

# Low Volatility Index Comparison: Flexible and Fast Road to Portfolio Protection

**Ryan Reardon**

Senior Smart Beta ETF Strategist

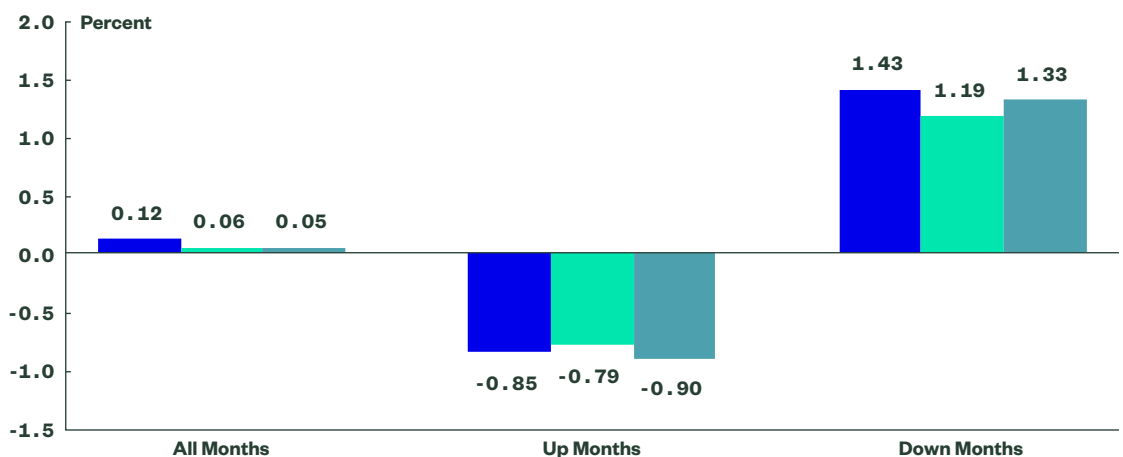
- Contrary to popular belief, low volatility strategies have achieved a higher level of volatility reduction than minimum volatility (or minimum variance) strategies.
- Low volatility's more regular rebalancing frequency can often react faster to prevailing market events.
- SPDR® ETFs offer a suite of low volatility strategies that follow a simple, yet effective methodology.

Low (or minimum) volatility index strategies have regularly attracted investors seeking to take long equity positions with lower historical risk. While many indices seek to target lower risk, less volatile stocks, SPDR ETFs offer a suite of low volatility strategies that follow a simple and yet effective methodology.

In this note, we take a look at the key distinctions between *Low Volatility* and *Minimum Volatility/Variance* index strategies.

Figure 1  
**Average Excess  
Returns of Volatility  
Strategies in Up and  
Down Markets**  
(Last 15 Years)

■ EURO STOXX® Low Risk  
Weighted 100 Index  
■ MSCI EMU Minimum Volatility  
Optimised Index  
■ MSCI EMU Select Dynamic  
50% Risk Weighted Index



Source: State Street Global Advisors, Bloomberg Finance L.P., as of 31 August 2020.

## Targeting Less Volatile Stocks Effectively

Research offered by Michael Jensen (1972) posed a considerable challenge to the capital asset pricing model (CAPM), which originally suggested a positive relationship between risk and return. Jensen's work, and subsequent empirical studies, demonstrated how lower volatility stocks have historically generated higher risk-adjusted returns.<sup>1</sup> This well-documented phenomenon, dating back to the 1970s, is referred to as the 'low volatility anomaly'.

As a result, many investment strategies have been constructed to capture this observable market behaviour, through investable indices. When constructing factor-based strategies, it is important that investors understand the index methodology. Construction variation can often produce a wide array of outcomes. The most common strategies, used by ETFs, for harvesting the return opportunity presented by the low volatility anomaly are *Low Volatility* and optimised *Minimum Volatility/Variance*.

Low Volatility follows a process of selecting a portfolio of the least volatile stocks.<sup>2</sup> The EURO STOXX® Low Risk Weighted 100 Index accomplishes this goal by selecting the 100 least volatile stocks in the EURO STOXX® Index. The portfolio then rebalances quarterly so that it can react quickly to prevailing market conditions, thus helping investors to continuously target the lowest volatility stocks.

Optimised Minimum Volatility (Variance) strategies are more complex than Low Volatility. Minimum Volatility strategies often use more constraints that limit allocation and portfolio turnover, while also considering the variation correlation of constituent securities.

Figure 2  
Main Index Methodologies  
Targeting Less Volatile  
Stocks in Eurozone Equities

