

Europe Persistence Scorecard

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INTRODUCTION

The Europe Persistence Scorecard aims to differentiate skill from luck by examining the ability of active European equity funds to consistently outperform their peers and their benchmark. This scorecard looks to support the well-known disclaimer that past performance is not indicative of future results and that oftentimes an investor may have better success in selecting a fund at random rather than from a group of top performers.

In this report, we pose two questions: did top funds stay ahead of the pack, and did outperforming funds continue to beat their benchmark?

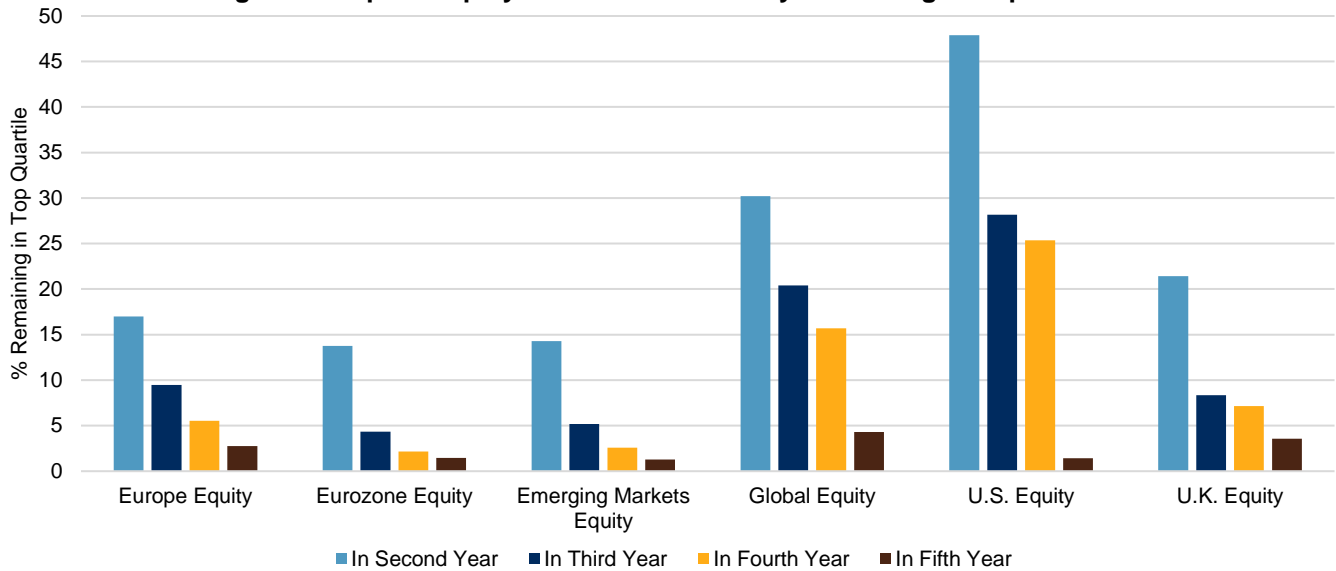
YEAR-END 2021 HIGHLIGHTS

Pan-European Equity Funds: Looking at the two-year period since the COVID-19 pandemic started, 52% of the top-quartile Europe Equity funds at the start of 2020 were able to remain in the same category by the end of the same year. By the end of 2021, over 21% of these same starting funds were still in the top quartile. This figure is far higher than what would be expected through choosing a fund at random (6.25%). This short-term persistence was not unique to Europe Equity over this period; across all fund categories, at least 6.25% of funds remained in the top quartile for three consecutive years.

While top-quartile funds may have demonstrated a better chance of repeating their relative success over this most recent period, it seems that may not have necessarily translated to outperformance when compared with their benchmarks. To avoid the risk of drawing conclusions from a single time period, Report 8 analyzes the persistence of outperformance on average over rolling quarters. Europe Equity funds that had beaten the benchmark in any rolling three-year window over the period analyzed had a 44.4% probability of outperforming in the subsequent year. The probability of the same funds outperforming for three consecutive years following their initial success dropped to 7.2%.

Report 5 indicates that there may also have been some predictability when it comes to bottom-quartile funds; the report shows that 62% of Europe Equity funds in the bottom quartile either remained there or ceased to exist over the subsequent five years. In fact, in all fund categories, fourth-quartile active funds were more likely to remain relatively poor performers, with fewer than 10% able to turn their fortunes around and become first-quartile funds.

