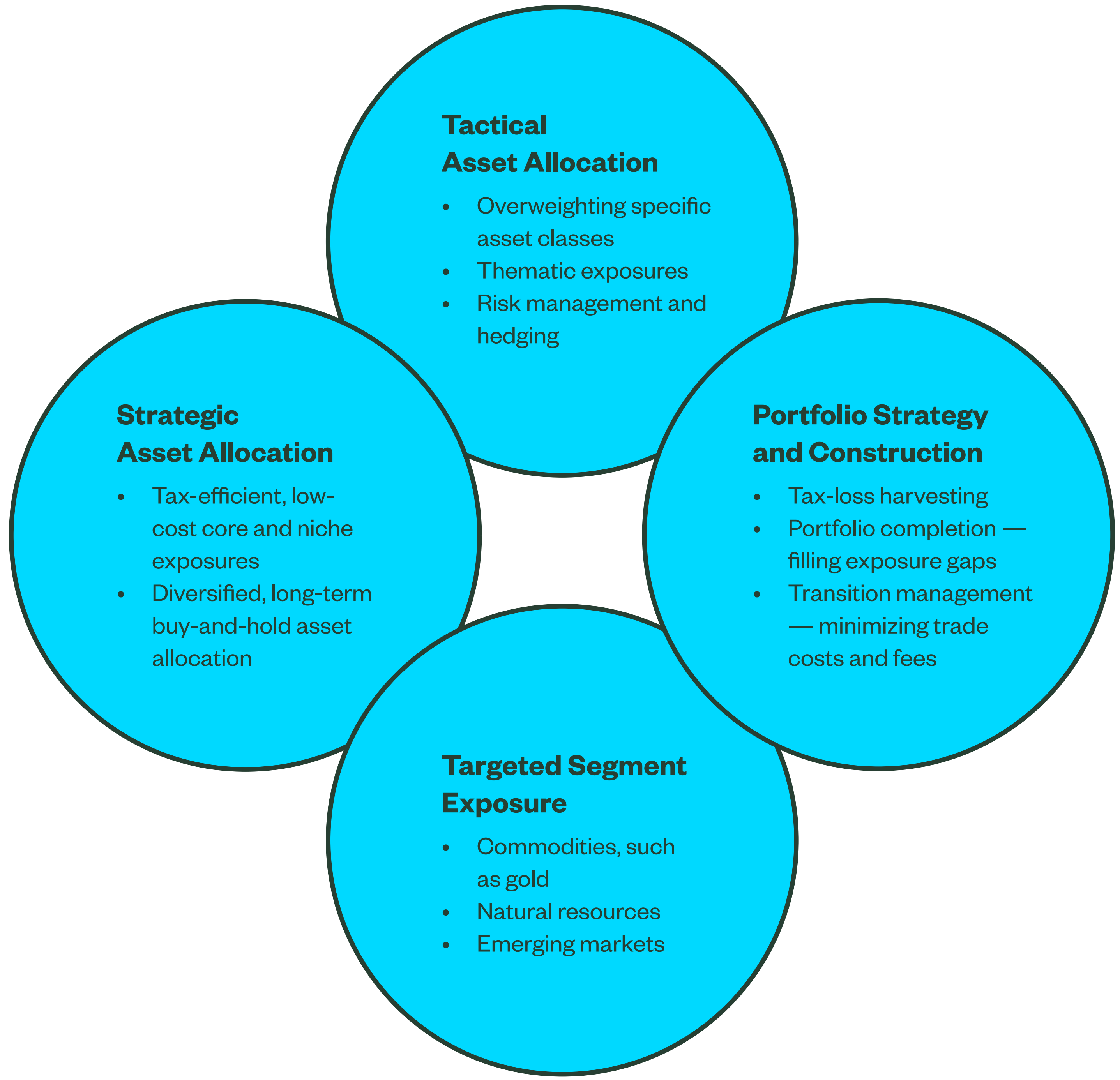
More advisors are taking advantage of ETF model portfolios — asset allocation strategies aimed at providing a full or complementary portfolio solution comprised of several funds — to give their clients tax-efficient access to institutional-caliber investment management.

ETFs in Action Use Cases for Investors

From strategic asset allocation to risk management to securities lending, ETFs offer a myriad of use cases that can help investors achieve their investment objectives — showcasing the versatility and effectiveness of these investment vehicles.

Traditional Investor Use Cases

ETFs Meet a Wide Range of Investor Needs



Source: State Street Global Advisors. For illustrative purposes only.

ETFs revolutionized investing by proving useful to investors in a variety ways. ETF liquidity and transparency, along with cost, trading, and tax efficiencies, have given rise to several common use cases.

Strategic Asset Allocation

The Challenge: Mutual Funds Can Erode Returns

A strategic core comprised of mutual funds can incur management fees that significantly erode portfolio returns over time. For example, consider that the expense ratio of the median US-listed mutual fund is 0.97% a year.[13]

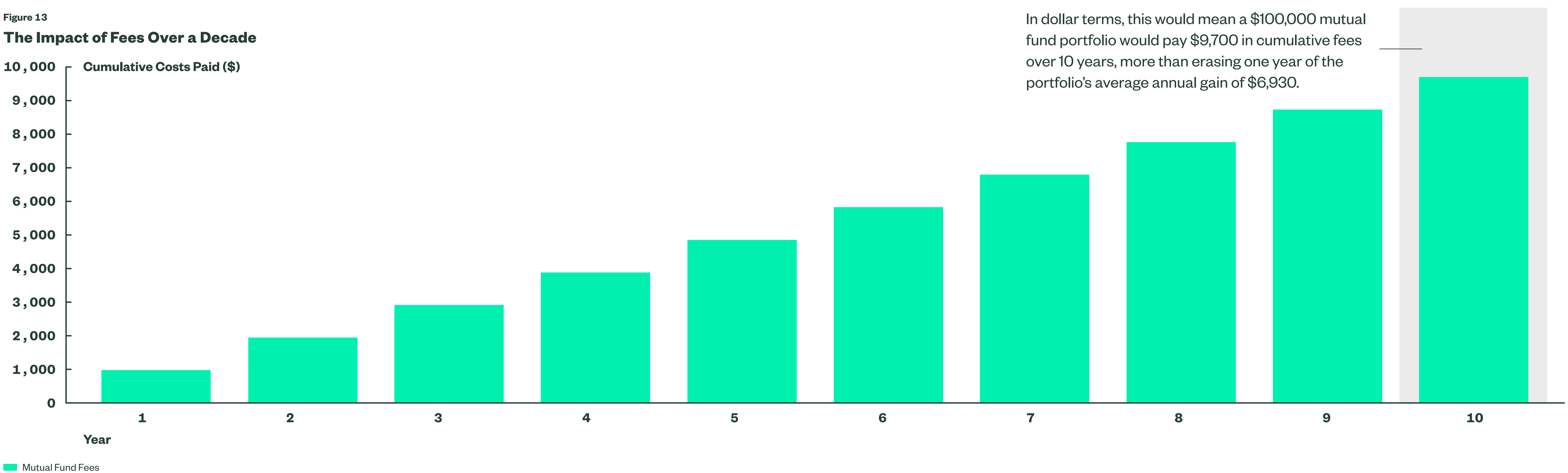
While that may not seem like much, over a period of 10 years, assuming an industry standard return target of 6.93%[14] was met each year, investors using mutual funds to gain core exposures would end up paying cumulative fees of 9.7% of their starting principal. That's more than 2% higher than one year of portfolio returns.

The ETF Solution: Low-Cost Strategic Core Portfolio

Investors can reduce management fees and still build a diversified and tax efficient strategic core allocation by using low-cost ETFs. For example, SPDR® Portfolio ETFs™ have an average expense ratio of just 5 basis points — that's 94% lower than the average US-listed mutual fund.[15]

Figure 13

The Impact of Fees Over a Decade



* Median US-listed mutual fund TER = 0.97%.
Source: Morningstar, State Street Global Advisors, as of March 31, 2023. Actual fees paid by an investor will differ.

Tactical Asset Allocation

The Challenge: Positioning Portfolios for Emerging Opportunities

Positioning portfolios for ever-shifting business cycles can be challenging — and static allocations can result in missed tactical opportunities, potentially impacting portfolio returns.