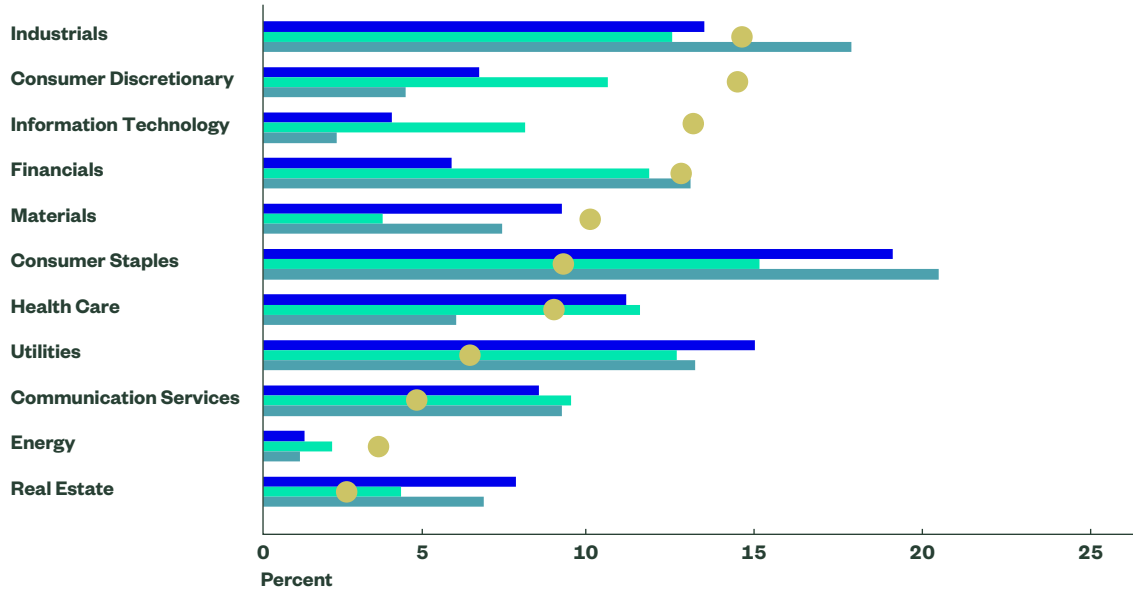
	EURO STOXX® Low Risk Weighted 100 Index	MSCI EMU Minimum Volatility Index	MSCI EMU Select Dynamic 50% Risk Weighted Index
<b>Ticker</b>	<b>SXLV1T Index</b>	<b>M4EMVOE Index</b>	<b>M7CXEMRW Index</b>
<b>Selection Universe</b>	EURO STOXX® Index	MSCI EMU Index	MSCI EMU Index
<b>Construction</b>	<i>Rank and select Top 100, based on past volatility measure (standard deviation)</i>	<i>Minimise index volatility subject to constraints</i>	<i>Rank and select Top 50% (aggregate risk), based on past volatility measure (standard deviation)</i>
<b>Weighting Scheme</b>	Price-weighted with a weighting factor based on the inverse of the preceding 12-month volatility	Determined by optimiser, using an estimated security covariance matrix, having taken into account constraints	Relative security price variance using weekly returns of the preceding 3-years
<b>Stock Weight Constraint</b>	<i>Max weight: 10%</i>	<i>Max weight: Lower of 20x the stock's MSCI EMU weight or 1.5%</i> <i>Min weight: 0.05%</i>	None
<b>Country Constraint</b>	None	<i>Greater than 2.5% of MSCI EMU: ± 5% of the country's MSCI EMU weight</i> <i>Less than 2.5% of MSCI EMU: 3x of the country's MSCI EMU weight</i>	None
<b>Sector/Industry Constraint</b>	None	± 5% of the sector's MSCI EMU weight	None
<b>Factor Constraint</b>	None	± 0.25 standard deviation of benchmark exposure to all factors (except Beta and Residual Volatility)	None
<b>Turnover Constraint</b>	None	Maximum 10% one-way turnover at each rebalance	A buffer of 20% of the cumulative targeted risk weight of 50% is used to mitigate index turnover
<b>No. of Securities</b>	100	Floating	Floating
<b>Rebalance Frequency</b>	Quarterly (3rd Friday in March, June, September and December)	Semi-annually (Last business day of May and November)	Semi-annually (Last business day of May and November)

Source: State Street Global Advisors, STOXX, MSCI, as of 31 August 2020. The information contained above is for illustrative purposes only.

## A Flexible Approach to Lower Volatility

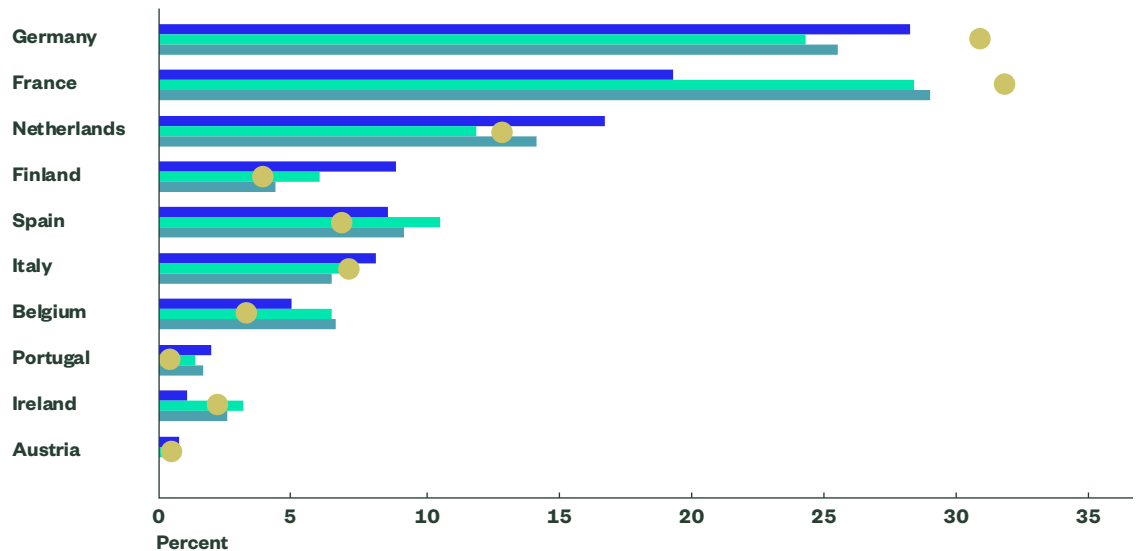
The matrix in Figure 2 explains the key distinctions between the construction methodologies of Low Volatility and Minimum Volatility indices. The critical feature is the relatively *'unconstrained'* nature of a low volatility approach. By limiting the allocation constraints, the low volatility strategy has the flexibility to go *'wherever it needs to'* in targeting lower volatility. This will often lead to dislocations in sector and country exposure (see Figure 3) across the various strategies. It is important to remember that these allocations are an *outcome* of investing in the least volatile stocks. This flexibility also helps promote the more dynamic approach enjoyed by low volatility strategies discussed in the next section (and displayed in Figure 5).

Figure 3a  
Sector Exposure of Volatility Strategies



Source: State Street Global Advisors, FactSet, BarraOne as of 21 September 2020.

Figure 3b  
Country Exposure of Volatility Strategies (Top 10)



Source: State Street Global Advisors, FactSet, BarraOne as of 21 September 2020.

The flexibility provided by the low volatility approach is often the feature most cited for driving the excess return in down markets (Figure 1), since low volatility is able to hold more of the lowest volatility stocks. Figure 4 explains the detailed performance of our low volatility approach in each of the major market pullbacks, experienced by the broader market (EURO STOXX® Index), in recent years.

