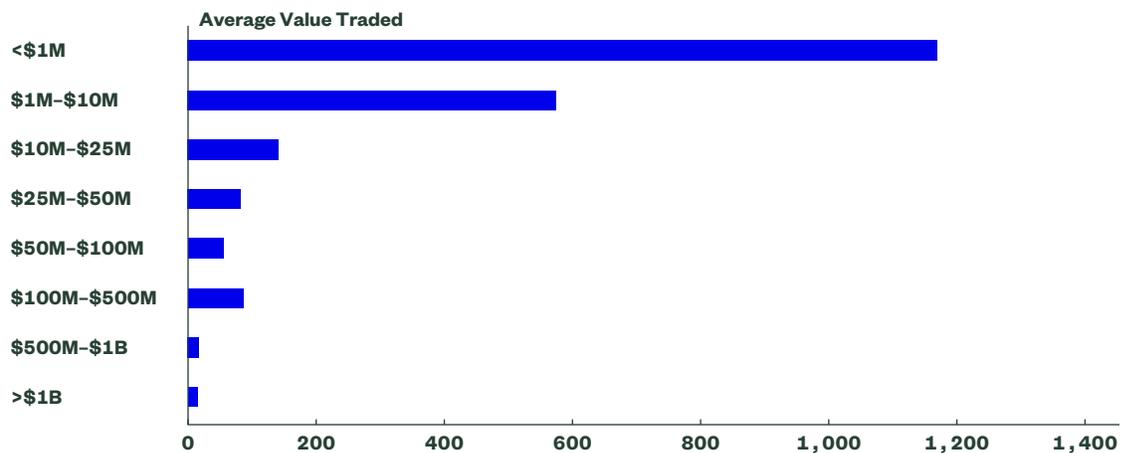


# Optimizing Trade Execution for ETFs of All Levels of Liquidity

Exchange Traded Funds (ETFs) are known for their tradability. With \$5 trillion in secondary market notional volume in 2019 — more than that of its top 10 competitors combined — the robust liquidity of the SPDR S&P 500 (SPY) sets the benchmark of implementation flexibility for a wide array of trading strategies.<sup>1</sup> Yet with 88% of all US-listed ETFs trading less than \$25M per day, on average,<sup>2</sup> we're mindful that trading the vast majority of less liquid ETFs efficiently can take a little more attention. We're here to help.

As the industry's liquidity leader, SPDR ETFs accounted for 40% of all trading volume of US-listed ETFs in 2019.<sup>3</sup> The SPDR Sales Execution and Implementation Team is a dedicated group of capital markets professionals focused on providing resources to help assess ETF liquidity and evaluate different execution strategies, even for ETFs that don't have SPY's highly liquid profile.

Figure 1  
**Many ETF Solutions,  
But Not Many  
With Scale**



Source: Bloomberg Finance, L.P., as of 12/31/2019.

## Determining Execution Objectives — One Size Does Not Fit All

As the number of ETFs in the marketplace has grown, investors have increasingly dedicated resources to evaluating ETF liquidity as a key component of their Total Cost of Ownership (TCO). For all SPDR ETFs, our Sales Execution and Implementation Team can help you evaluate different execution strategies with the goal of optimizing investment objectives and TCO. The SPDR team can help assess:

### Execution Priorities

- What is the timeframe for execution?
- Is the creation/redemption window open?
- Based on trade objectives, which is the correct type of order to use?

## Trade Considerations

- Is the trade of a social size, or is it outsized in comparison with the ETF's historical average volumes?
- What is the trade size relative to the underlying market?
- Are the underlying constituents open to trade due to local market hours or holidays?

## Market Environment

- Is the market trading in an orderly fashion (i.e., volatility halts)
- Is the ADV drastically higher/lower than normal?
- Is the ETF's bid/ask wider than usual?
- Is there currently an outsized premium/discount?

## Match Execution Strategies With Portfolio Objectives

ETF secondary trading volume is often the first measure of ETF liquidity. However, investors with larger order sizes can source liquidity not displayed on the screen from liquidity providers. ETFs are at least as liquid as their underlying constituents at any given point in time. With ETFs representing a multitude of asset classes, geographies, sectors, and styles — the SPDR team is available to navigate different market environments and volatility regimes to properly evaluate execution strategies and meet your objectives.