Exhibit 1: Percentage of European Equity Funds Consecutively Remaining in Top Quartile



Source: S&P Dow Jones Indices LLC, Morningstar. Based on funds performing in top quartile of respective category in 2017 calendar year. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Other Equity Funds in Europe: As Exhibit 1 highlights, U.S. Equity funds demonstrated the most notable short-term persistence over the first four years. However, this drops off significantly in the fifth year, when only 1.4% managed to remain in the top quartile, only slightly better than if a fund were selected at random (0.4% probability).

Similarly, top-half U.S. Equity funds showed the strongest signs of persistence when compared to the other fund categories over five consecutive 12-month periods. After four years, 32.6% of funds remained in the top half, over 20% higher than would have been expected from a random draw.

Report 8 also highlights how difficult it has been for U.S. Equity fund managers to beat the benchmark. On average, only 8% of funds were able to beat the [S&P 500®](#) over any initial three-year period. However, the resulting percentage of funds outperforming in the following three one-year periods is higher than in other categories, with 19.5% continuing to outperform the benchmark across the consecutive periods.

ABOUT THE PERSISTENCE SCORECARD

The phrase “past performance is no guarantee of future results” (or some variation thereof) can be found in the fine print of most mutual fund literature. Yet, many investors and advisors consider past performance and related metrics to be important factors in fund selection. So, does past performance really matter?

To answer this question, Reports 1-6 track the degree to which historical relative performance is predictive of future relative performance. The scorecard highlights performance persistence over three and five consecutive 12-month periods and two non-overlapping three- and five-year periods.

Reports 7,8 and 9 showcase the degree to which outperforming funds from one period continue to beat their benchmarks thereafter. Specifically, we first identify funds that beat their benchmarks, based on three-year annualized returns. We then examine whether these funds (the “winners”) can continue to outperform during each of the following three one-year periods.

Report 8 covers the period from Dec. 31, 2011, to Dec. 31, 2021. On a quarterly basis beginning on Dec. 31, 2011, we compute the trailing three-year annualized returns for each fund in our universe, as well as for their benchmarks. We then identify funds that beat their benchmarks and track their relative performance in each of the next three years. Quarterly results are then averaged to arrive at the final report. By identifying funds that beat their benchmarks as “winners” and those that do not as “losers,” this approach applies the “winner-winner, winner-loser” methodology developed by Brown and Goetzmann¹ and examines if winners in period t are also winners in $t + j$, where $j = \text{Year 1, Year 2, and Year 3}$.

Key features of the S&P Persistence Scorecard include:

- **Historical rankings without survivorship bias:** For anyone making an investment decision, all funds available at the time of that decision are part of the initial opportunity set. Ignoring funds that liquidate or merge during a period of study biases measurements of persistence. The S&P Persistence Scorecard ranks all funds available at each point in time and tracks the top-quartile and top-half performers throughout the time.
- **Clean universe:** The fund universe used in these reports comprises actively managed domestic European equity funds. Index funds and leveraged funds are excluded from the sample. To avoid double counting multiple share classes, only the share class with the highest previous period return of each fund is used.
- **Tracking reports of top performers:** The tracking reports show the percentages of funds that remain in the top-quartile or top-half rankings over consecutive three- and five-year periods.
- **Transition matrices:** Transition matrices show the movements between quartiles and halves over non-overlapping three- and five-year periods. They also track the percentage of funds that have merged or liquidated.

As in our widely followed SPIVA Europe Scorecards, Morningstar serves as our underlying data source.

¹ Brown, S. J., and Goetzmann, W. N. (1995). Performance Persistence. *The Journal of Finance*, 50(2), 679-698.

REPORTS

Report 1: Performance Persistence of European Equity Funds over Three Consecutive 12-Month Periods			
FUND CATEGORY	FUND COUNT AT START (DECEMBER 2019)	PERCENTAGE REMAINING IN TOP QUARTILE	
		DECEMBER 2020	DECEMBER 2021
TOP QUARTILE			
EURO-DENOMINATED FUNDS (EUR)			
Europe Equity	255	52.55	21.18
Eurozone Equity	138	43.48	17.39
Global Equity	283	49.47	12.72
Emerging Markets Equity	80	60.00	6.25
U.S. Equity	71	47.89	8.45
POUND STERLING-DENOMINATED FUNDS (GBP)			
U.K. Equity	82	47.56	24.39
FUND CATEGORY	FUND COUNT AT START (DECEMBER 2019)	PERCENTAGE REMAINING IN TOP HALF	
		DECEMBER 2020	DECEMBER 2021
TOP HALF			
EURO-DENOMINATED FUNDS (EUR)			
Europe Equity	510	63.14	32.94
Eurozone Equity	276	61.59	31.52
Global Equity	566	62.72	32.69
Emerging Markets Equity	160	63.13	20.00
U.S. Equity	142	66.90	28.17
POUND STERLING-DENOMINATED FUNDS (GBP)			
U.K. Equity	164	65.24	35.37

