

SPDR® S&P 500® ETF

Capital Markets

Perspective

SPY

Product Comparison
Core Equity

30th Anniversary

As the first US-listed exchange traded fund (ETF), the SPDR S&P 500 ETF (SPY) seeks to offer investors liquid, cost-effective, and transparent access to the S&P 500 in a single security that trades on an exchange. Thirty years after its launch, SPY's dominant position remains intact, as the most actively traded ETF in the world.¹ In times of volatility, SPY's liquidity benefits become even more pronounced, allowing investors to source liquidity when it's needed most.

Liquidity

SPY is the most actively traded ETF,² with a 12-month average daily notional trading volume that's greater than its competitors — approximately 15 times greater than the iShares Core S&P 500 ETF (IVV) and 17 times greater than the Vanguard S&P 500 ETF (VOO).³

SPY's depth of liquidity can offer a cost advantage for investors as greater market participation can translate to tighter and more consistent bid-ask spreads, and less market impact for large trades. Investors seeking to trade on the secondary market may benefit from lower transaction costs and broader flexibility in implementation.

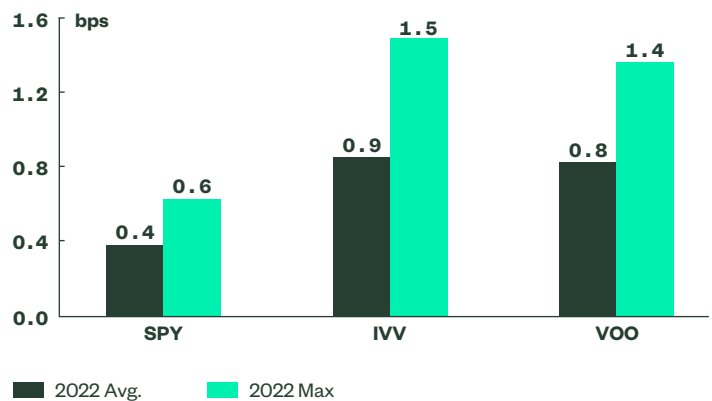
As volatility increases, SPY's bid-ask spread remains consistent in comparison to competitor S&P 500 ETFs' bid-ask spreads, which may be more impacted by underlying market conditions.

- 1 Bloomberg Finance L.P., as of December 31, 2022.
- 2 Bloomberg Finance L.P., as of December 31, 2022.
- 3 Bloomberg Finance L.P., State Street Global Advisors, as of December 31, 2022.

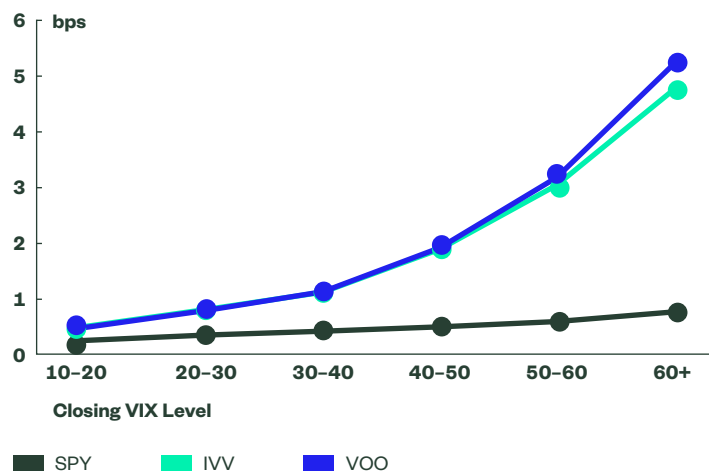
12-Month Average Daily Notional Trading Volume

	SPY	IVV	VOO
12-Month Average Daily Notional Trading Volume (\$)	38.8B	2.6B	2.2B
Secondary to Primary Volume Ratio	22.5	5.7	5.6

2022 Bid-Ask Spread Trends



Average Bid-Ask Spreads per Volatility Regimes (2020-2022)



Source: Bloomberg Finance L.P., SPDR Pre-Trade Tool Powered by Virtu Financial; as of December 31, 2022.

Securities Lending Revenue

Investors can generate revenue by lending SPY shares to help offset their costs. The average notional value of SPY shares on loan in 2022 was \$63.3B compared to \$1.9B for IVV and \$1.9B for VOO. Increased demand for SPY shares resulted in a higher return on lendable assets for SPY (7.5 bps) versus .4 bps for IVV and 1.1 bps for VOO.⁴ The securities lending revenue comes from loaning shares of SPY, not the lending of the underlying securities in the trust itself.

Options

SPY's derivative ecosystem creates additional sources of liquidity in the marketplace. For example, SPY's average options open interest of 19.6 million contracts represented over 99.3% of all S&P 500 ETF contracts. SPY's average daily options volume of 7.2 million contracts represented 99.9% of S&P 500 ETF options activity and 46% of total ETF options contracts traded in 2022.⁵

⁴ Markit, State Street Global Advisors, as of December 31, 2022.