Figure 4

**Low Volatility Performance  
in Major Market Selloffs**

Period	Date	EURO STOXX® Index (%)	EURO STOXX® Low Risk Weighted 100 Index (%)**	Allocation Effect	Selection Effect	Low Vol Outperformance (%)	MSCI EMU Minimum Volatility Index (%)†	Min Vol Outperformance (%)
2020 Q1	20-FEB-2020 to 23-MAR-2020	-34.94	-33.91	-0.15	1.17	1.02	-31.15	3.79
2018 Q4	3-OCT-2018 to 27-DEC-2018	-14.77	-11.82	1.56	1.38	2.94	-10.23	4.54
2015 Q3	14-AUG-2015 to 29-SEP-2015	-12.17	-8.56	0.41	3.20	3.61	-9.36	2.81
2012 Q2	2-APR-2012 to 4-JUN-2012	-13.81	-6.83	3.03	3.96	6.98	-11.73	2.08
2011 Q3	2-MAY-2011 to 4-OCT-2011	-28.27	-17.81	4.52	5.94	10.46	-18.87	9.40
GFC	19-SEP-2008 to 9-MAR-2009	-44.42	-32.29	4.58	7.55	12.13	-36.79	7.63

Source: STOXX Ltd. as of the date indicated. †State Street Global Advisors, Bloomberg Finance LP as of the date indicated. Index ticker M4EMVOE Index was used as a proxy for Min Vol. The intensity of the colour indicates the relative size of the data points in a given column(s) from lowest to highest.

\*\*The EURO STOXX® Low Risk Weighted 100 Index was inception on 4 October 2012, returns prior to this date are based hypothetical index positions using the index methodology.

**A Dynamic Approach  
to Volatility Investing**

In addition to the flexibility offered by the ‘unconstrained’ nature of the low volatility approach, the more frequent rebalance schedule of the Low Volatility Index means that they are more ‘dynamic’ than the minimum volatility/variance strategies available. While this may lead to higher turnover, this is a feature of the strategy.

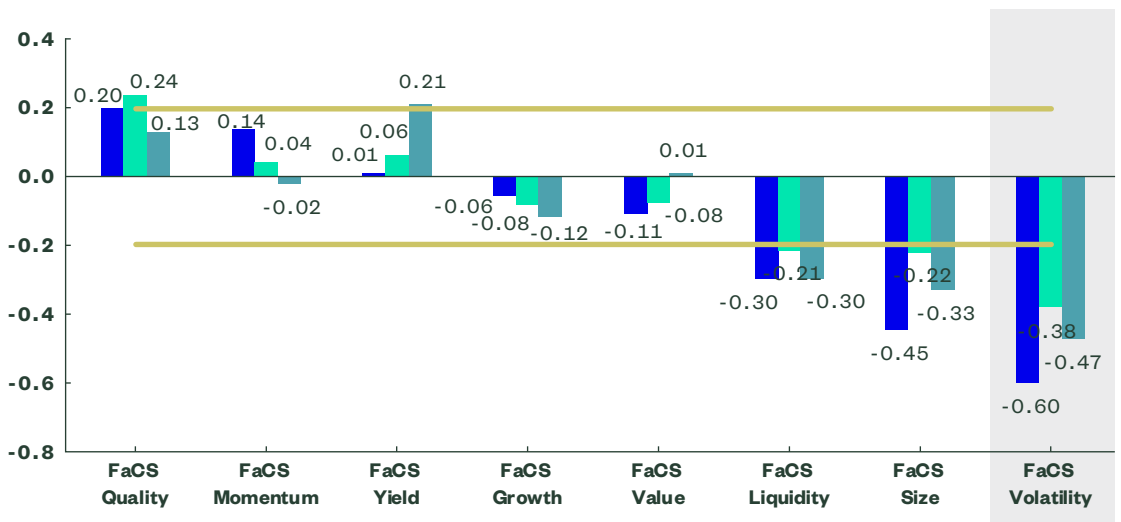
The dynamic quarterly rebalance, coupled with the flexibility of the diversification approach, help the Low Volatility Index to often display the lowest volatility (i.e. the highest factor exposure), as compared to the minimum volatility index (Figure 5).

Figure 5a

**FaCS Active Exposure  
Comparison**

(vs. EURO STOXX® INDEX)

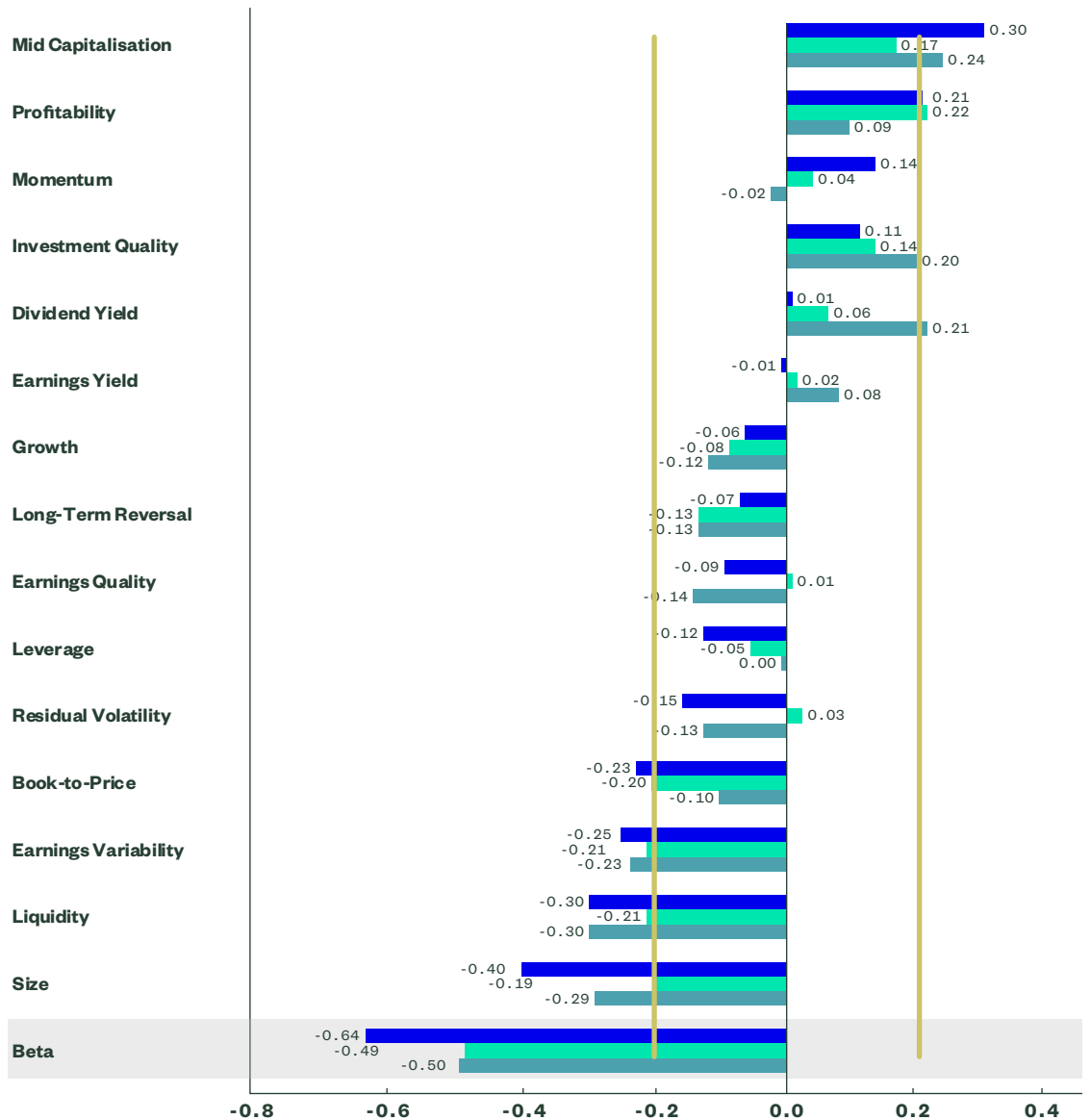
- EURO STOXX® Low Risk Weighted 100 Index
- MSCI EMU Minimum Volatility Index
- MSCI EMU Dynamic 50% Risk Weighted Index
- Significance Level (±0.20)



