

SPIVA[®] Europe Scorecard

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Experience the
active vs. passive debate
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S&P Dow Jones Indices has been the de facto scorekeeper of the ongoing active versus passive debate since the first publication of the S&P Indices Versus Active Funds (SPIVA) U.S. Scorecard in 2002. The SPIVA Europe Scorecard measures the performance of actively managed European equity funds denominated in euro (EUR), British pound sterling (GBP), and other European local currencies against the performance of their respective S&P DJI benchmark indices over 1-, 3-, 5-, and 10-year investment horizons.

YEAR-END 2018 HIGHLIGHTS

- A high proportion of active funds in Europe underperformed their benchmarks in 2018; this coincided with substantial drawdowns in global and European equity markets toward the end of the year.
 - Of the active pan-European equity funds (euro-denominated), 86% failed to beat the [S&P Europe 350[®]](#) over the year.
 - Markets became increasingly concerned throughout the year—global trade tensions, weakening economic growth in China, and eurozone and Brexit uncertainty were all contributing factors. The S&P Europe 350 was down 9.90% in euros at the end of the year.
 - Over the same period, active Pan-European equity funds were down 13.46% on an asset-weighted basis.
- The majority of active fund managers underperformed in all 23 fund categories studied over 2018.
 - From the same 23 fund categories, only Spanish equity funds were able to narrowly outperform their benchmark on average (on an asset-weighted basis) over the year.
- Over the 10-year time horizon, the majority of active equity funds analyzed were also unable to outperform their respective benchmarks. Over this longer timeframe, the percentage of funds that underperformed was between 65% and 98%, depending on the fund category.

- Active funds domiciled within Europe and categorized as either global, U.S., or emerging market equities had notably low success rates with respect to their benchmarks over the 10-year period. Those denominated in euros with fund returns at the start of the 10-year period performed as follows.
 - Of the 1,376 Global Equity funds, 21 survived and outperformed.
 - Of the 239 Emerging Markets Equity funds, 5 survived and outperformed.
 - Of the 473 U.S. Equity funds, 11 survived and outperformed.
- Initially robust U.S. market strength gave way to fears of an earnings slowdown, precipitated by disappointing financial results from high-profile Information Technology stocks in Q4 2018. Despite heavy declines in the [S&P 500®](#), U.S. dollar strength over the year offset some of those losses for investors based in Europe.
 - When expressed in euro and pound sterling, the S&P 500 was the only benchmark from this scorecard that recorded positive returns in 2018, up 0.44% and 1.56%, respectively.
 - On the same basis, average asset-weighted returns for active U.S. equity funds in 2018 were -3.30% and -1.33%, respectively.

UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

Since its first publication 17 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For more than a decade, we have heard passionate arguments from believers in both camps when headline numbers have deviated from their beliefs.

Over the years, we have built on more than a decade of experience publishing the report by expanding coverage into Canada, India, Japan, Australia, Latin America, and South Africa. While the report will not end the debate on active versus passive investing, we hope to make a meaningful contribution by examining market segments in which one strategy might work better than the other.

In 2015, the range of fund categories covered in the SPIVA Europe Scorecard was expanded to include domestic equity funds from Italy, the Netherlands, Poland, Spain, Switzerland, and the Nordic region, with specific data for Denmark and Sweden.

Beyond the SPIVA Scorecard's widely cited headline numbers is a rich data set that addresses issues related to measurement techniques, universe composition, and fund survivorship that are less frequently discussed, but are often more fascinating. These data sets are rooted in the fundamental principles of the SPIVA Scorecard that regular readers will be familiar with, including the following.

- **Survivorship Bias Correction:** Many funds might be liquidated or merged during a period of study. However, for someone making an investment decision at the beginning of the period, these funds are part of the opportunity set. Unlike other commonly available comparison reports, SPIVA Scorecards account for the entire opportunity set—not just the survivors—thereby eliminating survivorship bias.
- **Asset-Weighted Returns:** Average returns for a fund group are often calculated using only equal weighting, which means the returns of a EUR 10 billion fund affect the average in the same manner as the returns of a EUR 10 million fund. An accurate representation of how market participants fared in a particular period can be ascertained by calculating weighted average returns where each fund's return is weighted by net assets. SPIVA Scorecards show both equal- and asset-weighted averages.
- **Data Cleaning:** SPIVA Scorecards avoid double counting multiple share classes in all count-based calculations by using only the share class with greater assets. Index, leveraged, and inverse funds, along with other index-linked products, are excluded because this is meant to be a scorecard for active managers.