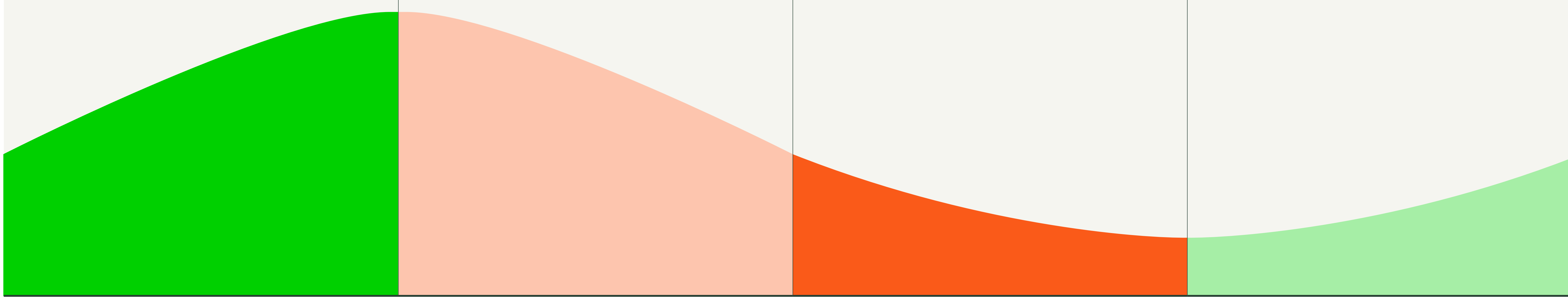
The ETF Solution: Tactical Asset Allocation with Sector ETFs

Investors can use sector ETFs to position their portfolios to capture opportunities amid changing business cycles. As sector performance varies in each phase of the business cycle, investors may tactically overweight industries that tend to benefit from the current economic environment.

Figure 14

Sector ETFs for Tactically Navigating Business Cycles

Expansion	Slowdown	Recession	Recovery
• Growth reaches the peak • Increasing capex to improve productivity and meet increasing demand • Interest rates start rising from their relatively low level	• Capacity utilization peaks • Positive output gaps • Positive but decelerating growth • More restrictive monetary policy	• Declining economic outputs • Falling demand from both consumers and business • Increasing unemployment • Low consumer confidence • Easing monetary policy	• Economy rebounds but below trends • Consumer expectations improve • Discretionary spending increases • Businesses stop cutting back on commercial activities • Monetary policy remains accommodative



Source: State Street Global Advisors. For illustrative purposes only.

Transparent Access to Non-Traditional Exposures

The Challenge: Accessing Hard-to-Reach Markets

Certain areas of the market have historically been difficult to access for all but the largest institutional investors — presenting challenges for investors seeking targeted exposures.

The ETF Solution: Targeted Exposure to a Once Hard-to-Reach Market

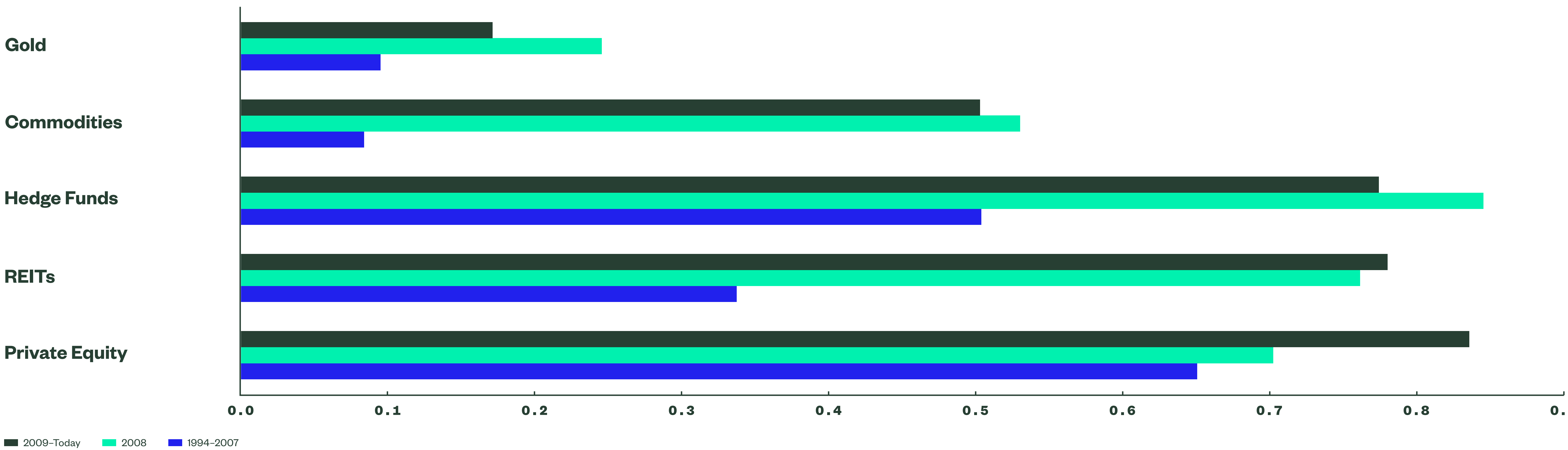
ETFs can be a transparent, easy-to-access solution for investors seeking targeted exposures to hard-to-reach markets such as commodities, emerging market debt, and senior loans. Many of these exposures can offer diversification benefits as strategic allocations or can be effective tools for tactical strategies.

For example, with gold's historically low correlation to many traditional markets, it can be a long-term strategic allocation for its potential diversification benefits.

In today's macroeconomic environment, gold can also be a tactical allocation — implemented to position for a weaker dollar, inflation surprises, or increased macro risks. Gold was once difficult to access without cost, transaction, and storage challenges. But in 2004, State Street Global Advisors launched the first physically backed gold ETF. This type of ETF offers investors a transparent, low-cost, and liquid vehicle for both tactical and strategic allocations to gold.

Figure 15

Gold Exhibits Low Correlation to Global Equity Markets



Source: Bloomberg Finance, L.P., State Street Global Advisors. Data from December 31, 1993 to December 31, 2022. Gold = gold spot price. Commodities = S&P GSCI Total Return Index. Hedge Funds = Hedge Fund Research HFRI FOF Diversified Index. REITs = FTSE NAREIT All Equity REITS Total Return Index. Private Equity = LPX50 Listed Private Equity Index Total Return. **Past performance is not a reliable indicator of future performance.**

Portfolio Completion

The Challenge: Filling Exposure Gaps
As investors seek to position portfolios against an ever-shifting macroeconomic backdrop, they can often identify gaps in exposures — but filling these holes with a single security can compromise portfolio diversification.

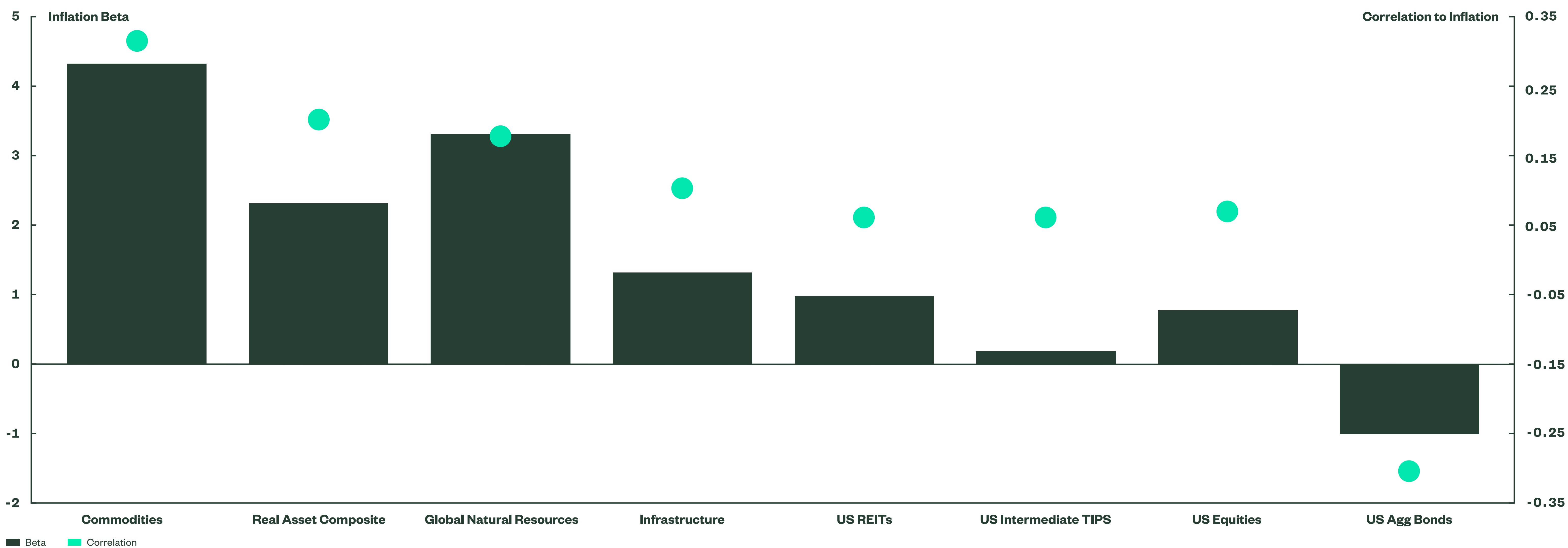
The ETF Solution: Gain Diversified Exposure in a Single Trade