Source: State Street Global Advisors, FactSet, BarraOne as of 21 September 2020. MSCI FaCS stands for MSCI Factor Classification Standards.

Figure 5b  
**GEMLT Active**  
**Exposure Comparison**  
 (vs. EURO STOXX® Index)

- EURO STOXX® Low Risk Weighted 100 Index
- MSCI EMU Minimum Volatility Index
- MSCI EMU Dynamic 50% Risk Weighted Index
- Significance Level ( $\pm 0.20$ )



Source: State Street Global Advisors, FactSet, BarraOne as of 21 September 2020. GEMLT stands for MSCI Barra's Global Equity Model for Long-Term Investors.

## Conclusion

One strategy that has often attracted investors seeking to take long equity positions with lower historical risk is low (or minimum) volatility. While many indices seek to target lower risk, less volatile stocks, SPDR ETFs offer a suite of low volatility strategies that follow a simple and yet effective methodology.

The Low Volatility strategies tracked by SPDR ETFs offer two important features that set them apart from minimum volatility/variance indices. Our low volatility indices are largely unconstrained, which allows them more flexibility in targeting lower volatility, and they are more dynamic as a result of rebalancing more frequently. In one simple trade, investors can seek to lower the risk exposure in their portfolio, while remaining invested in global equities using the SPDR® EURO STOXX® Low Volatility UCITS ETF.

## SPDR ETFs

The investment objective of the SPDR family of Low Volatility ETFs is to track the performance of US (S&P® 500), Eurozone (EURO STOXX®) and Global (STOXX® Global 1800) equity securities, which historically have exhibited low volatility characteristics. Historically, both the S&P® 500 Low Volatility Index and EURO STOXX® Low Risk Weighted 100 Index have demonstrated better risk-adjusted returns versus the benchmark universes from which they select their constituent stocks, in part by offering lower historical drawdowns. The STOXX® Global Low Risk Weighted Diversified 200 Index was launched in 2019.

### SPDR® EURO STOXX® Low Volatility UCITS ETF

The SPDR® EURO STOXX® Low Volatility UCITS ETF seeks to fully replicate the EURO STOXX® Low Risk Weighted 100 Index, which represents the 100 lowest volatility companies from the EURO STOXX® Index. Constituents are selected based on their 12-month historical volatility and weighted by the inverse of their 12-month historical volatility subject to a 10% component cap at rebalance.

The EURO STOXX® Index is a broad benchmark index representing large, mid and small capitalisation companies of 12 Eurozone countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain.

Figure 6  
Standard Performance

Fund/Index Name	1 Month	3 Months	6 Months	Year to Date	1 Year	3 Years	5 Years	Since Inception
<b>Inception Date 24/03/2014</b>								
SPDR® EURO STOXX® Low Volatility UCITS ETF	-0.10	2.52	15.46	-9.73	-7.50	0.84	4.68	6.75
EURO STOXX® Low Risk Weighted 100 Index	-0.08	2.55	15.26	-9.95	-7.71	0.53	4.45	6.52
<b>Difference</b>	<b>-0.02</b>	<b>-0.03</b>	<b>0.20</b>	<b>0.22</b>	<b>0.21</b>	<b>0.31</b>	<b>0.23</b>	<b>0.23</b>
EURO STOXX® Index†	-1.81	0.67	18.33	-10.95	-6.19	-0.90	4.12	4.22
<b>Difference</b>	<b>1.71</b>	<b>1.85</b>	<b>-2.87</b>	<b>1.22</b>	<b>-1.31</b>	<b>1.74</b>	<b>0.56</b>	<b>2.53</b>

Source: State Street Global Advisors, \*Morningstar and Bloomberg, as of 30 September 2020.

Performance is net of fees. **Performance quoted represents past performance, which is no guarantee of future results. Investment return and principal value will fluctuate, so you may have a gain or loss when shares are sold. Current performance may be higher or lower than that quoted. All results are historical and assume the reinvestment of dividends and capital gains. The performance data do not take account of the commissions and costs incurred on the issue and redemption, or purchases and sale, of units. Visit [spdrs.com](https://www.spdrs.com) for most recent month-end performance.** Performance returns for periods of less than one year are not annualised. Index returns are unmanaged and do not reflect the deduction of any fees or expenses.

## Endnotes

- 1 Michael C. Jensen, ed., Studies in the Theory of Capital Markets. Praeger Publishers Inc, 1972.
- 2 In the methodology, volatility of the constituents, within each eligible universe, is calculated using available price return data for the trailing one year of trading days leading up to each index rebalancing reference date.