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Performance Persistence of European Equity Funds over Five Consecutive 12-Month Periods						
FUND CATEGORY	FUND COUNT AT START (DECEMBER 2017)	PERCENTAGE REMAINING IN TOP QUARTILE				
		DECEMBER 2018	DECEMBER 2019	DECEMBER 2020	DECEMBER 2021	
TOP QUARTILE						
EURO-DENOMINATED FUNDS (EUR)						
Europe Equity	253	17.00	9.49	5.53	2.77	
Eurozone Equity	138	13.77	4.35	2.17	1.45	
Global Equity	255	30.20	20.39	15.69	4.31	
Emerging Markets Equity	77	14.29	5.19	2.60	1.30	
U.S. Equity	71	47.89	28.17	25.35	1.41	
POUND STERLING-DENOMINATED FUNDS (GBP)						
U.K. Equity	84	21.43	8.33	7.14	3.57	
FUND CATEGORY	FUND COUNT AT START (DECEMBER 2017)	PERCENTAGE REMAINING IN TOP HALF				
		DECEMBER 2018	DECEMBER 2019	DECEMBER 2020	DECEMBER 2021	
TOP HALF						
EURO-DENOMINATED FUNDS (EUR)						
Europe Equity	505	39.21	24.16	17.82	10.50	
Eurozone Equity	276	39.86	19.20	14.49	8.70	
Global Equity	509	44.20	32.02	26.33	14.54	
Emerging Markets Equity	154	36.36	20.78	13.64	5.19	
U.S. Equity	141	58.16	40.43	32.62	12.77	
POUND STERLING-DENOMINATED FUNDS (GBP)						
U.K. Equity	168	37.50	20.24	16.67	9.52	

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Three-Year Transition Matrix – Performance over Two Non-Overlapping Three-Year Periods (Based on Quartile)						
QUARTILE	FUND COUNT AT START (DECEMBER 2018)	THREE-YEAR PERCENTAGES AT END (DECEMBER 2021)				
		1ST QUARTILE (%)	2ND QUARTILE (%)	3RD QUARTILE (%)	4TH QUARTILE (%)	MERGED/ LIQUIDATED (%)
EURO-DENOMINATED FUNDS (EUR)						
EUROPE EQUITY						
1st Quartile	221	35.29	19.91	10.86	20.36	13.57
2nd Quartile	221	20.36	22.62	23.98	15.84	17.19
3rd Quartile	221	12.67	19.46	23.53	19.00	25.34
4th Quartile	222	11.71	18.02	21.62	24.77	23.87
EUROZONE EQUITY						
1st Quartile	126	38.10	18.25	15.08	16.67	11.90
2nd Quartile	125	14.40	27.20	23.20	20.80	14.40
3rd Quartile	126	13.49	22.22	26.19	22.22	15.87
4th Quartile	126	17.46	15.08	18.25	23.81	25.40
GLOBAL EQUITY						
1st Quartile	220	41.82	20.00	9.09	13.18	15.91
2nd Quartile	220	21.82	22.27	17.27	24.09	14.55
3rd Quartile	220	13.18	24.55	26.36	20.45	15.45
4th Quartile	221	7.69	17.65	31.67	26.70	16.29
EMERGING MARKETS EQUITY						
1st Quartile	69	26.09	24.64	15.94	11.59	21.74
2nd Quartile	69	18.84	21.74	20.29	20.29	18.84
3rd Quartile	69	14.49	15.94	21.74	23.19	24.64
4th Quartile	70	18.57	14.29	18.57	22.86	25.71
U.S. EQUITY						
1st Quartile	59	42.37	15.25	18.64	5.08	18.64
2nd Quartile	59	18.64	27.12	18.64	13.56	22.03
3rd Quartile	59	10.17	23.73	22.03	25.42	18.64
4th Quartile	60	6.67	11.67	18.33	35.00	28.33
POUND STERLING-DENOMINATED FUNDS (GBP)						
U.K. EQUITY						
1st Quartile	76	35.53	21.05	15.79	18.42	9.21
2nd Quartile	75	17.33	17.33	22.67	25.33	17.33
3rd Quartile	76	15.79	21.05	25.00	21.05	17.11
4th Quartile	76	14.47	22.37	19.74	18.42	25.00