REPORTS

Report 1: Percentage of European Equity Funds Outperformed by Benchmarks					
FUND CATEGORY	COMPARISON INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR
EURO-DENOMINATED FUNDS (EUR)					
Europe Equity	S&P Europe 350	85.65	86.01	80.21	86.96
Eurozone Equity	S&P Eurozone BMI	77.17	90.46	89.35	91.32
Nordic Equity	S&P Nordic BMI	86.96	93.10	86.67	96.43
Global Equity	S&P Global 1200	87.00	94.43	96.16	98.47
Emerging Markets Equity	S&P/IFCI Composite	79.33	89.62	97.18	97.95
U.S. Equity	S&P 500	82.68	92.08	95.64	97.73
France Equity	S&P France BMI	98.19	94.55	84.96	87.50
Germany Equity	S&P Germany BMI	74.44	77.17	81.91	82.30
Italy Equity	S&P Italy BMI	74.58	60.00	63.27	65.38
Spain Equity	S&P Spain BMI	59.09	68.97	72.37	78.33
Netherlands Equity	S&P Netherlands BMI	100.00	100.00	90.91	93.10
POUND STERLING-DENOMINATED FUNDS (GBP)					
Europe Equity	S&P Europe 350	80.58	76.24	74.47	78.00
Europe Ex-UK Equity	S&P Europe Ex-UK BMI	81.48	81.40	82.79	79.87
UK Equity	S&P United Kingdom BMI	73.41	80.28	69.09	73.47
UK Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	78.21	95.32	69.10	73.04
UK Small-Cap Equity	S&P United Kingdom SmallCap	57.14	37.84	50.65	71.26
Global Equity	S&P Global 1200	76.73	89.97	88.99	92.28
Emerging Markets Equity	S&P/IFCI Composite	76.97	81.71	88.89	89.33
U.S. Equity	S&P 500	76.32	87.73	93.09	91.89
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES					
Denmark Equity	S&P Denmark BMI	83.78	31.43	60.61	85.29
Poland Equity	S&P Poland BMI	93.18	97.73	93.62	91.43
Switzerland Equity	S&P Switzerland BMI	88.38	52.57	62.72	73.37
Sweden Equity	S&P Sweden BMI	61.74	64.10	54.87	78.99

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Outperformance is based on equal-weighted fund counts. Index performance based on total return. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship Consistency of European Equity Funds		
FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
1-YEAR (EUR)		
Europe Equity	1124	94.40
Eurozone Equity	574	95.82
Nordic Equity	24	87.50
Global Equity	1316	94.00
Emerging Markets Equity	340	95.29
U.S. Equity	397	92.70
France Equity	222	95.95
Germany Equity	91	96.70
Italy Equity	59	98.31
Spain Equity	89	97.75
Netherlands Equity	7	71.43
1-YEAR (GBP)		
Europe Equity	113	91.15
Europe Ex-UK Equity	141	96.45
UK Equity	357	94.40
UK Large-/Mid-Cap Equity	163	92.02
UK Small-Cap Equity	79	96.20
Global Equity	479	94.78
Emerging Markets Equity	185	95.14
U.S. Equity	239	93.31
1-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	37	97.30
Poland Equity	62	95.16
Switzerland Equity	203	94.58
Sweden Equity	115	93.04
3-YEAR (EUR)		
Europe Equity	1078	85.71
Eurozone Equity	572	88.29
Nordic Equity	31	67.74
Global Equity	1232	83.12
Emerging Markets Equity	333	84.98
U.S. Equity	380	82.63
France Equity	222	89.64
Germany Equity	93	88.17
Italy Equity	50	90.00
Spain Equity	87	88.51
Netherlands Equity	8	62.50