Execution Strategy	Description	High Urgency	Market Impact Sensitivity	Time Risk	Anonymity
<b>Risk Trade</b>	Client receives price for the entire trade at once, and the liquidity provider takes on the risk of managing the resulting position. Liquidity providers can be put in competition for the trade, allowing for a clear measure of best execution. Client generally benchmarks vs. the quoted NBBO.	✓			
<b>NAV Trade</b>	Trade executed by buying or selling the underlying basket of securities and subsequently creating/redeeming ETF shares. The client typically receives a price reflective of executions for the underlying basket of securities plus or minus creation/redemption costs. Client generally benchmarks vs. end of day NAV.		✓	✓	
<b>Worked Order</b>	Electronic order types using automated preprogrammed trading instructions. Orders can be measured relative to execution benchmarks based on volume, time or other metrics. Can be applied to both trading in the secondary market or trading the basket.		✓	✓	✓

## Trading the SPDR Portfolio Developed World ETF (SPDW)

The SPDR Portfolio Developed World ex-US ETF (SPDW) seeks to track the S&P Developed Ex-U.S. BMI Index, which represents a broad index composed of developed international equities around the world. The fund averages roughly \$30M in secondary notional value traded per day, which occurs while many of the underlying markets are closed.

Investors seeking to trade orders of \$20M–30M would represent a significant portion of the secondary volume but may consider trading the ETF on risk with a liquidity provider.

Let's walk through execution considerations:

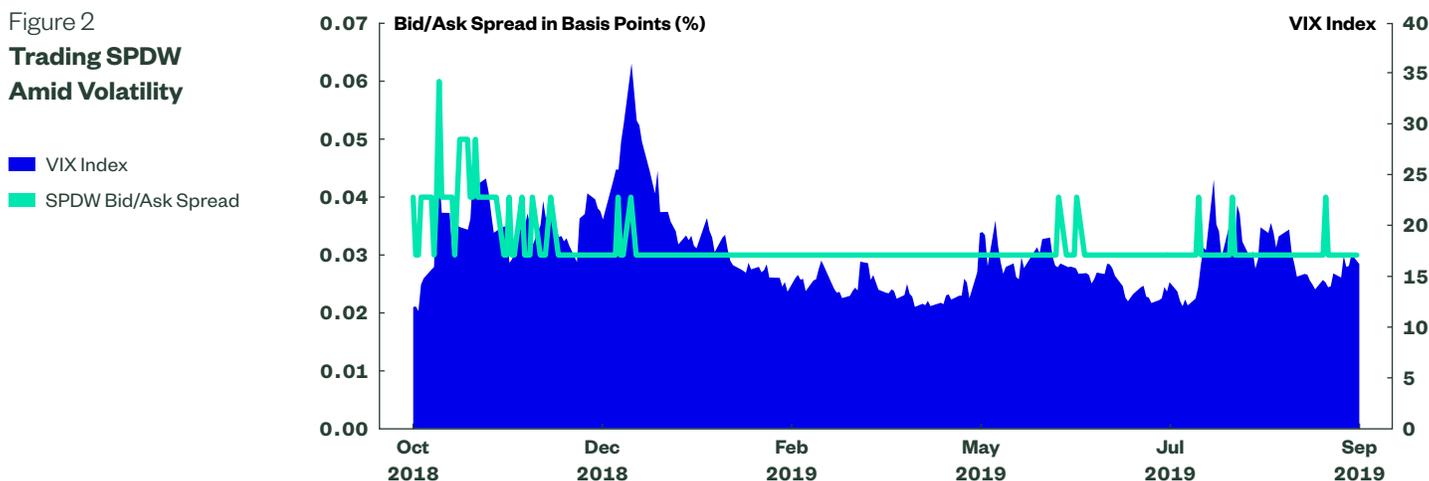
- **Execution Priority** Investors seeking to execute an order during US market hours while underlying equity markets may be closed.
- **Trade Considerations** The order size represents a large percentage of SPDW's secondary trading volume but a small percentage of the underlying basket volumes. Roughly half of SPDW's assets represent European equities with market hours that overlap with early US trading hours.
- **Market Environment** Is there news or are there macro-related headlines that may impact market volatility or cause uncertainty for liquidity providers?