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 4: Three-Year Transition Matrix – Performance over Two Non-Overlapping Three-Year Periods (Based on Halves)				
HALF	FUND COUNT AT START (DECEMBER 2018)	THREE-YEAR PERCENTAGES AT END (DECEMBER 2021)		
		TOP HALF (%)	BOTTOM HALF (%)	MERGED/LIQUIDATED (%)
EURO-DENOMINATED FUNDS (EUR)				
EUROPE EQUITY				
Top Half	442	49.10	35.52	15.38
Bottom Half	443	30.93	44.47	24.60
EUROZONE EQUITY				
Top Half	251	49.00	37.85	13.15
Bottom Half	252	34.13	45.24	20.63
GLOBAL EQUITY				
Top Half	440	52.95	31.82	15.23
Bottom Half	441	31.52	52.61	15.87
EMERGING MARKETS EQUITY				
Top Half	138	45.65	34.06	20.29
Bottom Half	139	31.65	43.17	25.18
U.S. EQUITY				
Top Half	118	51.69	27.97	20.34
Bottom Half	119	26.05	50.42	23.53
POUND STERLING-DENOMINATED FUNDS (GBP)				
U.K. EQUITY				
Top Half	151	45.70	41.06	13.25
Bottom Half	152	36.84	42.11	21.05

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 5: Five-Year Transition Matrix - Performance over Two Non-Overlapping Five-Year Periods (Based on Quartile)						
QUARTILE	FUND COUNT AT START (DECEMBER 2016)	FIVE-YEAR PERCENTAGES AT END (DECEMBER 2021)				
		1ST QUARTILE (%)	2ND QUARTILE (%)	3RD QUARTILE (%)	4TH QUARTILE (%)	MERGED/ LIQUIDATED (%)
EURO-DENOMINATED FUNDS (EUR)						
EUROPE EQUITY						
1st Quartile	191	39.27	17.28	12.57	13.61	17.28
2nd Quartile	190	20.00	24.74	15.79	17.37	22.11
3rd Quartile	190	7.89	20.53	26.84	16.32	28.42
4th Quartile	191	7.33	11.52	18.85	27.23	35.08
EUROZONE EQUITY						
1st Quartile	116	33.62	13.79	21.55	12.07	18.97
2nd Quartile	115	22.61	31.30	11.30	17.39	17.39
3rd Quartile	115	13.91	20.87	25.22	15.65	24.35
4th Quartile	116	7.76	12.07	19.83	32.76	27.59
GLOBAL EQUITY						
1st Quartile	181	31.49	20.99	11.05	16.57	19.89
2nd Quartile	181	24.86	23.76	15.47	12.71	23.20
3rd Quartile	181	11.60	20.99	29.28	18.78	19.34
4th Quartile	181	7.18	9.39	19.34	27.62	36.46
EMERGING MARKETS EQUITY						
1st Quartile	54	33.33	12.96	11.11	7.41	35.19
2nd Quartile	54	18.52	33.33	18.52	16.67	12.96
3rd Quartile	54	16.67	12.96	27.78	20.37	22.22
4th Quartile	54	5.56	14.81	16.67	29.63	33.33
U.S. EQUITY						
1st Quartile	48	25.00	20.83	20.83	18.75	14.58
2nd Quartile	48	18.75	22.92	8.33	10.42	39.58
3rd Quartile	48	14.58	22.92	29.17	14.58	18.75
4th Quartile	49	16.33	6.12	16.33	30.61	30.61
POUND STERLING-DENOMINATED FUNDS (GBP)						
U.K. EQUITY						
1st Quartile	74	39.19	20.27	16.22	5.41	18.92
2nd Quartile	73	19.18	20.55	13.70	23.29	23.29
3rd Quartile	74	12.16	16.22	21.62	13.51	36.49
4th Quartile	74	0.00	12.16	18.92	28.38	40.54

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 6: Five-Year Transition Matrix – Performance over Two Non-Overlapping Five-Year Periods (Based on Halves)				
HALF	FUND COUNT AT START (DECEMBER 2016)	FIVE-YEAR PERCENTAGES AT END (DECEMBER 2021)		
		TOP HALF (%)	BOTTOM HALF (%)	MERGED/LIQUIDATED (%)
EURO-DENOMINATED FUNDS (EUR)				
EUROPE EQUITY				
Top Half	381	50.66	29.66	19.69
Bottom Half	381	23.62	44.62	31.76
EUROZONE EQUITY				
Top Half	231	50.65	31.17	18.18
Bottom Half	231	27.27	46.75	25.97
GLOBAL EQUITY				
Top Half	362	50.55	27.90	21.55
Bottom Half	362	24.59	47.51	27.90
EMERGING MARKETS EQUITY				
Top Half	108	49.07	26.85	24.07
Bottom Half	108	25.00	47.22	27.78
U.S. EQUITY				
Top Half	96	43.75	29.17	27.08
Bottom Half	97	29.90	45.36	24.74
POUND STERLING-DENOMINATED FUNDS (GBP)				
U.K. EQUITY				
Top Half	147	49.66	29.25	21.09
Bottom Half	148	20.27	41.22	38.51