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship Consistency of European Equity Funds (cont.)		
FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
3-YEAR (GBP)		
Europe Equity	108	81.48
Europe Ex-UK Equity	135	87.41
UK Equity	370	84.05
UK Large-/Mid-Cap Equity	177	80.23
UK Small-Cap Equity	76	88.16
Global Equity	414	84.78
Emerging Markets Equity	170	84.12
U.S. Equity	230	79.57
3-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	35	91.43
Poland Equity	62	95.16
Switzerland Equity	179	87.15
Sweden Equity	117	78.63
5-YEAR (EUR)		
Europe Equity	1056	75.09
Eurozone Equity	589	77.93
Nordic Equity	32	50.00
Global Equity	1192	70.47
Emerging Markets Equity	333	71.47
U.S. Equity	365	73.42
France Equity	228	79.39
Germany Equity	94	79.79
Italy Equity	49	79.59
Spain Equity	78	83.33
Netherlands Equity	11	45.45
5-YEAR (GBP)		
Europe Equity	98	66.33
Europe Ex-UK Equity	128	77.34
UK Equity	380	75.00
UK Large-/Mid-Cap Equity	182	71.98
UK Small-Cap Equity	79	78.48
Global Equity	369	72.09
Emerging Markets Equity	150	75.33
U.S. Equity	199	70.35
5-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	34	91.18
Poland Equity	65	90.77
Switzerland Equity	172	79.07
Sweden Equity	113	72.57

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship Consistency of European Equity Funds (cont.)		
FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
10-YEAR (EUR)		
Europe Equity	1402	45.22
Eurozone Equity	781	49.04
Nordic Equity	30	46.67
Global Equity	1425	43.79
Emerging Markets Equity	250	57.20
U.S. Equity	502	40.24
France Equity	290	52.41
Germany Equity	113	55.75
Italy Equity	78	43.59
Spain Equity	121	47.93
Netherlands Equity	29	17.24
10-YEAR (GBP)		
Europe Equity	100	32.00
Europe Ex-UK Equity	154	53.90
UK Equity	532	43.61
UK Large-/Mid-Cap Equity	297	37.37
UK Small-Cap Equity	89	53.93
Global Equity	356	45.79
Emerging Markets Equity	79	56.96
U.S. Equity	194	39.69
10-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	35	71.43
Poland Equity	48	81.25
Switzerland Equity	170	61.76
Sweden Equity	139	48.20

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Average European Equity Fund Performance (Equal Weighted)				
CATEGORY	1-YEAR (%)	3-YEAR (ANNUALIZED %)	5-YEAR (ANNUALIZED %)	10-YEAR (ANNUALIZED %)
EURO-DENOMINATED FUNDS (EUR)				
Europe Equity	-14.35	-1.24	2.84	7.98
S&P Europe 350	-9.90	1.06	3.88	8.80
Eurozone Equity	-16.17	-0.77	2.51	6.42
S&P Eurozone BMI	-12.82	1.71	4.44	8.14
Nordic Equity	-9.75	-0.09	4.72	11.47
S&P Nordic BMI	-6.97	2.00	6.20	13.52
Global Equity	-8.36	1.96	5.54	8.52
S&P Global 1200	-3.85	5.50	9.21	12.51
Emerging Markets Equity	-12.90	4.92	3.76	8.14
S&P/IFCI Composite	-9.89	7.59	6.48	11.18
U.S. Equity	-3.97	4.25	8.76	12.16
S&P 500	0.44	7.42	12.62	15.35
France Equity	-19.17	0.13	4.16	7.71
S&P France BMI	-8.45	4.37	6.19	9.18
Germany Equity	-20.92	-1.40	2.24	8.62
S&P Germany BMI	-18.02	0.34	3.06	9.22
Italy Equity	-17.07	-2.71	2.33	4.60
S&P Italy BMI	-14.13	-2.00	2.66	3.48
Spain Equity	-11.30	0.34	0.93	4.15
S&P Spain BMI	-11.05	0.73	1.20	3.71
Netherlands Equity	-13.12	2.15	5.56	8.99
S&P Netherlands BMI	-8.72	5.63	8.72	12.40
POUND STERLING-DENOMINATED FUNDS (GBP)				
Europe Equity	-12.66	5.80	5.46	9.27
S&P Europe 350	-8.93	7.93	5.47	8.08
Europe Ex-UK Equity	-12.53	6.36	5.80	8.43
S&P Europe Ex-UK BMI	-9.73	8.56	6.72	8.66
UK Equity	-11.07	4.17	3.89	10.28
S&P United Kingdom BMI	-9.28	6.27	3.99	9.12
UK Large-/Mid-Cap Equity	-10.25	3.76	3.38	9.04
S&P United Kingdom LargeMidCap	-8.82	6.81	3.61	7.99
UK Small-Cap Equity	-12.49	6.23	6.61	15.39
S&P United Kingdom SmallCap	-12.16	3.34	5.31	14.86
Global Equity	-5.49	9.88	8.34	9.90
S&P Global 1200	-2.77	12.71	10.95	11.83
Emerging Markets Equity	-11.88	13.18	6.22	8.57
S&P/IFCI Composite	-8.88	14.89	8.10	10.36
U.S. Equity	-1.54	12.44	11.51	13.17
S&P 500	1.56	14.71	14.35	14.50
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES				
Denmark Equity	-12.24	0.47	10.71	15.71
S&P Denmark BMI	-9.27	-0.64	10.93	16.26
Poland Equity	-17.32	1.00	-2.87	2.59
S&P Poland BMI	-7.70	9.52	3.32	7.93
Switzerland Equity	-13.84	3.40	5.08	7.92
S&P Switzerland BMI	-8.10	2.75	4.84	8.43
Sweden Equity	-5.23	4.51	8.96	13.94
S&P Sweden BMI	-5.02	4.69	7.63	13.96