ETFs offer diversified exposures in a single trade, making them an easy solution for completing portfolio gaps. For example, amid today's inflationary pressures many investors have found they've under-allocated to exposures that can serve as inflation hedges.

With a history of high sensitivity to inflation, real assets can protect portfolios from rising inflation — and a real asset ETF can offer diversified exposure to the asset class.

Figure 16

Portfolio Completion with Real Assets to Hedge Against Inflation



Source: State Street Global Advisors, FactSet, December 31, 2006–2022. "Real Asset Composite" comprises 25% Bloomberg Roll Select Commodity Index, 25% S&P® Global LargeMidCap Commodity and Resources Index, 20% S&P® Global Infrastructure Index, 20% Bloomberg US Government Inflation-Linked 1-10 Year Bond Index, and 10% Dow Jones US Select REIT Index. The "Traditional 60% US Equity-40% US FI Mix" comprises 60% S&P® 500 and 40% Bloomberg US Aggregate Bond Index.

The Future of ETFs
5 Emerging Trends

As the ETF industry continues to evolve, it stands poised on the brink of the next great frontier, where innovation and opportunity collide. Explore what's on the horizon for ETF investors — and what trends we predict will chart new paths in this next era of ETF investing.

Signs of Growth on the Road Ahead

Despite their remarkable growth to date, ETFs still only represent about 9% of investable assets.[16] And, while passive investing has grown in lockstep with ETFs, global passive equity only comprises 12% of the market[17] — which means there's still plenty of room for passive ETFs to grow (Figure 17).

The potential for passive asset growth extends beyond just equities — it's a trend we're also observing in fixed income. Over the past few years, we've canvassed the views of institutional investors across the globe to better understand where the fixed income market is and where it's heading.

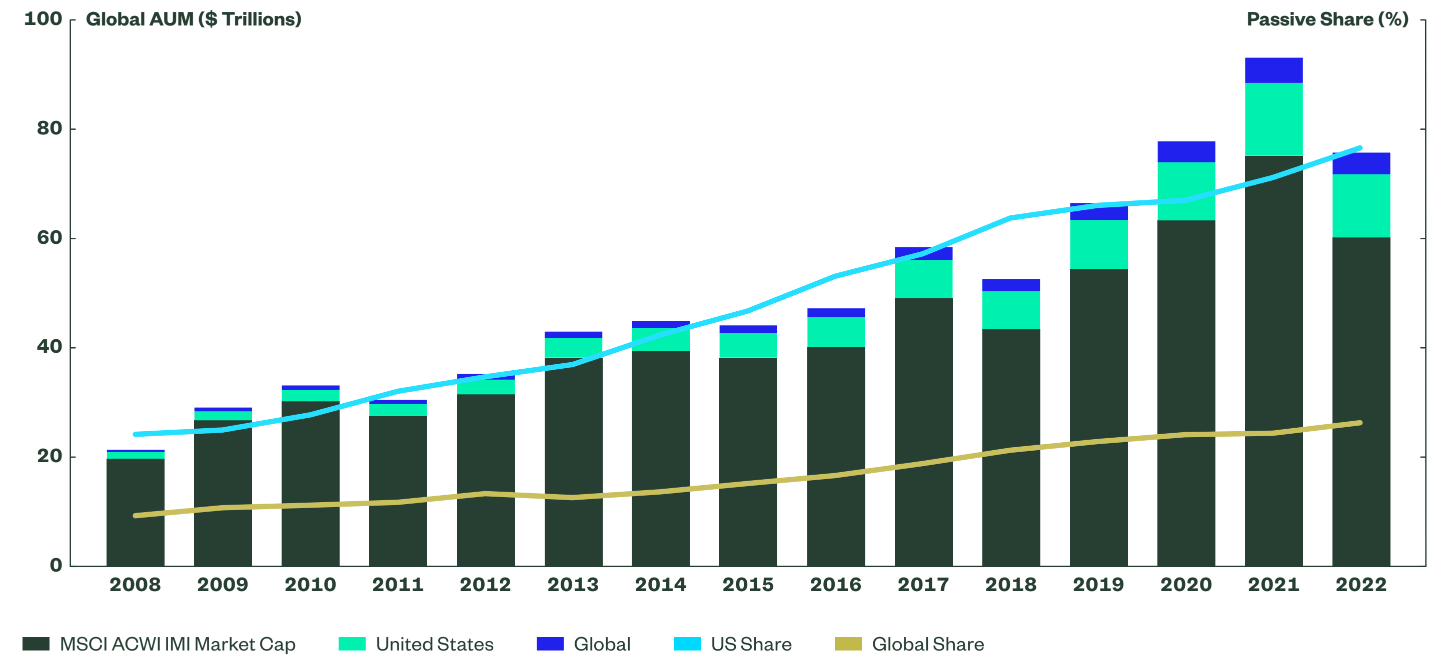
Our 2022 survey and report on the future of fixed income found that while active strategies have traditionally prevailed in fixed income, and continue to dominate portfolios, the early shifts we've seen in prior surveys[18] are continuing.

Now, over one-third (37%) of respondents say that more than 20% of their portfolio is allocated to index strategies. For 7% of respondents, more than 30% of their portfolio is allocated to index strategies (Figure 18).

As we look to the year ahead and beyond, we anticipate continued industry growth and expect several trends to unfold in the ETF landscape.

Figure 17

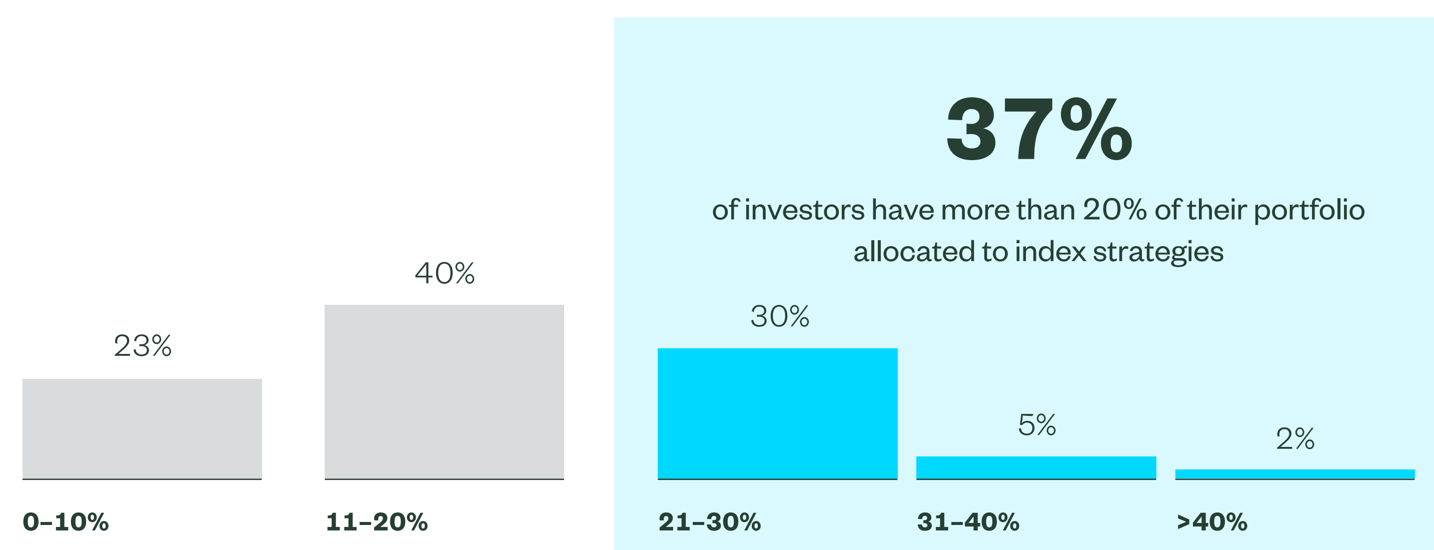
Passive Assets Still Have Room to Grow



Source: Bloomberg Finance L.P., and Morningstar as of December 31, 2022. Calculations per SPDR Americas Research.