## Appendix

Figure 7  
**Brinson Attribution by Sector**  
 (Q1 2020)

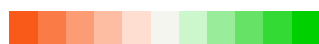
Sector	EURO STOXX® Low Risk Weighted 100 Index			EURO STOXX® Index			Attribution Analysis		
	Average Weight	Total Return	Contrib. To Return	Average Weight	Total Return	Contrib. To Return	Allocation Effect	Selection Effect	Total Effect
<b>Total</b>	–	<b>-33.91</b>	–	–	<b>-34.94</b>	–	<b>-0.24</b>	<b>1.25</b>	<b>1.02</b>
Financials	16.48	-40.82	-7.10	15.53	-44.74	-7.51	-0.09	0.75	0.65
Industrials	11.20	-37.69	-4.40	14.44	-41.51	-6.32	0.19	0.44	0.63
Communication Services	7.99	-24.06	-1.69	5.03	-28.04	-1.31	0.20	0.30	0.50
Utilities	19.94	-31.70	-6.09	7.38	-31.49	-2.26	0.45	-0.03	0.42
Energy	3.88	-35.87	-1.39	4.27	-42.39	-1.93	0.06	0.25	0.31
Consumer Staples	11.25	-24.23	-2.51	9.40	-24.42	-2.07	0.18	0.01	0.19
Materials	3.95	-26.89	-1.01	8.95	-32.48	-2.85	-0.12	0.20	0.08
Consumer Discretionary	3.97	-30.83	-1.22	13.01	-32.71	-4.18	-0.21	0.05	-0.16
Technology	0.05	-5.58	-0.05	10.70	-31.48	-3.30	-0.36	-0.03	-0.39
Health Care	3.16	-28.60	-0.88	8.40	-27.14	-2.13	-0.38	-0.05	-0.43
Real Estate	18.12	-39.66	-7.58	2.89	-36.07	-1.08	-0.16	-0.62	-0.78

Source: STOXX Ltd. from 20 February 2020 to 23 March 2020.

Figure 8  
**Brinson Attribution by Sector**  
 (Q4 2018)

Sector	EURO STOXX® Low Risk Weighted 100 Index			EURO STOXX® Index			Attribution Analysis		
	Average Weight	Total Return	Contrib. To Return	Average Weight	Total Return	Contrib. To Return	Allocation Effect	Selection Effect	Total Effect
<b>Total</b>	–	<b>-11.82</b>	–	–	<b>-14.77</b>	–	<b>1.30</b>	<b>1.64</b>	<b>2.94</b>
Real Estate	12.56	-8.92	-1.12	2.47	-10.71	-0.26	0.40	0.21	0.61
Consumer Staples	12.33	-5.31	-0.59	9.57	-7.66	-0.71	0.22	0.27	0.49
Financials	19.92	-14.22	-2.91	18.35	-16.40	-3.03	-0.01	0.43	0.42
Consumer Discretionary	5.53	-14.40	-0.83	11.50	-17.38	-2.03	0.16	0.16	0.32
Technology	2.44	-21.94	-0.62	8.59	-20.81	-1.86	0.37	-0.06	0.31
Health Care	3.85	-11.53	-0.38	8.42	-16.86	-1.40	0.10	0.21	0.31
Energy	4.62	-15.10	-0.71	6.46	-18.58	-1.24	0.07	0.17	0.24
Communication Services	4.51	6.91	0.28	5.64	-1.67	-0.10	-0.13	0.33	0.19
Utilities	6.17	1.23	-0.00	5.42	-0.05	-0.01	0.07	0.06	0.13
Industrials	20.98	-15.23	-3.24	14.76	-15.53	-2.28	-0.05	0.06	0.01
Materials	7.08	-22.38	-1.71	8.81	-19.76	-1.85	0.10	-0.21	-0.11

Source: STOXX Ltd. from 3 October 2018 to 26 December 2018.



The intensity of the colour indicates the relative size of the data points in a given column from lowest to highest.

Figure 9

**Brinson Attribution by Sector**

(Q3 2015)

Sector	EURO STOXX® Low Risk Weighted 100 Index			EURO STOXX® Index			Attribution Analysis		
	Average Weight	Total Return	Contrib. To Return	Average Weight	Total Return	Contrib. To Return	Allocation Effect	Selection Effect	Total Effect
<b>Total</b>	–	<b>-8.56</b>	–	–	<b>-12.17</b>	–	<b>-0.21</b>	<b>3.83</b>	<b>3.62</b>
Financials	25.02	-8.01	-2.06	24.30	-12.77	-3.12	-0.04	1.12	1.08
Consumer Discretionary	15.25	-7.50	-1.14	14.21	-13.55	-1.92	-0.03	0.93	0.90
Industrials	19.47	-8.30	-1.62	14.08	-12.00	-1.69	0.01	0.73	0.73
Utilities	7.84	-6.11	-0.47	5.50	-13.25	-0.74	-0.02	0.56	0.53
Consumer Staples	15.18	-9.21	-1.40	9.70	-10.47	-1.02	0.12	0.20	0.32
Health Care	4.13	-5.10	-0.20	8.96	-10.62	-0.94	-0.07	0.22	0.15
Materials	7.31	-15.33	-1.16	7.51	-15.76	-1.20	0.02	0.04	0.05
Telecommunication Services	2.95	-11.41	-0.34	4.97	-11.58	-0.57	-0.02	0.01	-0.01
Energy	–	–	–	4.99	-11.50	-0.58	-0.04	–	-0.04
Technology	2.84	-5.98	-0.17	5.77	-7.23	-0.40	-0.14	0.03	-0.11

Source: STOXX Ltd. from 14 August 2015 to 29 September 2015.

Figure 10

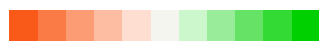
**Brinson Attribution by Sector**

(Q2 2012\*\*)

Sector	EURO STOXX® Low Risk Weighted 100 Index			EURO STOXX® Index			Attribution Analysis		
	Average Weight	Total Return	Contrib. To Return	Average Weight	Total Return	Contrib. To Return	Allocation Effect	Selection Effect	Total Effect
<b>Total</b>	–	<b>-6.83</b>	–	–	<b>-13.81</b>	–	<b>2.56</b>	<b>4.44</b>	<b>6.99</b>
Financials	7.07	-11.27	-0.81	18.40	-20.78	-4.05	0.89	0.72	1.61
Health Care	11.35	4.79	0.50	7.93	-4.01	-0.30	0.33	0.88	1.21
Industrials	15.09	-6.10	-0.91	14.10	-13.39	-1.88	0.00	1.10	1.10
Consumer Staples	21.06	-5.97	-1.25	10.72	-5.72	-0.59	0.86	-0.06	0.80
Consumer Discretionary	12.32	-9.38	-1.16	11.73	-14.19	-1.66	0.01	0.59	0.60
Technology	5.42	-9.17	-0.50	5.22	-17.64	-0.95	-0.00	0.47	0.47
Materials	4.43	-7.79	-0.35	9.45	-15.88	-1.51	0.11	0.36	0.47
Telecommunication Services	11.96	-7.89	-0.96	6.32	-9.04	-0.55	0.27	0.13	0.40
Energy	2.77	-9.78	-0.28	8.05	-15.73	-1.28	0.11	0.17	0.28
Utilities	7.33	-14.35	-1.11	6.74	-15.33	-1.04	-0.01	0.07	0.06

Source: STOXX Ltd. from 2 April 2012 to 4 June 2012.