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Index performance based on total return. Funds are equal weighted, but indices are not. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 4: Average European Equity Fund Performance (Asset Weighted)				
CATEGORY	1-YEAR (%)	3-YEAR (ANNUALIZED %)	5-YEAR (ANNUALIZED %)	10-YEAR (ANNUALIZED %)
EURO-DENOMINATED FUNDS (EUR)				
Europe Equity	-13.46	-1.33	2.79	8.10
S&P Europe 350	-9.90	1.06	3.88	8.80
Eurozone Equity	-15.93	-0.81	2.47	6.34
S&P Eurozone BMI	-12.82	1.71	4.44	8.14
Nordic Equity	-9.70	-1.08	4.42	11.17
S&P Nordic BMI	-6.97	2.00	6.20	13.52
Global Equity	-8.01	2.02	5.86	9.03
S&P Global 1200	-3.85	5.50	9.21	12.51
Emerging Markets Equity	-12.93	5.01	4.23	8.75
S&P/IFCI Composite	-9.89	7.59	6.48	11.18
U.S. Equity	-3.30	4.12	8.88	12.01
S&P 500	0.44	7.42	12.62	15.35
France Equity	-17.06	0.13	3.50	6.93
S&P France BMI	-8.45	4.37	6.19	9.18
Germany Equity	-21.89	-1.64	2.28	9.06
S&P Germany BMI	-18.02	0.34	3.06	9.22
Italy Equity	-16.02	-2.76	2.23	4.41
S&P Italy BMI	-14.13	-2.00	2.66	3.48
Spain Equity	-10.91	0.57	1.27	4.68
S&P Spain BMI	-11.05	0.73	1.20	3.71
Netherlands Equity	-13.87	1.67	4.82	8.69
S&P Netherlands BMI	-8.72	5.63	8.72	12.40
POUND STERLING-DENOMINATED FUNDS (GBP)				
Europe Equity	-11.21	7.14	6.75	10.42
S&P Europe 350	-8.93	7.93	5.47	8.08
Europe Ex-UK Equity	-10.40	6.96	6.58	8.67
S&P Europe Ex-UK BMI	-9.73	8.56	6.72	8.66
UK Equity	-10.33	4.54	3.90	9.66
S&P United Kingdom BMI	-9.28	6.27	3.99	9.12
UK Large-/Mid-Cap Equity	-9.62	4.55	3.78	9.12
S&P United Kingdom LargeMidCap	-8.82	6.81	3.61	7.99
UK Small-Cap Equity	-12.84	6.24	6.70	15.57
S&P United Kingdom SmallCap	-12.16	3.34	5.31	14.86
Global Equity	-3.58	11.66	9.91	11.18
S&P Global 1200	-2.77	12.71	10.95	11.83
Emerging Markets Equity	-11.36	13.01	6.57	9.77
S&P/IFCI Composite	-8.88	14.89	8.10	10.36
U.S. Equity	-1.33	12.52	11.92	12.92
S&P 500	1.56	14.71	14.35	14.50
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES				
Denmark Equity	-11.22	0.55	10.72	15.65
S&P Denmark BMI	-9.27	-0.64	10.93	16.26
Poland Equity	-16.29	1.15	-3.12	-0.47
S&P Poland BMI	-7.70	9.52	3.32	7.93
Switzerland Equity	-12.84	3.75	5.53	8.31
S&P Switzerland BMI	-8.10	2.75	4.84	8.43
Sweden Equity	-6.66	4.52	8.61	13.86
S&P Sweden BMI	-5.02	4.69	7.63	13.96