Figure 18

Investors Show Sustained Interest in Indexed Approaches to Fixed Income



Source: State Street Global Advisors , as of May 2022. Percentage of respondents. Note: Fixed income index strategy is defined as 'A portfolio of fixed income securities that seeks to track the performance of a market index, such as the Bloomberg Barclays US Aggregate Bond Index. Index strategies may seek to precisely replicate a market index, or to build a representative sample of an index.' Respondents were allowed to select one answer. n=643

1. Active ETFs Join the Chat

We're also seeing room for growth in active ETFs — a trend that's evident in ETF issuer product development plans for the year ahead. When surveyed by Cerulli Associates in 2022, 75% of ETF issuers reported either currently developing or planning to develop transparent active ETFs (Figure 19).

With active ETFs at the forefront of product development, it should perhaps come as no surprise that the majority of ETF issuers also said they expect "significant flows" into transparent active ETFs in 2023[19] — and it appears this is already materializing.

In 2022, active strategies took in a record amount of assets, registering $106 billion of total inflows on the year. This was 22% more than the 2021 record of $87 billion — and was fueled by active equity ETFs. Those funds amassed $86 billion in 2022, a 100% increase from their prior record total in 2021 of $43 billion.[20]

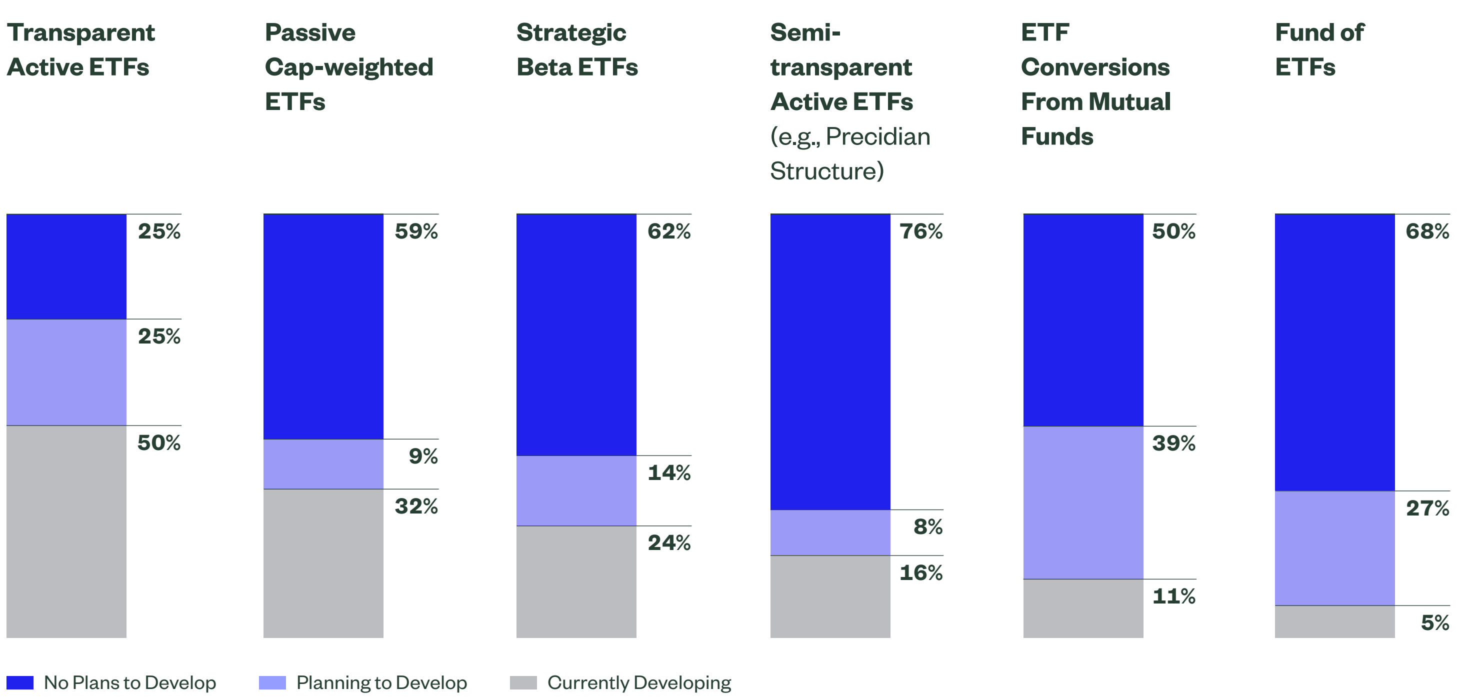
Strong flows into active ETFs overall have continued into 2023, taking in $33 billion through just the first four months of the year (Figure 20). Once again, active equity ETFs have been driving the flows — taking in $28 billion versus $5 billion for active fixed income ETFs. In fact, active equity funds have had inflows each month so far this year, extending a record-setting streak of 41 consecutive months of inflows.

Various active strategies were behind these record-setting flows. Some came from ETFs previously converted from mutual funds, with an embedded buying base and existing assets. Other inflows went to strategies that deliver defined outcomes (e.g., buffer funds) using options, or to those targeting specific investor goals (e.g., income) as opposed to pure alpha. While the latter two could be considered alternative strategies, the flows nonetheless represent elevated usage of active strategies within an ETF wrapper.

These trends have pushed total active ETF assets to $394 billion.[21] And if asset gathering continues at 2022's pace, assets could surpass $450 billion by the end of the year.

Figure 19

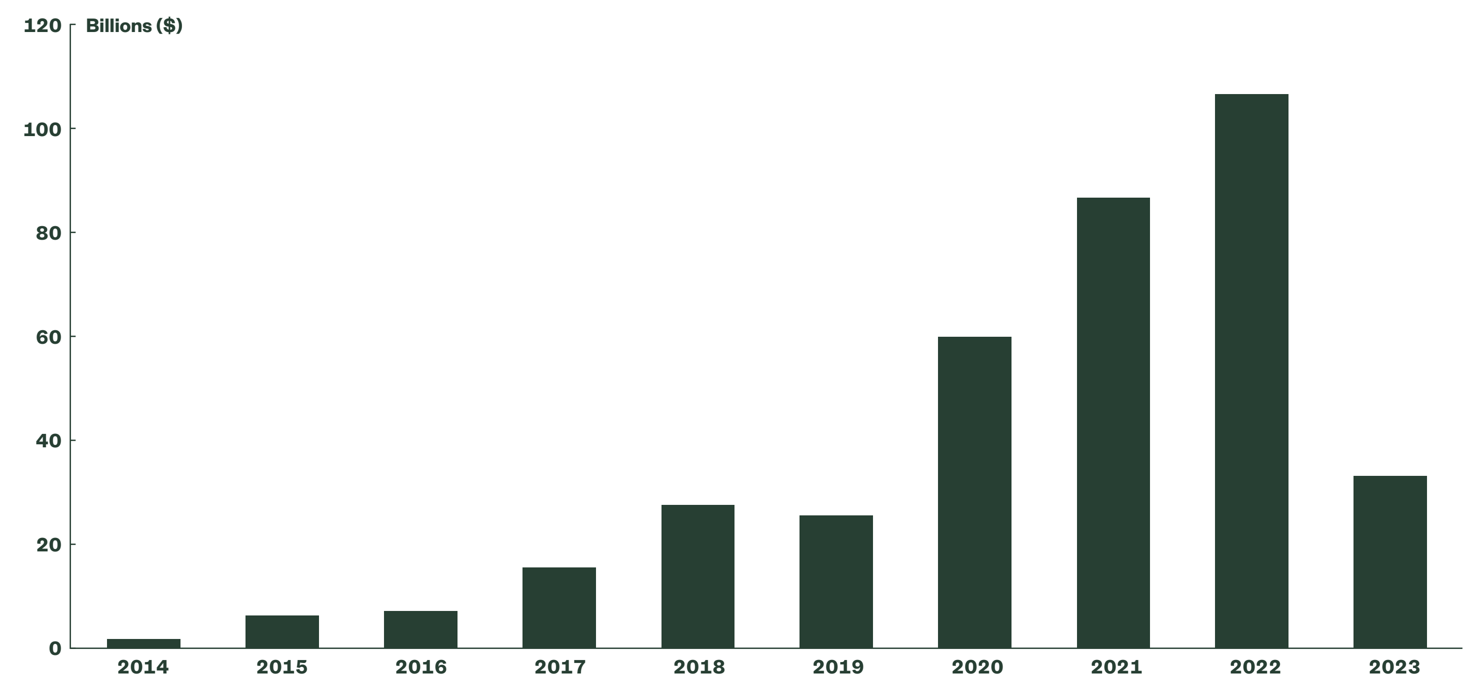
ETF Issuers' Plans to Develop Exchange Traded Vehicles by Type, 2022