\*\*The EURO STOXX® Low Risk Weighted 100 Index was inception on 4 October 2012, returns prior to this date are based hypothetical index positions using the index methodology.



The intensity of the colour indicates the relative size of the data points in a given column from lowest to highest.



Figure 11

**Brinson Attribution by Sector**

(Q3 2011\*\*)

Sector	EURO STOXX® Low Risk Weighted 100 Index			EURO STOXX® Index			Attribution Analysis		
	Average Weight	Total Return	Contrib. To Return	Average Weight	Total Return	Contrib. To Return	Allocation Effect	Selection Effect	Total Effect
<b>Total</b>	–	<b>-17.81</b>	–	–	<b>-28.27</b>	–	<b>3.62</b>	<b>6.80</b>	<b>10.42</b>
Financials	13.40	-24.21	-3.33	21.22	-38.17	-8.64	1.02	1.95	2.97
Industrials	11.38	-20.44	-2.38	14.57	-32.77	-4.86	0.12	1.49	1.61
Consumer Staples	19.17	-13.54	-2.55	9.15	-12.62	-1.08	1.47	-0.14	1.33
Consumer Discretionary	9.13	-13.27	-1.22	11.32	-27.67	-3.10	-0.09	1.31	1.22
Materials	6.27	-26.37	-1.69	9.29	-35.25	-3.40	0.28	0.57	0.85
Telecommunication Services	9.62	-12.72	-1.20	6.97	-18.48	-1.24	0.26	0.51	0.77
Health Care	10.46	-12.96	-1.32	6.46	-14.75	-0.92	0.53	0.17	0.70
Utilities	12.38	-22.75	-2.90	7.95	-25.33	-1.96	0.18	0.32	0.49
Technology	4.22	-16.19	-0.67	4.65	-26.37	-1.19	0.01	0.41	0.41
Energy	3.02	-18.26	-0.55	7.58	-25.18	-1.89	-0.15	0.21	0.06

Source: STOXX Ltd. from 2 May 2011 to 4 October 2011.

\*\*The EURO STOXX® Low Risk Weighted 100 Index was inceptioned on 4 October 2012, returns prior to this date are based hypothetical index positions using the index methodology.

Figure 12

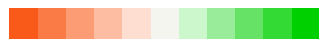
**Brinson Attribution by Sector**

(GFC\*\*)

Sector	EURO STOXX® Low Risk Weighted 100 Index			EURO STOXX® Index			Attribution Analysis		
	Average Weight	Total Return	Contrib. To Return	Average Weight	Total Return	Contrib. To Return	Allocation Effect	Selection Effect	Total Effect
<b>Total</b>	–	<b>-32.29</b>	–	–	<b>-44.44</b>	–	<b>4.28</b>	<b>7.88</b>	<b>12.16</b>
Financials	17.27	-46.12	-8.78	24.28	-65.44	-19.98	2.00	4.64	6.64
Utilities	13.37	-26.73	-3.39	11.65	-35.30	-3.78	0.50	0.81	1.30
Consumer Staples	13.98	-27.30	-3.70	7.40	-29.27	-1.91	1.01	0.24	1.25
Consumer Discretionary	15.39	-33.80	-5.05	10.21	-38.34	-3.35	0.91	0.10	1.02
Industrials	8.22	-32.10	-2.60	11.17	-43.66	-4.89	0.02	0.99	1.01
Health Care	7.73	-22.74	-1.59	6.03	-27.56	-1.50	0.31	0.35	0.66
Technology	3.35	-33.64	-1.11	4.85	-46.47	-2.28	0.06	0.43	0.50
Materials	8.07	-43.87	-3.74	6.61	-46.18	-3.22	0.14	0.27	0.40
Telecommunication Services	8.81	-18.92	-1.43	9.30	-18.53	-1.39	0.04	-0.08	-0.04
Energy	3.60	-27.32	-0.89	8.24	-30.15	-2.15	-0.71	0.13	-0.58

Source: STOXX Ltd. from 19 September 2008 to 9 March 2009.

\*\*The EURO STOXX® Low Risk Weighted 100 Index was inceptioned on 4 October 2012, returns prior to this date are based hypothetical index positions using the index methodology.



The intensity of the colour indicates the relative size of the data points in a given column from lowest to highest.

## ssga.com/etfs

### Marketing communication. For professional client use only.

**For Investors in Austria:** The offering of SPDR ETFs by the Company has been notified to the Financial Markets Authority (FMA) in accordance with section 139 of the Austrian Investment Funds Act. Prospective investors may obtain the current sales Prospectus, the articles of incorporation, the KIID as well as the latest annual and semi-annual report free of charge from State Street Global Advisors GmbH, Brienner Strasse 59, D-80333 Munich. T: +49 (0)89-55878-400. F: +49 (0)89-55878-440.

**For Investors in Finland:** The offering of funds by the Companies has been notified to the Financial Supervision Authority in accordance with Section 127 of the Act on Common Funds (29.1999/48) and by virtue of confirmation from the Financial Supervision Authority the Companies may publicly distribute their Shares in Finland. Certain information and documents that the Companies must publish in Ireland pursuant to applicable Irish law are translated into Finnish and are available for Finnish investors by contacting State Street Custodial Services (Ireland) Limited, 78 Sir John Rogerson's Quay, Dublin 2, Ireland.