⁵ Bloomberg Finance L.P., as of December 31, 2022.

Product Structure Comparison

	Investment Objective	SEC Registration	Portfolio Management	Dividend Reinvestment	Securities Lending Permitted	Use of Options/ Swaps/ Futures	Investment Advisor/ Trustee	Net Expense Ratio (%)	Gross Expense Ratio (%)
SPY Unit Investment Trust	SPY seeks to provide investment results that, before expenses, correspond generally to the price and yield performance of the S&P 500 Index.	Investment Company Act of 1940	Full replication	Cannot reinvest	No	No	Trustee	0.0945	0.0945
IVV Open End Fund	IVV seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the S&P 500 Index.	Investment Company Act of 1940	May sample/optimize	May reinvest	Yes	Yes	Investment advisor	0.03	0.03
VOO Open End Fund	VOO invests in stocks in the S&P 500 Index with the goal to closely track the index's return, which is considered a gauge of overall US stock returns.	Investment Company Act of 1940	Full replication	May reinvest	Yes	May use derivatives	Investment advisor	0.03	0.03

Source: Bloomberg Finance L.P., State Street Global Advisors, as of December 31, 2022. The gross expense ratio is the fund's total annual operating expenses ratio. It is gross of any fee waivers or expense reimbursements. It can be found in the fund's most recent prospectus.

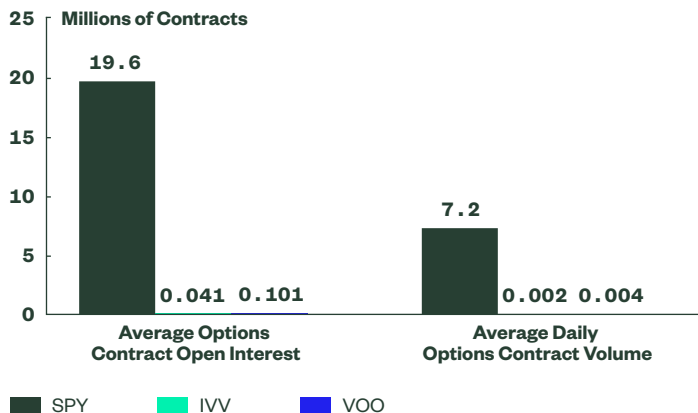
2022 S&P 500 ETF Short Interest

	SPY	IVV	VOO
Average Short Interest — Shares	155.6M	5.3M	5.0M
Average Short Interest — Notional (\$)	63.3B	1.9B	1.9B

Source: Bloomberg Finance L.P., State Street Global Advisors, as of December 31, 2022.

The data included are as of the date indicated, are subject to change, and should not be relied upon as current thereafter. Average Short Interest are the bi-weekly averages for 2022.

2022 Listed ETF Options Comparison



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Equity securities may fluctuate in value in response to the activities of individual companies and general market and economic conditions. Companies with large market capitalizations go in and out of favor based on market and economic conditions. Larger companies tend to be less volatile than companies with smaller market capitalizations. In exchange for this potentially lower risk, the value of the security may not rise as much as companies with smaller market capitalizations. There can be no assurance that a liquid market will be maintained for ETF shares.

While the shares of ETFs are tradable on secondary markets, they may not readily trade in all market conditions and may trade at significant discounts in periods of market stress.

The funds presented herein have different investment objectives, costs and expenses. Each fund is managed by a different investment firm, and the performance of each fund will necessarily depend on the ability of their respective managers to select portfolio investments. These differences, among others, may result in significant disparity in the funds' portfolio assets and performance. Securities lending programs and the subsequent reinvestment of the posted collateral are subject to a number of risks, including the risk that the value of the investments held in the collateral may decline in value and may at any point be worth less than the original cost of that investment. ETFs trade like stocks, are subject to investment risk, fluctuate in market value and may trade at prices above or below the ETFs' net asset value. Brokerage commissions and ETF expenses will reduce returns. Passively managed funds invest by sampling the index, holding a range of securities that, in the aggregate, approximates the full Index in terms of key risk factors and other characteristics. This may cause the fund to experience tracking errors relative to performance of the index. Frequent trading of ETFs could significantly increase commissions and other costs such

that they may offset any savings from low fees or costs.

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Derivative investments may involve risks such as potential illiquidity of the markets and additional risk of loss of principal.

In general ETFs can be expected to move up or down in value with the value of the applicable index. Although ETF shares may be bought and sold on the exchange through any brokerage account, ETF shares are not individually redeemable from the Fund. Investors may acquire ETFs and tender them for redemption through the Fund in Creation Unit Aggregations only. Please see the prospectus for more details. Investing involves risk including the risk of loss of principal.

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