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2021. 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 7: Outperformance Persistence over Three Consecutive Years							
FUND CATEGORY	BENCHMARK	TOTAL FUND COUNT	FUNDS OUTPERFORMING THE BENCHMARK (DECEMBER 2018)		PERCENTAGE OUTPERFORMING THE BENCHMARK (PERIOD END)		
			COUNT	PERCENTAGE (%)	DECEMBER 2019	DECEMBER 2020	DECEMBER 2021
EURO-DENOMINATED FUNDS (EUR)							
Europe Equity	S&P Europe 350	1030	166	16.12	40.96	36.75	13.86
Eurozone Equity	S&P Eurozone BMI	569	69	12.13	23.19	21.74	14.49
Global Equity	S&P Global 1200	1075	70	6.51	60.00	54.29	8.57
Emerging Markets Equity	S&P/IFCI Composite	322	45	13.98	66.67	33.33	0.00
U.S. Equity	S&P 500	289	27	9.34	55.56	55.56	3.70
POUND STERLING-DENOMINATED FUNDS (GBP)							
U.K. Equity	S&P United Kingdom BMI	358	79	22.07	79.75	73.42	46.84

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2021. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 8: Rolling Quarterly Average Outperformance Persistence over Three Consecutive Years

FUND CATEGORY	BENCHMARK	TOTAL FUND COUNT	FUNDS OUTPERFORMING THE BENCHMARK (CURRENT PERIOD)		PERCENTAGE OUTPERFORMING THE BENCHMARK (PERIOD END)		
			COUNT	PERCENTAGE (%)	YEAR 1	YEAR 2	YEAR 3
EURO-DENOMINATED FUNDS (EUR)							
Europe Equity	S&P Europe 350	1030	363	35.36	44.35	17.14	7.16
Eurozone Equity	S&P Eurozone BMI	592	106	18.04	38.65	15.47	6.29
Global Equity	S&P Global 1200	1066	102	9.61	33.20	18.50	9.25
Emerging Markets Equity	S&P/IFCI Composite	317	48	15.30	36.65	14.23	6.25
U.S. Equity	S&P 500	288	24	8.32	39.72	30.23	19.52
POUND STERLING-DENOMINATED FUNDS (GBP)							
U.K. Equity	S&P United Kingdom BMI	379	200	52.13	48.20	22.35	12.22

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2021. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 9: Universe Statistics

FUND CATEGORY	AVERAGE	MEDIAN
EURO-DENOMINATED FUNDS (EUR)		
Europe Equity	1030	1023
Eurozone Equity	592	585
Global Equity	1066	1066
Emerging Markets Equity	317	321
U.S. Equity	288	288
POUND STERLING-DENOMINATED FUNDS (GBP)		
U.K. Equity	379	370

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2021. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

APPENDIX

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 Persistence Scorecard covers European and global equity categories.

European Equity Funds Denominated in EUR and GBP

The Europe Persistence Scorecard covers regional and country-specific funds that are denominated in EUR and GBP, and they have been mapped to the relevant Morningstar fund categories as indicated in Exhibit 1. 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 2: 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	Global Equity
EAA Fund Global Large-Cap Blend Equity	
EAA Fund Global Large-Cap Growth Equity	
EAA Fund Global Large-Cap Value Equity	U.S. Equity
EAA Fund Global Small/Mid-Cap Equity	
EAA Fund U.S. Large-Cap Blend Equity	
EAA Fund U.S. Large-Cap Growth Equity	
EAA Fund U.S. Large-Cap Value Equity	
EAA Fund U.S. Mid-Cap Equity	U.S. Equity
EAA Fund U.S. Flex-Cap Equity	
EAA Fund U.S. Small-Cap Equity	U.S. 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.

Exhibit 2: Morningstar Categories and SPIVA Peer Groups for European Equity Funds (cont.)**EUROPEAN FUNDS DENOMINATED IN BRITISH POUND STERLING (GBP)**

MORNINGSTAR CATEGORY	SPIVA CATEGORY
EAA Fund UK Large-Cap Blend Equity	U.K. 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	

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

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