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 5: Quartile Breakpoints of European Equity Funds			
FUND CATEGORY	THIRD QUARTILE (ANNUALIZED, %)	SECOND QUARTILE (ANNUALIZED, %)	FIRST QUARTILE (ANNUALIZED, %)
1-YEAR (EUR)			
Europe Equity	-17.32	-14.19	-11.42
Eurozone Equity	-18.37	-15.00	-12.96
Nordic Equity	-13.31	-10.16	-8.88
Global Equity	-11.50	-8.73	-5.88
Emerging Markets Equity	-14.36	-12.30	-10.27
U.S. Equity	-6.23	-3.17	-0.48
France Equity	-24.43	-18.36	-13.25
Germany Equity	-23.15	-20.89	-17.82
Italy Equity	-18.57	-16.11	-14.20
Spain Equity	-14.03	-11.79	-9.40
Netherlands Equity	-20.20	-18.42	-17.23
1-YEAR (GBP)			
Europe Equity	-14.75	-12.82	-10.15
Europe Ex-UK Equity	-14.61	-12.28	-10.28
UK Equity	-14.31	-11.19	-8.97
UK Large-/Mid-Cap Equity	-11.84	-10.36	-8.87
UK Small-Cap Equity	-15.52	-12.82	-9.32
Global Equity	-8.24	-5.79	-2.85
Emerging Markets Equity	-13.67	-11.36	-9.08
U.S. Equity	-4.19	-1.37	1.60
1-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	-13.41	-11.50	-10.01
Poland Equity	-19.37	-15.23	-13.00
Switzerland Equity	-17.67	-12.76	-9.35
Sweden Equity	-8.52	-6.02	-2.42
3-YEAR (EUR)			
Europe Equity	-2.94	-1.42	0.34
Eurozone Equity	-2.11	-0.75	0.43
Nordic Equity	-1.58	0.13	0.56
Global Equity	0.23	1.67	3.25
Emerging Markets Equity	3.31	4.81	6.45
U.S. Equity	2.57	4.28	5.78
France Equity	-1.66	0.31	2.16
Germany Equity	-2.52	-1.53	0.56
Italy Equity	-3.90	-2.32	-1.00
Spain Equity	-2.72	-0.72	2.29
Netherlands Equity	1.42	2.24	3.24
3-YEAR (GBP)			
Europe Equity	5.11	6.48	8.00
Europe Ex-UK Equity	2.03	3.84	5.99
UK Equity	2.13	3.66	5.15
UK Large-/Mid-Cap Equity	2.84	6.23	8.98
UK Small-Cap Equity	8.03	10.08	11.48
Global Equity	11.18	13.22	14.80
Emerging Markets Equity	10.95	12.33	13.79
U.S. Equity	5.11	6.48	8.00
3-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	-0.48	0.61	1.52
Poland Equity	-3.69	2.05	4.37
Switzerland Equity	1.53	2.82	4.73
Sweden Equity	2.43	4.56	6.39