Source: Cerulli Associates.
Analyst note: "ETF conversions from mutual funds" was a new choice added to this year's survey.

Figure 20

The Rapid Acceleration of Active ETF Flows



Source: Bloomberg Finance, as of May 15, 2023. **Past performance is not a reliable indicator of future performance.**

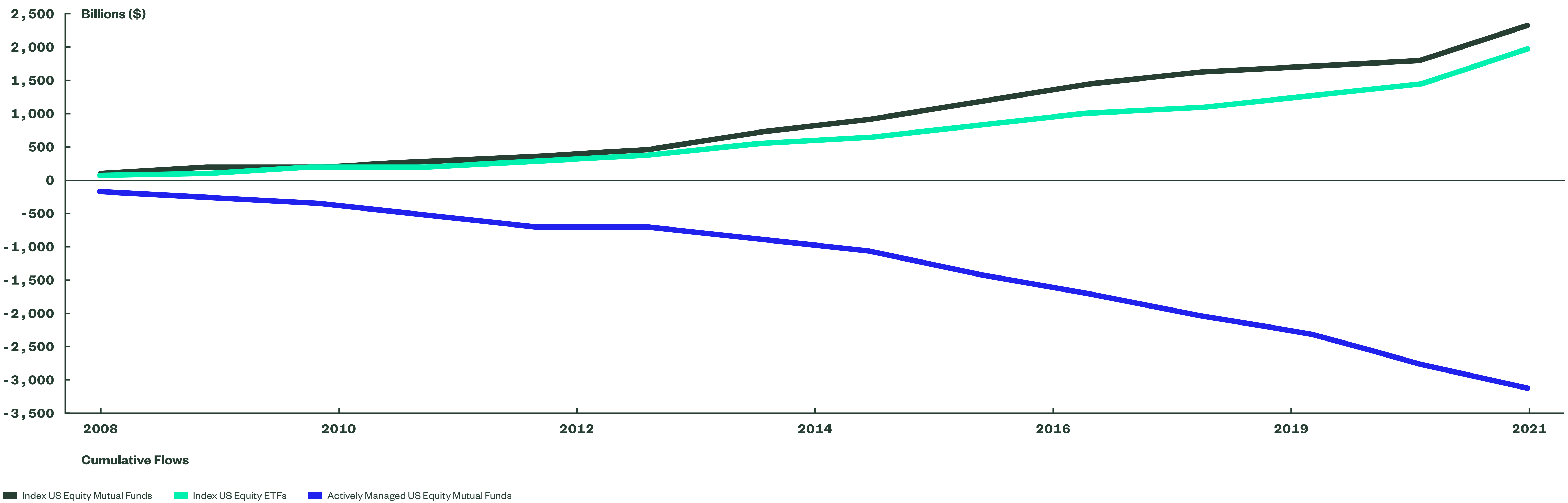
2. Continued Flows from Mutual Funds to ETFs

The cost, trading, and tax efficiency advantages ETFs offer versus active mutual funds have in part fueled their astounding growth. Over the past decade, US equity ETF inflows have largely been at the expense of active mutual funds.

We expect this trend to continue, as we're seeing a growing number of asset managers enter the ETF business for the first time. And as more ETF providers and products enter the market, we anticipate a continued focus on ETF liquidity and market quality — making for an optimal trading experience for ETF buyers and sellers.

Figure 21

Investors Flock from Active Mutual Funds to ETFs: US Equity Flows 2008–2021 Cumulative Flows*



Source: 2022 Investment Company Fact Book, Broadridge, Morningstar US Fund Fee Study 2021.
* ETF mutual fund data include net new cash flow and reinvested dividends.

3. The Fixed Income ETF Moment Isn't Over

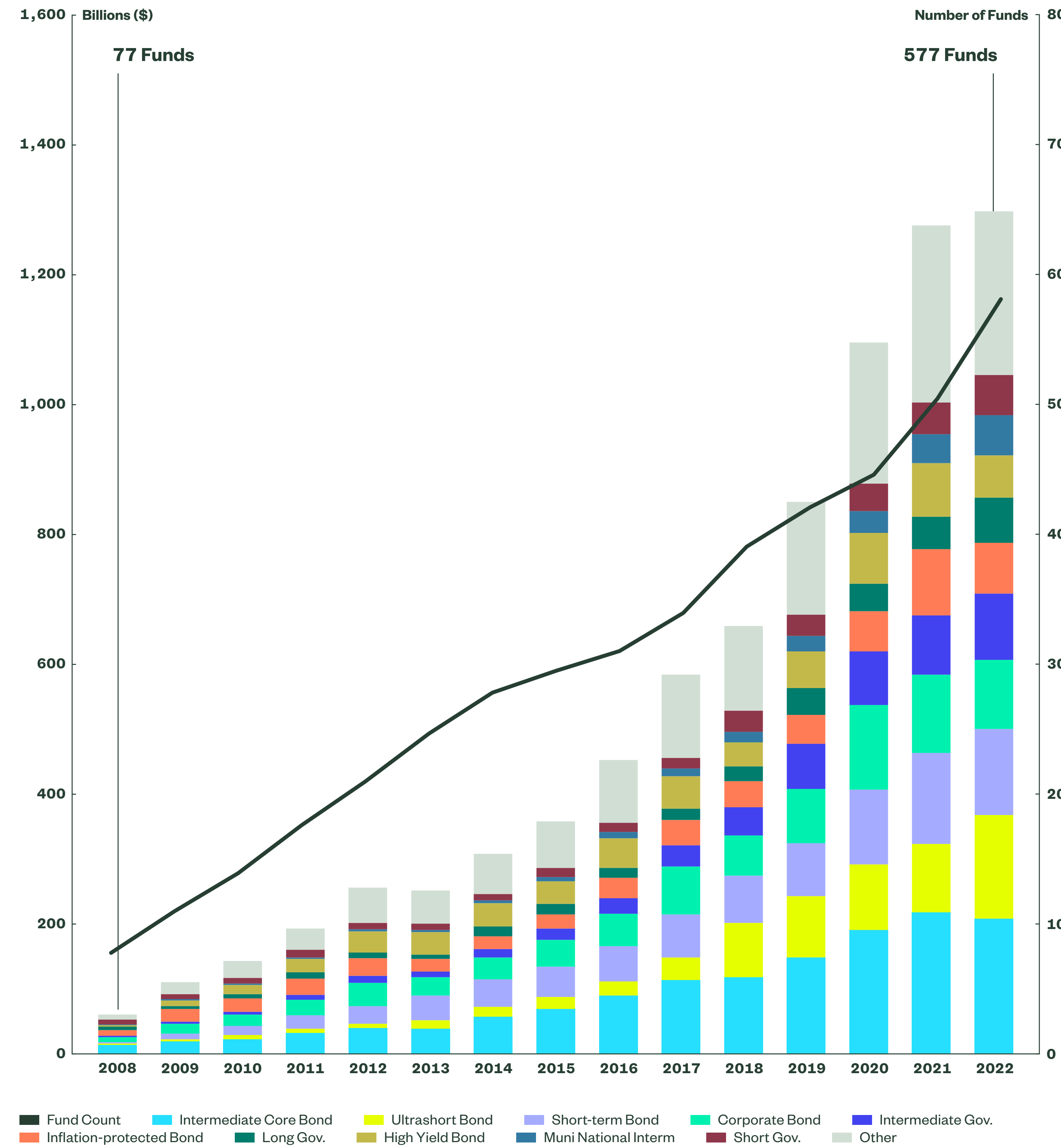
Bond ETFs took in nearly $200 billion in 2022, led by a record $125 billion of inflows into government funds. As investors sought higher yielding short duration sectors amid rising rates, ultra-short government bond ETFs comprised more than a third of bond ETF inflows.