**For Investors in France:** This document does not constitute an offer or request to purchase shares in the Companies. Any subscription for shares shall be made in accordance with the terms and conditions specified in the complete Prospectuses, the KIIDs, the addenda as well as the Companies' Supplements. These documents are available from the Companies' centralising correspondent: State Street Banque S.A., 23-25 rue Delariviere- Lefoullon, 92064 Paris La Defense Cedex or on the French part of the site ssga.com. The Companies are undertakings for collective investment in transferable securities (UCITS) governed by Irish law and accredited by the Central Bank of Ireland as a UCITS in accordance with European Regulations. European Directive no. 2014/91/EU dated 23 July 2014 on UCITS, as amended, established common rules pursuant to the cross-border marketing of UCITS with which they duly comply. This common base does not exclude differentiated implementation. This is why a European UCITS can be sold in France even though its activity does not comply with rules identical to those governing the approval

of this type of product in France. The offering of these compartments has been notified to the Autorité des Marchés Financiers (AMF) in accordance with article L214-2-2 of the French Monetary and Financial Code.

**For Investors in Germany:** The offering of SPDR ETFs by the Companies has been notified to the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) in accordance with section 312 of the German Capital Investment Act. Prospective investors may obtain the current sales Prospectuses, the articles of incorporation, the KIIDs as well as the latest annual and semi-annual report free of charge from State Street Global Advisors GmbH, Brienner Strasse 59, D-80333 Munich. T: +49 (0)89-55878-400. F: +49 (0)89-55878-440.

**Israel Entity:** No action has been taken or will be taken in Israel that would permit a public offering of the Securities or distribution of this sales brochure to the public in Israel. This sales brochure has not been approved by the Israel Securities Authority (the 'ISA'). Accordingly, the Securities shall only be sold in Israel to an investor of the type listed in the First Schedule to the Israeli Securities Law, 1978, which has confirmed in writing that it falls within one of the categories listed therein (accompanied by external confirmation where this is required under ISA guidelines), that it is aware of the implications of being considered such an investor and consents thereto, and further that the Securities are being purchased for its own account and not for the purpose of re-sale or distribution. This sales brochure may not be reproduced or used for any other purpose, nor be furnished to any other person other than those to whom copies have been sent.

Nothing in this sales brochure should be considered investment advice or investment marketing as defined in the Regulation of Investment Advice, Investment Marketing and Portfolio Management Law, 1995 ("the Investment Advice Law"). Investors are encouraged to seek competent investment advice from a locally licensed investment advisor prior to making any investment. State Street is not licensed under the Investment Advice Law, nor does it carry the insurance as required of a licensee thereunder. This sales brochure does not constitute an offer to sell or solicitation of an offer to buy any securities other than the Securities offered hereby, nor does it constitute an offer to sell to

or solicitation of an offer to buy from any person or persons in any state or other jurisdiction in which such offer or solicitation would be unlawful, or in which the person making such offer or solicitation is not qualified to do so, or to a person or persons to whom it is unlawful to make such offer or solicitation.

**Italy Entity:** State Street Global Advisors Ireland Limited, Milan Branch (Sede Secondaria di Milano) is a branch of State Street Global Advisors Ireland Limited, registered in Ireland with company number 145221, authorised and regulated by the Central Bank of Ireland, and whose registered office is at 78 Sir John Rogerson's Quay, Dublin 2. State Street Global Advisors Ireland Limited, Milan Branch (Sede Secondaria di Milano), is registered in Italy with company number 10495250960 – R.E.A. 2535585 and VAT number 10495250960 and whose office is at Via dei Bossi, 4 - 20121 Milano, Italy. T: +39 02 32066 100. F: +39 02 32066 155.

**For Investors in Luxembourg:** The Companies have been notified to the Commission de Surveillance du Secteur Financier in Luxembourg in order to market its shares for sale to the public in Luxembourg and the Companies are notified Undertakings in Collective Investment for Transferable Securities (UCITS).

**For Investors in the Netherlands:** This communication is directed at qualified investors within the meaning of Section 2:72 of the Dutch Financial Markets Supervision Act (Wet op het financieel toezicht) as amended. The products and services to which this communication relates are only available to such persons and persons of any other description should not rely on this communication. Distribution of this document does not trigger a licence requirement for the Companies or SSGA in the Netherlands and consequently no prudential and conduct of business supervision will be exercised over the Companies or SSGA by the Dutch Central Bank (De Nederlandsche Bank N.V.) and the Dutch Authority for the Financial Markets (Stichting Autoriteit Financiële Markten). The Companies have completed their notification to the Authority Financial Markets in the Netherlands in order to market their shares for sale to the public in the Netherlands and the Companies are, accordingly, investment institutions (beleggingsinstellingen) according to Section 2:72 Dutch Financial Markets Supervision Act of Investment Institutions.

**For Investors in Norway:** The offering of SPDR

ETFs by the Companies has been notified to the Financial Supervisory Authority of Norway (Finanstilsynet) in accordance with applicable Norwegian Securities Funds legislation. By virtue of a confirmation letter from the Financial Supervisory Authority dated 28 March 2013 (16 October 2013 for umbrella II) the Companies may market and sell their shares in Norway.

**For Investors in Spain:** SSGA SPDR ETFs Europe I and II plc have been authorised for public distribution in Spain and are registered with the Spanish Securities Market Commission (Comisión Nacional del Mercado de Valores) under no.1244 and no.1242. Before investing, investors may obtain a copy of the Prospectus and Key Investor Information Documents, the Marketing Memoranda, the fund rules or instruments of incorporation as well as the annual and semi-annual reports of State Street Global Advisors SPDR ETFs Europe I and II plc from Cecabank, S.A. Alcalá 27, 28014 Madrid (Spain) who is the Spanish Representative, Paying Agent and distributor in Spain or at ssga.com. The authorised Spanish distributor of State Street Global Advisors SPDR ETFs is available on the website of the Securities Market Commission (Comisión Nacional del Mercado de Valores).

**For Investors in Switzerland:** The collective investment schemes referred to herein are collective investment schemes under Irish law. Prospective investors may obtain the current sales prospectus, the articles of incorporation, the KIID as well as the latest annual and semi-annual reports free of charge from the Swiss Representative and Paying Agent, State Street Bank International GmbH, Munich, Zurich Branch, Beethovenstr. 19, 8027 Zurich, as well as from the main distributor in Switzerland, State Street Global Advisors AG, Beethovenstrasse 19, 8027 Zurich. Before investing please read the prospectus and the KIID, copies of which can be obtained from the Swiss representative, or at ssga.com

**For Investors in the UK:** The Companies are recognised schemes under Section 264 of the Financial Services and Markets Act 2000 ("the Act") and are directed at 'professional clients' in the UK (within the meaning of the rules of the Act) who are deemed both knowledgeable and experienced in matters relating to investments. The products and services to which this communication relates are only available to such persons and persons of any other description should not rely on this communication. Many of the protections

provided by the UK regulatory system do not apply to the operation of the Companies, and compensation will not be available under the UK Financial Services Compensation Scheme.