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2018. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 5: Quartile Breakpoints of European Equity Funds (cont.)			
FUND CATEGORY	THIRD QUARTILE (ANNUALIZED, %)	SECOND QUARTILE (ANNUALIZED, %)	FIRST QUARTILE (ANNUALIZED, %)
5-YEAR (EUR)			
Europe Equity	0.99	2.27	3.97
Eurozone Equity	1.00	2.17	3.45
Nordic Equity	3.72	5.11	6.39
Global Equity	3.66	5.38	6.93
Emerging Markets Equity	2.54	3.79	5.02
U.S. Equity	7.17	8.78	10.37
France Equity	2.33	3.96	5.45
Germany Equity	0.69	1.91	2.86
Italy Equity	0.68	2.54	3.78
Spain Equity	-1.48	-0.52	2.23
Netherlands Equity	4.33	5.94	7.55
5-YEAR (GBP)			
Europe Equity	3.46	5.11	7.59
Europe Ex-UK Equity	4.37	5.70	6.56
UK Equity	2.07	3.67	5.35
UK Large-/Mid-Cap Equity	2.01	3.26	4.12
UK Small-Cap Equity	3.78	6.93	9.37
Global Equity	6.52	8.40	10.25
Emerging Markets Equity	5.38	6.33	7.39
U.S. Equity	10.04	11.39	12.67
5-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	9.87	10.68	11.44
Poland Equity	-4.63	-1.90	0.87
Switzerland Equity	3.71	4.70	6.28
Sweden Equity	6.69	8.56	11.77
10-YEAR (EUR)			
Europe Equity	5.80	7.41	9.15
Eurozone Equity	4.79	6.03	7.35
Nordic Equity	10.74	12.26	12.67
Global Equity	7.27	8.75	10.13
Emerging Markets Equity	7.18	8.18	9.17
U.S. Equity	10.88	12.13	13.39
France Equity	6.00	7.11	9.08
Germany Equity	6.82	8.24	9.86
Italy Equity	3.75	4.38	6.08
Spain Equity	2.03	3.38	5.12
Netherlands Equity	8.69	9.05	13.34
10-YEAR (GBP)			
Europe Equity	7.79	8.92	11.42
Europe Ex-UK Equity	6.98	7.86	9.41
UK Equity	8.32	9.72	13.15
UK Large-/Mid-Cap Equity	7.92	8.98	9.87
UK Small-Cap Equity	13.73	15.06	17.64
Global Equity	8.68	9.88	11.36
Emerging Markets Equity	8.04	9.23	10.12
U.S. Equity	11.93	13.02	14.23
10-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	14.71	15.51	15.89
Poland Equity	2.30	4.88	6.60
Switzerland Equity	6.81	7.99	9.59
Sweden Equity	12.32	13.62	17.13

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods Dec. 31, 2018. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

APPENDIX A

SPIVA Styles and Morningstar Fund Classifications

Data from Morningstar Europe is obtained for all managed funds for which month-end data is available during the performance period. The data includes funds domiciled in European markets. Offshore European equity funds are excluded. Funds are classified based on the Morningstar fund classification system, and the SPIVA Scorecard covers European and global equity categories.

European Equity Funds Denominated in EUR, GBP, and Other European Local Currencies

The SPIVA Europe Scorecard covers both regional and country-specific funds that are denominated in EUR, GBP, and other European local currencies, and they have been mapped to the relevant Morningstar fund categories as we indicate here. The Morningstar classification system produces narrow, style-based classifications for funds, particularly in relation to European and international equities. S&P Dow Jones Indices has consolidated the style-based categories in order to generate a larger sample size and develop a broad-market comparison to market-based benchmarks. A narrow, style-based comparison would yield a limited sample size, given that value and growth style segments are not consistently discernible over the past five years.

Morningstar categories have been mapped to SPIVA peer groups in the following manner.

Exhibit 1: Morningstar Categories and SPIVA Peer Groups for European Equity Funds	
EUROPEAN FUNDS DENOMINATED IN EUROS (EUR)	
MORNINGSTAR CATEGORY	SPIVA CATEGORY
EAA Fund Europe Flex-Cap Equity	Europe Equity
EAA Fund Europe Large-Cap Blend Equity	
EAA Fund Europe Large-Cap Growth Equity	
EAA Fund Europe Large-Cap Value Equity	
EAA Fund Europe Mid-Cap Equity	
EAA Fund Europe Small-Cap Equity	Eurozone Equity
EAA Fund Eurozone Flex-Cap Equity	
EAA Fund Eurozone Large-Cap Equity	
EAA Fund Eurozone Mid-Cap Equity	
EAA Fund Eurozone Small-Cap Equity	France Equity
EAA Fund France Large-Cap Equity	
EAA Fund France Small-/Mid-Cap Equity	Germany Equity
EAA Fund Germany Large-Cap Equity	
EAA Fund Germany Small-/Mid-Cap Equity	Italy Equity
EAA Fund Italy Equity	
EAA Fund Netherlands Equity	Netherlands Equity
EAA Fund Nordic Equity	Nordic Equity
EAA Fund Spain Equity	Spain Equity

Source: S&P Dow Jones Indices LLC and Morningstar. Table is provided for illustrative purposes.