Looking ahead, we expect fixed income ETF flows will continue to gather steam. And as the fixed income ETF universe has expanded and evolved, investors have the choice to look at shorter-duration segments beyond government bonds.

Today's extensive breadth of choice in the fixed income ETF market gives investors the ability to strategically design bond exposures for what lies ahead — and slice and dice the bond market to target outcomes with precision.

Figure 22

Fixed Income ETFs Offer More Choice for Investors



Source: Morningstar, as of December 31, 2022. Other includes Asset Allocation, Commodity, and Alternative Funds.

4. Investors Turn to Dividend Payers for Offense and Defense

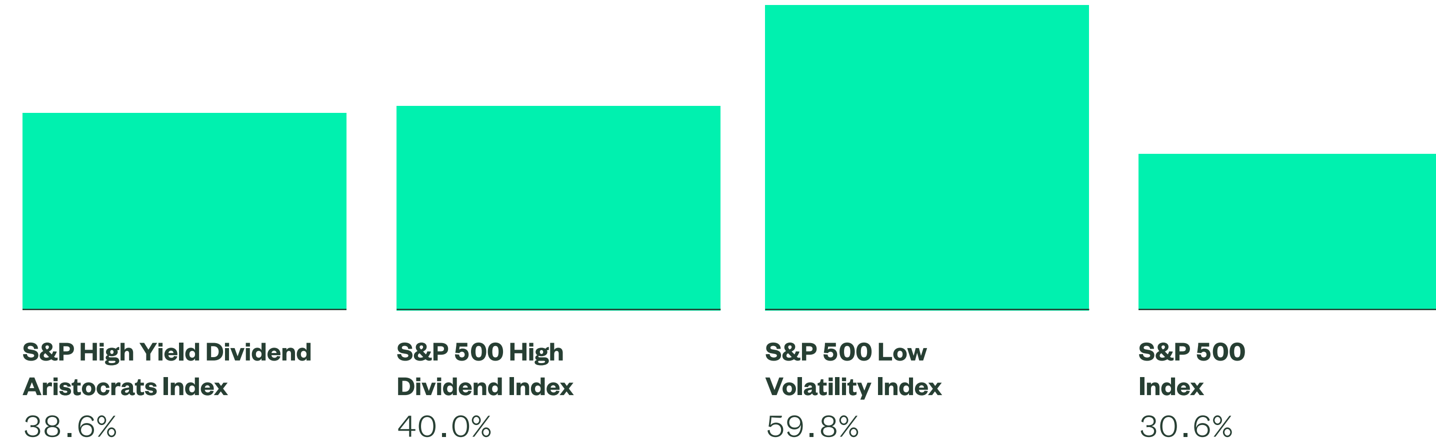
Equity investors faced wild market swings in 2022. High inflation, rising rates, increased geopolitical tensions, and weakening growth drove returns on the market's down days — and hope that economic conditions would improve drove the upside.

In 2023, positioning portfolios for this fundamental weakness, while acknowledging the potential for future strength, means combining offense with defense.

Dividend payers have a consistent track record of returning value to shareholders but aren't as heavily allocated to defensive market segments as volatility strategies (Figure 23). This mix of offensive and defensive characteristics may make dividend ETFs an effective strategy for positioning portfolios through the rest of 2023 and beyond.

Figure 23

Dividends Play Better Offense Than Low Volatility Percentage of Defensive Sector Exposure



Source: FactSet, as of October 31, 2022. Defensive sectors are the ones with low 1-year beta to the broad market, including Consumer Staples, Utilities, Health Care, and Energy.

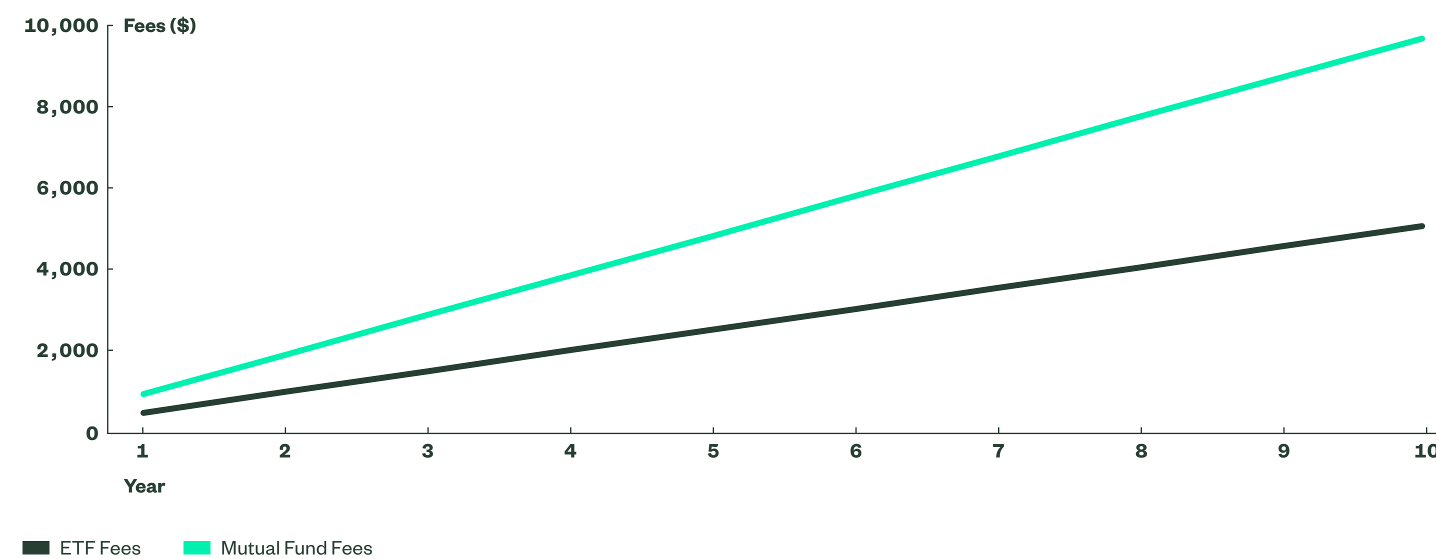
5. More Investors Want to Pay Less for Core Exposure

As market volatility and low return expectations extend into 2023, we anticipate investors will continue to take a closer look at total cost of ownership for their core portfolio holdings, further driving flows into low-cost ETFs.

Because costs can accumulate over time and erode portfolio returns (Figure 24), building a low-cost, diversified core is even more important today amid the market's murky future.

Figure 24

The Impact of Fees Over a Decade



* Median US-listed mutual fund TER = 0.97%.
Source: Morningstar, State Street Global Advisors, as of March 31, 2023. Actual fees paid by an investor will differ.

Investor Resources
For the Turbulent Times Ahead

The 30th anniversary of **SPY** — and the ETF industry as a whole — comes at a time of considerable market uncertainty. In 2022, high inflation, rising interest rates, and geopolitical tensions roiled global markets. The US banking crisis and policy uncertainty have extended the turmoil into 2023. As the ETF industry has evolved, ETFs' unique advantages have made them powerful tools for pursuing investing goals at all times — and especially during stressful periods like this.