We can see in the chart below that risk trades in the \$20M–30M range have occurred in SPDW as investors have sourced liquidity from providers during US market hours. Each example should be evaluated independently, as time of day and market environment can impact relative pricing. However, these block trades should serve as helpful historical examples of risk trades executed during different market environments.

On December 31, 2018, a client sold ~\$27M of SPDW. At the time that the trade took place, the market was 26.42/26.43. For reference, the VIX Index traded at 25.42.

- The client was able to efficiently execute the entire block at 26.41, a penny below the current bid at the time
- The trade accounted for ~22% of the fund's trading volume on the day and was 0.40x the fund's 30-day average value traded

Figure 2  
Trading SPDW  
Amid Volatility



Source: Bloomberg Finance, L.P., as of 12/31/2019.

Figure 3

**SPDW: Secondary Market Information**

Timeframe	5 day	30 day	YTD
Spreads (\$)	0.01	0.01	0.01
Spreads (%)	0.03	0.04	0.03
Volume (\$)	17,836,858	30,135,632	34,030,803
Volume (Shares)	598,418	1,028,534	1,179,502
Performance (%)	0.91	2.88	13.75
Fund Flow (\$)	0	94,234,300	989,741,400
Secondary: Primary Market Ratio	No Flow	9.59	5.82
Average Premium/Discount (%)	0.27	0.11	0.11

Date	Time	Ticker	Size (Shares)	Value (\$)	Trade Price	Bid	Ask	Versus NBBO (\$)
12/01/2017	15:30:13	SPDW	819,613	25.73M	31.39	31.37	31.39	0.00
07/11/2018	11:22:11	SPDW	783,376	23.80M	30.38	30.42	30.43	0.04
01/02/2019	15:03:39	SPDW	777,555	20.47M	26.32	26.36	26.37	0.04
03/12/2019	14:00:31	SPDW	741,516	21.47M	28.96	28.94	28.95	0.01
01/04/2018	15:54:28	SPDW	730,786	23.68M	32.40	32.40	32.41	0.00
06/29/2018	9:46:07	SPDW	954,539	29.08M	30.46	30.44	30.45	0.01
01/18/2019	15:50:41	SPDW	715,195	23.72M	33.17	33.15	33.16	0.01
05/31/2019	15:18:49	SPDW	701,249	19.93M	28.42	28.42	28.43	0.00
01/31/2019	15:13:54	SPDW	675,041	19.18M	28.42	28.40	28.41	0.01
12/31/2018	14:28:46	SPDW	1,012,162	26.73M	26.41	26.42	26.43	0.01

Source: Bloomberg Finance, L.P., as of 12/31/2019.

**Rely on the Expertise of the Liquidity Leader**

The SPDR Sales Execution and Implementation Team builds relationships with SPDR ETF authorized participants, market makers, liquidity providers, execution trading desks/platforms and stock exchanges.

We play an active role in supporting competitive markets and maintaining the SPDR ETF liquidity ecosystem. Given our insight into primary and secondary market activity — as well as our access to a wide variety of pre-trade liquidity analytics tools — our team of sales professionals is dedicated to working closely with our clients to help educate them about the nuances of ETF execution and ultimately support optimizing their TCO and portfolio construction efforts.

**Endnotes**

- 1 Bloomberg Finance, L.P., as of January 31, 2019.
- 2 Bloomberg Finance, L.P., as of January 31, 2019.
- 3 Bloomberg Finance, L.P., as of January 31, 2019.

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## About State Street Global Advisors

Our clients are the world's governments, institutions and financial advisors. To help them achieve their financial goals, we live our guiding principles each and every day:

- Start with rigor
- Build from breadth
- Invest as stewards
- Invent the future

For four decades, these principles have helped us be the quiet power in a tumultuous investing world. Helping millions of people secure their financial futures. This takes each of our employees in 27 offices around the world and a firmwide conviction that we can always do it better. As a result, we are the world's third-largest asset manager, with US \$3.12 trillion\* under our care.

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\* AUM reflects approximately \$43.72 billion USD (as of December 31, 2019), with respect to which State Street Global Advisors Funds Distributors, LLC (SSGA FD) serves as marketing agent; SSGA FD and State Street Global Advisors are affiliated.

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Equity securities may fluctuate in value in response to the activities of individual companies and general market and economic conditions.

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. For further information on the funds, please review their respective prospectuses.

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.

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.

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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