Exhibit 1: Morningstar Categories and SPIVA Peer Groups for European Equity Funds (cont.)**EUROPEAN FUNDS DENOMINATED IN POUND STERLING (GBP)**

MORNINGSTAR CATEGORY	SPIVA CATEGORY
EAA Fund Europe Flex-Cap Equity	Europe Equity
EAA Fund Europe Large-Cap Blend Equity	
EAA Fund Europe Large-Cap Growth Equity	
EAA Fund Europe Large-Cap Value Equity	
EAA Fund Europe Mid-Cap Equity	
EAA Fund Europe Small-Cap Equity	Europe Ex-UK Equity
EAA Fund Europe Ex-UK Large-Cap Equity	
EAA Fund Europe Ex-UK Small-/Mid-Cap Equity	UK Large-/Mid-Cap Equity
EAA Fund UK Large-Cap Blend Equity	
EAA Fund UK Large-Cap Growth Equity	
EAA Fund UK Large-Cap Value Equity	
EAA Fund UK Mid-Cap Equity	UK Small-Cap Equity
EAA Fund UK Small-Cap Equity	
EAA Fund UK Large-Cap Blend Equity	UK Equity
EAA Fund UK Large-Cap Growth Equity	
EAA Fund UK Large-Cap Value Equity	
EAA Fund UK Mid-Cap Equity	
EAA Fund UK Small-Cap Equity	
EAA Fund UK Flex-Cap Equity	
EUROPEAN FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES	
EAA Fund Denmark Equity	Denmark Equity
EAA Fund Poland Equity	Poland Equity
EAA Fund Sweden Large-Cap Equity	Sweden Equity
EAA Fund Sweden Small/Mid-Cap Equity	
EAA Fund Switzerland Small/Mid-Cap Equity	Switzerland Equity
EAA Fund Switzerland Large-Cap Equity	

Source: S&P Dow Jones Indices LLC and Morningstar. Table is provided for illustrative purposes.

International Funds Denominated in EUR and GBP

For international equities, the SPIVA Europe Scorecard reports on three major categories (U.S., global, and global emerging markets) in both EUR and GBP. These categories also include multiple Morningstar classifications.

Exhibit 2: Morningstar Categories and SPIVA Peer Groups for International Equity Funds

EUR and GBP-DENOMINATED INTERNATIONAL FUNDS

MORNINGSTAR CATEGORY	SPIVA CATEGORY
EAA Fund Global Large-Cap Blend Equity	Global Equity
EAA Fund Global Large-Cap Growth Equity	
EAA Fund Global Large-Cap Value Equity	
EAA Fund Global Small-Cap Equity	
EAA Fund U.S. Large-Cap Blend Equity	U.S. Equity
EAA Fund U.S. Large-Cap Growth Equity	
EAA Fund U.S. Large-Cap Value Equity	
EAA Fund U.S. Mid-Cap Equity	
EAA Fund U.S. Flex-Cap Equity	
EAA Fund U.S. Small-Cap Equity	
EAA Fund Global Emerging Markets Equity	Emerging Markets Equity

Source: S&P Dow Jones Indices LLC and Morningstar. Table is provided for illustrative purposes.

APPENDIX B

Glossary–Reports

PERCENTAGE OF FUNDS OUTPERFORMED BY THE INDEX

To correct for survivorship bias, we use the opportunity set available at the beginning of the period as the denominator. We determine the count of funds that have survived and beat the index. We then report the index outperformance percentage.

SURVIVORSHIP (%)

The survivorship measure represents the percentage of funds in existence at the beginning of the time period that are still active at the end of the time period.

EQUAL-WEIGHTED FUND PERFORMANCE

Equal-weighted returns for a particular style category are determined by calculating a simple average return of all active funds in that category in a particular month.

ASSET-WEIGHTED FUND PERFORMANCE

Asset-weighted returns for a particular style category are determined by calculating a weighted average return of all funds in that category in a particular month, with each fund's return weighted by its total net assets. Asset-weighted returns are a better indicator of fund category performance because they reflect the returns of the total money invested in that particular style category with more accuracy.