We Can Help You Navigate Today's Volatile Markets

Lean on a Trusted ETF Leader

About SPDR Exchange Traded Funds

SPDR ETFs are designed to be portfolio building blocks, span an array of asset classes, and provide investors with the flexibility to select investments that align with their investment strategy. The comprehensive family of SPDR ETFs is sponsored by affiliates of State Street Global Advisors.

About State Street Global Advisors

For four decades, State Street Global Advisors has served the world's governments, institutions, and financial advisors. With a rigorous, risk-aware approach built on research, analysis, and market-tested experience, we build from a breadth of index and active strategies to create cost-effective solutions. And, as pioneers in index and ETF investing, we are always inventing new ways to invest.

1st

Creator of the World's First ETFs[22]

$3.3T

AUM Managed Globally[23]

40 yrs

Indexing and Portfolio Experience[24]

29

offices around the world

Unlock More of Our ETF Resources

We expect market volatility to persist for some time, leading to a bumpy journey ahead. But just as they have in the past, we believe that ETFs will continue to prove they're built to weather these storms.

And as investors again turn to ETFs in turbulent times, we're here to help you better understand the unique attributes of these funds and how to use them, so that you can make the best possible investment decisions.

ETF Education
Everything you need to know about ETFs.

Endnotes

1 Bloomberg Finance, L.P., as of December 31, 2022.

2 Bloomberg Finance, L.P. and Morningstar, as of December 31, 2022.

3 Bloomberg Finance, L.P., as of December 31, 2022.

4 Bloomberg Finance, L.P., as of December 31, 2022.

5 Bloomberg Finance L.P., as of December 16, 2022.

6 Bloomberg Finance L.P., as of December 16, 2022.

7 Bloomberg Finance, L.P., as of December 31, 2022.

8 Bloomberg Finance, L.P., as of December 31, 2022, calculations per SPDR Americas Research.

9 Bloomberg Finance L.P., as of March 17, 2023, based on US-listed ETFs with the sector classification of Financials.

10 The Cerulli Report: U.S. Exchange-Traded Fund Markets 2022.

11 Bloomberg Finance, L.P., as of January 5, 2023, based on the Bloomberg Global Aggregate Bond Index.

12 Morningstar as of December 31, 2022.

13 Morningstar, as March 31, 2023. Median net expense ratio for all US listed MF by oldest share class.

14 NASRA, Public Pension Plan Investment Return Assumption, March 2023.

15 State Street Global Advisors per Morningstar, as of November 17, 2022.

16 State Street Global Advisors, as of March 31, 2023, based on calculations per the SPDR Americas Research Team.

17 State Street Global Advisors, as of March 31, 2023, based on calculations per the SPDR Americas Research Team.

18 See, for example, Fixed Income: Preparing for the Big Shift, State Street Global Advisors, 2021.

19 The Cerulli Report: U.S. Exchange-Traded Fund Markets 2022.

20 State Street Global Advisors, as of March 31, 2023, based on calculations per the SPDR Americas Research.

21 State Street Global Advisors, as of March 31, 2023, based on calculations per the SPDR Americas Research.

22 ETFs managed by State Street Global Advisors have the oldest inception dates within the US, Australia, Hong Kong, and Singapore. State Street Global Advisors launched the first ETF in the US on January 22, 1993; launched the first ETF in Hong Kong on November 11, 1999; launched the first ETF in Australia on August 24, 2001; and launched the first ETF in Singapore on April 11, 2002.

23 State Street Corporation, as of September 30, 2022.

24 State Street Corporation, as of September 30, 2022.

Glossary

Active Strategy An actively managed approach involves a manager choosing securities to build, say, a fixed-income portfolio.

Active Management A portfolio-management approach that uses a human hand, such as a single manager, co-managers, or a team of managers, to select and adjust a fund's holdings over time. Active managers rely on research, forecasts and their own judgment and experience to make decisions on what securities to buy, hold and sell. The opposite of active management is passive management, which includes indexing.

Authorized Participant (AP) A US-registered and self-clearing broker-dealer who meet certain criteria and signs a participant agreement with a particular ETF sponsor or distributor to become an "authorized participant" of the fund. APs are often associated with large and influential investment banks and scrutinized for their integrity and operational competence as they are the only parties who transact directly with an ETF.

Asset Allocation An investment strategy of mixing a portfolio's stocks, bonds and cash equivalents — and sometimes other assets — to balance risk and return according to an individual's goals, risk tolerance and investment horizon.

Asset Class Distinct groups of investments that have similar characteristics and past performance, such as stocks, bonds, cash, real estate and commodities. Asset classes can also be further segmented, such as emerging market equities in the case of stocks and US corporate bonds in the case of fixed income.

Basis Point (bps) A unit of measure for interest rates, investment performance, pricing of investment services and other percentages in finance. One basis point is equal to one-hundredth of 1 percent, or 0.01%.

Bid-Ask Spread (Spread) The difference between the highest price a buyer is willing to pay for an asset and the lowest price the seller will accept to sell. Bid-ask spreads are a key measure of the liquidity of an asset or security.

Bond A debt investment in which an investor loans money to an entity — typically a corporate or governmental entity — that borrows the funds for a defined period of time at a variable or fixed interest rate. Bonds are used by companies, municipalities, states and sovereign governments to raise money and finance a variety of projects and activities. Owners of bonds are debtholders, or creditors, of the issuer.

Bloomberg US Aggregate Bond Index A broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasurys, government-related and corporate securities.

Bullion A term used to describe physical gold or physical silver that is at least 99.5 percent pure.

Commodities A basic good used in commerce that is interchangeable, or "fungible," with other commodities of the same type. Commodities are most often used as inputs in the production of other goods or services. For example, crude oil is a commodity that is used to make motor fuels, and heating oil and lubricants.

Credit Financial slang for so-called fixed-income "spread" products such as corporate bonds that are sometimes priced in terms of how much more they yield than risk-free fixed-income securities with the same maturities such as Treasurys.

Credit Risk The potential for an investment loss based on the borrower's inability to repay a loan or meet other obligations. Credit risk is typically measured by credit ratings maintained by credit ratings agencies such as S&P, Moody's and Fitch.

Diversification A strategy of combining a broad mix of investments and asset class to potentially limit risk, although diversification does not guarantee protecting against a loss in falling markets.

Drawdown A specific decline in the stock market during a specific time period that is measured in percentage terms as a peak-to-trough move.

Duration A commonly used measure, expressed in years, which measures the sensitivity of the price of a bond or a fixed-income portfolio to changes in interest rates or interest-rate expectations. The greater the duration, the greater the sensitivity to interest rates changes, and vice versa. Specifically, the specific duration figure indicates, on a percentage basis, by how much a portfolio of bonds will rise or fall when interest rates shift by 1 percentage point.

Emerging Markets Developing countries where the characteristics of mature economies, such as political stability, market liquidity and accounting transparency, are beginning to manifest. Emerging market investments are generally expected to achieve higher returns than developed markets but are also accompanied by greater risk, decreasing their correlation to investments in developed markets.

Equities An instrument that signifies an ownership position, or equity, in a corporation, and which represents a claim on its proportionate share in the corporation's assets and profits.

Exchange The marketplace where securities, commodities, derivatives, and other financial tools such as ETFs are traded. Exchanges, such as stock exchanges, allow for fair and orderly trading and efficient circulation of securities prices. Exchanges give firms looking to market publicly listed securities the platform to do this.

Exchange Traded Fund (ETF) An ETF is an open-ended fund that provides exposure to underlying investment, usually an index. Like an individual stock, an ETF trades on an exchange throughout the day. Unlike mutual funds, ETFs can be sold short, purchased on margin and often have options chains attached to them.

Fixed Income A type of investing, usually involving bills, notes or bonds, for which real return rates or periodic income is received at regular intervals and at reasonably predictable levels. Fixed income can also refer to a budgeting style that is based on fixed pension payments.

Fund An investment that is made up of a variety of different securities. A target retirement fund comprises a broadly diversified mix of investments, including stocks, bonds, and cash.