**Important Information:** This document has been issued by State Street Global Advisors Ireland ("SSGA"), regulated by the Central Bank of Ireland. Registered office address 78 Sir John Rogerson's Quay, Dublin 2. Registered number 145221. T: +353 (0)1 776 3000. F: +353 (0)1 776 3300.

SPDR ETFs is the exchange traded funds ("ETF") platform of State Street Global Advisors and is comprised of funds that have been authorised by Central Bank of Ireland as open-ended UCITS investment companies.

State Street Global Advisors SPDR ETFs Europe I & SPDR ETFs Europe II plc issue SPDR ETFs, and is an open-ended investment company with variable capital having segregated liability between its sub-funds. The Company is organised as an Undertaking for Collective Investments in Transferable Securities (UCITS) under the laws of Ireland and authorised as a UCITS by the Central Bank of Ireland.

**The information provided does not constitute investment advice as such term is defined under the Markets in Financial Instruments Directive (2014/65/EU) or applicable Swiss regulation and it should not be relied on as such. It should not be considered a solicitation to buy or an offer to sell any investment. It does not take into account any investor's or potential investor's particular investment objectives, strategies, tax status, risk appetite or investment horizon. If you require investment advice you should consult your tax and financial or other professional advisor. All information is from SSGA unless otherwise noted and has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such.**

ETFs trade like stocks, are subject to investment risk and will fluctuate in market value. The investment return and principal value of an investment will fluctuate in value, so that when shares are sold or redeemed, they may be worth more or less than when they were

purchased. Although shares may be bought or sold on an exchange through any brokerage account, shares are not individually redeemable from the fund. Investors may acquire shares and tender them for redemption through the fund in large aggregations known as "creation units." Please see the fund's prospectus for more details.

The views expressed in this material are the views of SPDR EMEA Strategy and Research through the period ended 30 September 2020 and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance and actual results or developments may differ materially from those projected.

The trademarks and service marks referenced herein are the property of their respective owners. Third party data providers make no warranties or representations of any kind relating to the accuracy, completeness or timeliness of the data and have no liability for damages of any kind relating to the use of such data.

**Past performance is not a guarantee of future results. It is not possible to invest directly in an index. Index performance does not reflect charges and expenses associated with the fund or brokerage commissions associated with buying and selling a fund. Index performance is not meant to represent that of any particular fund.**

Investing involves risk including the risk of loss of principal. Investments in emerging or developing markets may be more volatile and less liquid than investing in developed markets and may involve exposure to economic structures that are generally less diverse and mature and to political systems which have less stability than those of more developed countries.

Equity securities may fluctuate in value in response to the activities of individual companies and general market and economic conditions. Investing in foreign domiciled securities may involve risk of capital loss from unfavourable fluctuation in currency values, withholding taxes, from differences in generally accepted accounting principles or from economic or political instability in other nations.

Standard & Poor's, S&P and SPDR are registered trademarks of Standard & Poor's Financial Services LLC (S&P); Dow Jones is a registered trademark of Dow Jones Trademark Holdings LLC (Dow Jones); and these trademarks have been licensed for use by S&P Dow Jones Indices LLC (SPDJI) and sublicensed for certain purposes by State Street Corporation. State Street Corporation's financial products are not sponsored, endorsed, sold or promoted by SPDJI, Dow Jones, S&P, their respective affiliates and third party licensors and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability in relation thereto, including for any errors, omissions, or interruptions of any index. All the index performance results referred to are provided exclusively for comparison purposes only. It should not be assumed that they represent the performance of any particular investment.

The ETFs listed above have historically paid dividends to investors and/or invest in the securities of dividend paying issuers; however, there is no guarantee that these ETFs will consistently pay dividends to investors in the future or will appreciate in value. Investors could lose money by investing in ETFs. The whole or any part of this work may not be reproduced, copied or transmitted or any of its contents disclosed to third parties without SSGA's express written consent.

A Smart Beta strategy does not seek to replicate the performance of a specified cap-weighted index and as such may underperform such an index. The factors to which a Smart Beta strategy seeks to deliver exposure may themselves undergo cyclical performance. As such, a Smart Beta strategy may underperform the market or other Smart Beta strategies exposed to similar or other targeted factors. In fact, we believe that factor premia accrue over the long-term (5-10 years), and investors must keep that long time horizon in mind when investing.

The momentum style of investing that emphasises investing in securities that have had higher recent price performance compared to other securities, which is subject to the risk that these securities may be more volatile and can turn quickly and cause significant variation from other types of investments.

A "quality" style of investing emphasises companies with high returns, stable earnings, and low financial leverage. This style of investing is subject to the risk that the past performance of these companies does not continue or that the returns on "quality" equity securities are less than returns on other styles of investing or the overall stock market.

The value style of investing that emphasises undervalued companies with characteristics for improved valuations, which may never improve and may actually have lower returns than other styles of investing or the overall stock market. Low volatility funds/stocks can exhibit relative low volatility and excess returns compared to the Index over the long-term; both portfolio investments and returns may differ from those of the Index. The fund may not experience lower volatility or provide returns in excess of the Index and may provide lower returns in periods of a rapidly rising market. Active stock selection may lead to added risk in exchange for the potential outperformance relative to the Index.

**The information contained in this communication is not a research recommendation or 'investment research' and is classified as a 'Marketing Communication' in accordance with the Markets in Financial Instruments Directive (2014/65/EU) or applicable Swiss regulation. This means that this marketing communication (a) has not been prepared in accordance with legal requirements designed to promote the independence of investment research (b) is not subject to any prohibition on dealing ahead of the dissemination of investment research. You should obtain and read the SPDR prospectus and relevant Key Investor Information Document (KIID) prior to investing, which may be obtained from [ssga.com](http://ssga.com). These include further details relating to the SPDR funds, including information relating to costs, risks and where the funds are authorised for sale. Investments in small-sized companies may involve greater risks than in those of larger, better known companies.**

© 2020 State Street Corporation.  
All Rights Reserved.  
ID344597-3338574.11.EMEA.INST 1120  
Exp. Date: 31/01/2021