QUARTILE BREAKPOINTS

The p^{th} percentile for a set of data is the value that is greater than or equal to $p\%$ of the data but is less than or equal to $(100-p)\%$ of the data. In other words, it is a value that divides the data into two parts: the lower $p\%$ of the values and the upper $(100-p)\%$ of the values. The first quartile is the 75th percentile, which is the value separating the elements of a population into the lower 75% and the upper 25%. The second quartile is the 50th percentile, and the third quartile is the 25th percentile. For fund category quartiles in a particular time horizon, the data used is the return of the largest surviving share class of the fund net of fees, excluding loads.

SURVIVORSHIP BIAS

Many funds might liquidate or merge during a period of study. This usually occurs due to continued poor performance by the fund. Therefore, if index returns were compared to fund returns using only surviving funds, the comparison would be biased in favor of the fund category. The SPIVA reports remove this bias in three ways. The first method to remove the bias is to use the entire investment opportunity set, made up of all funds in that particular category at the outset of the period, as the denominator for outperformance calculations. The second is explicitly to show the survivorship rate in each category. The final way is to construct a peer average return series for each category based on all available funds at the outset of the period.

FEES

The fund returns used are net of fees, excluding loads.

Indices

A benchmark index provides an investment vehicle against which fund performance can be measured.

S&P 500

Widely regarded as the best single gauge of the U.S. equities market, this market-capitalization-weighted index includes a representative sample of the 500 leading companies in the leading industries of the U.S. economy and provides over 80% coverage of U.S. equities.

S&P/IFCI COMPOSITE

The [S&P/IFCI Composite](#) is widely recognized as a comprehensive and reliable measure of the world's emerging markets. It measures the returns of stocks that are legally and practically available to foreign investors.

S&P DENMARK BMI

The S&P Denmark BMI, a subset of the [S&P Global BMI](#), is an equity index that is designed to represent the Danish stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P EUROPE 350

Covering approximately 70% of the region's market capitalization, the S&P Europe 350 is an equity index drawn from 17 major European markets.

S&P EUROPE EX-UK BMI

The S&P Europe ex-UK BMI, a subset of the S&P Global BMI, is designed to represent the stock markets of Europe, excluding the UK. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P EUROZONE BMI

The [S&P Eurozone BMI](#), a subset of the S&P Global BMI, is designed to represent the stock markets of European countries that adopt the euro currency.

S&P FRANCE BMI

The S&P France BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the French stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P GERMANY BMI

The S&P Germany BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the German stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P GLOBAL 1200

Capturing approximately 70% of the world's capital markets, the [S&P Global 1200](#) is a composite of seven headline indices, many of which are accepted leaders in their regions. It includes the S&P 500 (U.S.), S&P Europe 350 (Europe), [S&P/TOPIX 150](#) (Japan), [S&P/TSX 60](#) (Canada), [S&P/ASX All Australian 50](#) (Australia), [S&P Asia 50](#) (Asia Ex-Japan), and [S&P Latin America 40](#) (Latin America).

S&P ITALY BMI

The S&P Italy BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the Italian stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P NETHERLANDS BMI

The S&P Netherlands BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the Dutch stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P NORDIC BMI

The S&P Nordic BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the Swedish, Danish, Norwegian, and Finnish stock markets. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P POLAND BMI

The S&P Poland BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the Polish stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P SPAIN BMI

The S&P Spain BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the Spanish stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P SWEDEN BMI

The S&P Sweden BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the Swedish stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P SWITZERLAND BMI

The S&P Switzerland BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the Swiss stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P UNITED KINGDOM BMI

The [S&P United Kingdom BMI](#), a subset of the S&P Global BMI, is an equity index that is designed to represent the UK stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P UNITED KINGDOM LARGEMIDCAP

The [S&P United Kingdom LargeMidCap](#), a subset of the S&P Global BMI, is an equity index that is designed to represent the large- and mid-cap companies of the UK stock market and covers approximately 85% of the float market cap. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

S&P UNITED KINGDOM SMALLCAP

The [S&P United Kingdom SmallCap](#), a subset of the S&P Global BMI, is an equity index that is designed to represent the small-cap companies of the UK stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

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