Global Financial Crisis The economic crisis that occurred from 2007–2009 that is generally considered biggest economic challenge since the Great Depression of the 1930s. The GFC was triggered largely by the sub-prime mortgage crisis that led to the collapse of systemically vital US investment banks such as Lehman Brothers. The crisis began with the collapse of two Bear Stearns hedge funds in June 2007, and the stabilization period began in late 2008 and continued until the end of 2009.

Hedging An investment strategy designed to reduce the risk of adverse price movements in an asset. Normally, a hedge consists of taking an offsetting position in a related security, such as a futures contract.

Index An indicator or measure of something — typically securities prices. An index is typically an imaginary portfolio of securities (stocks, bonds or even futures contracts) that represent a specific market, such as, say, the US equities market by way of the MSCI USA Total Return Index.

Inflation An overall increase in the price of an economy's goods and services during a given period, translating to a loss in purchasing power per unit of currency. Inflation generally occurs when growth of the money supply outpaces growth of the economy. Central banks attempt to limit inflation, and avoid deflation, in order to keep the economy running smoothly.

Interest Rate The amount charged, expressed as a percentage of principal, by a lender to a borrower for the use of assets.

Liquidity The ability to quickly buy or sell an investment in the market without impacting its price. Trading volume is a primary determinant of liquidity.

Low Volatility A lower volatility means that a security's value does not fluctuate dramatically and tends to be more steady and has less systematic risk.

Macro The part of the economics concerned with large scale or general economic factors such as interest rates and national productivity.

Market Cap A measure of a company's market value calculated by multiplying its share price by its total number of shares outstanding.

Market Maker A financial firm, usually a broker-dealer that is charged with facilitating trading in a particular security. Market makers are typically large financial intuitions with considerable market buying power in secondary securities markets.

Monetary Policy The actions of a central bank, currency board or other regulatory committee that determine the size and rate of growth of the money supply, which, in turn, affects interest rates. Monetary policy is maintained through actions such as modifying the interest rate, buying, or selling government bonds, and changing the amount of money banks are required to keep in the vault (bank reserves).

MSCI A provider of research-based indices and analytics, including the MSCI EAFE Index, a popular equity benchmark for international developed markets.

Net Asset Value (NAV) The price of a share determined by the total value of the securities in the underlying portfolio, less any liabilities.

Options Financial derivative contracts sold by one party, called the option writer, to another, referred to as the option holder. Options contracts offer the buyer the right, but not the obligation, to buy (a call) or sell (a put) a security at an agreed-upon price, which is called the strike price.

Passive Investing An investment strategy that removes the active human hand from the process and replaces it with systematic, rules-based approaches to securities selection. Passive investing, notably index investing, is relatively cheap because it typically limits portfolio turnover and because the passive investing does not involve relatively costly research.

Percentile Ranking A system of ranking scores that shows the percentage of results that are lower than the benchmark or fund in question for the most recent three-year period. Every year, each score is updated with the most recent year's percentiles.

Portfolio A portfolio is a group of stocks, bonds, cash equivalents — a few or many — or a combination of various assets that are owned by an investor and/or managed by a professional.

Primary Market The market where Authorized Participants (APs) create and redeem ETF shares in-kind, typically in blocks of 50,000 shares, which are known as creation units.

Profit The amount of money business is left with after deducting such expenses from revenue which made the receipt of revenue possible. Profit is calculated on two levels: gross profit and net profit. Gross profit is the amount of revenue from which trading expenses has been deducted—that is expenses related to main activities of the business. Net profit is the amount of revenue that includes incomes from other activities as well and all such expenses has been deducted which were incurred towards main activities as well as other activities.

Recession A period of temporary economic decline during which trade and industrial activity are reduced.

Real Estate Investment Trust (REIT) Companies that own and operate commercial properties, such as office buildings and apartment complexes.

Return Anything a business or an investor reaps above principal amount of investment. Return is received in many different forms besides rising principal, such as interest and dividends. Return can also be linked to currencies, such as when a business holds foreign-currency savings accounts, In such cases, return includes the interest received and the benefit from the fluctuation of foreign currency rates.

Risk The possibility that an investment's return will differ from expected returns, especially the possibility of losing some or all of an investment. Risk is typically measured by calculating the standard deviation on historical, or average, returns of a given investment.

Secondary Market The market in which ETF shares or common shares of public companies that currently exist are traded on exchanges between investors.

Sector Investing An investor or portfolio that invests assets into one or more sector of the economy such as financials, energy, or health care.

Securities Lending (Sec Lending) The loaning of stocks, derivatives or other securities to investors, often short sellers. Securities lending requires the borrower to put up collateral, whether cash, security, or a letter of credit. When a security is loaned, the title and the ownership are also transferred to the borrower. Short selling is a common practice for fund managers, who use profits from securities lending to defray costs of running a fund, helping to lower expense ratios for investors.

Security A financial instrument representing ownership positions in a publicly-traded stocks, corporation- and government-issued bonds, or rights to potential ownership as options represent. A security is a fungible, negotiable financial instrument that represents some type of financial value. The party that issues the security is called the issuer.

Senior Loans Floating-rate debt issued by corporations and backed by collateral such as real estate or other assets.

Short Interest A measure of the quantity of a given security that is being sold short. Short interest is measured in terms of the number of shares held short, divided by total shares outstanding. Short interest can also be expressed as a dollar amount – number of shares multiplied by share price —or as a percentage of total outstanding shares multiplied by the shares short and divided by overall assets under management.

Smart Beta A set of investment strategies that use alternative index construction rules seeking to achieve outperformance over first-generation market capitalization-based indices. Most smart beta indices isolate six particular "factors" — individually or in some combination. Those six factors include small size, value, high yield, low volatility, quality and momentum. Smart bet indices seek to deliver better risk-adjusted returns than cap-weighted indices.

Spread The difference between the yield on a given security and the yield on a reference security. The yield differences between, say, a corporate bond and a Treasurys security with the same maturity would be expressed as the spread. Assets such as corporate bonds are thus sometimes referred to as "spread products."

S&P 500® Index A popular benchmark for U.S. large-cap equities that includes 500 companies from leading industries and captures approximately 80% coverage of available market capitalization.

Strategy The idea behind an investment plan. A strategy consists of portfolio. A strategic balanced portfolio includes multiple asset classes and is designed to achieve a long-term asset allocation objective. The weights of the various asset classes are pre-determined and the portfolio is periodically rebalanced to ensure that the asset class weights reflect that pre-determined or strategic mix over time.

Tactical Asset Allocation An ongoing and dynamic approach to asset management that emphasizes exposure to asset classes that are poised to enhance returns or control drawdowns. A drawback of the system is that it is difficult to predict major market dislocations and moreover, continuing shifts in allocation cost money and so detract from returns.

Tax Efficiency A term that describes various approaches to investing that minimize tax liability. Certain types of investments, including funds like ETFs or securities like municipal bonds are valued for their tax efficiency, as are tax-protected accounts such as Individual Retirement Accounts (IRAs) or Roth IRAs. Also, certain practices, such as tax-loss harvesting, which is designed to lighten tax obligations, are considered ways to pursue greater tax efficiency.

Treasurys The debt obligations of a national government. Also known as "government securities," Treasurys are backed by the credit and taxing power of a country and are thus regarded as having relatively little or no risk of default.

Valuation The process of determining the current worth of an asset or a company.

Value One of the basic elements of "style"-focused investing that focuses on companies that may be priced below intrinsic value. The most commonly used methodology to assess value is by examining price-to-book (P/B) ratios, which compare a company's total market value with its assessed book value.

VIX The VIX, often referred to as the equity market's "fear gauge," is a measure of market risk based on expectations of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 index options—both calls and puts. The VIX volatility measure is meant to be forward looking.

Volatility The tendency of a market index or security to jump around in price. Volatility is typically expressed as the annualized standard deviation of returns. In modern portfolio theory, securities with higher volatility are generally seen as riskier due to higher potential losses.

Yield The income produced by an investment, typically calculated as the interest received annually divided by the price of the investment. Yield comes from interest-bearing securities, such as bonds and dividend-paying stocks.

Yield to Worst The lowest potential yield that investors can expect when investing in a callable bond without the issuer defaulting.

Yuan, or CNY China's currency, which is also referred to as the China Yuan Renminbi. The yuan is issued by the People's Bank of China and is, for now, roughly pegged to the US dollar.

Important Information