

SPIVA[®] Europe Scorecard

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[Experience](#) the
active vs. passive debate
on a global scale.

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 2021 HIGHLIGHTS

Recovery in Europe

In spite of the ongoing COVID-19 pandemic throughout 2021, European equity markets were buoyant, recovering well from the extreme volatility of the previous year. The [S&P Europe 350[®]](#) was up 26.1% in 2021.

- Of active euro-denominated Europe Equity funds, 74.8% underperformed the S&P Europe 350 in 2021. On a risk-adjusted basis the same group of funds generally fared no better, with 79.7% and 84.3% underperforming over the 1- and 10-year period respectively.
- European regional benchmarks saw double-digit returns across the board, with many returning over 20% for the one-year period. The picture was similar for fund managers, with all categories seeing returns in excess of 10% for the year.
- Despite the strong returns, fewer European fund managers beat the benchmark than in the prior year, as evidenced by Report 1c. In each category, there was an increase in the percentage of funds outperformed by their benchmark.
- Europe Equity funds saw a 37.4% absolute increase in the percentage of funds outperformed by their benchmark from 2020 to 2021, and the volatility of the benchmark was 27.9% in 2020 and 12.3% in 2021. From this we can surmise that, on average, fund managers in this region may have utilized their skills better during more volatile market conditions than in a comparatively stable environment. However, as SPIVA frequently witnesses, any short-term success typically dissipates as the time horizon increases. For instance, 83.2% of Europe Equity funds underperformed the S&P Europe 350 over the 10-year period.

Emerging Markets Highlights

Over the course of 2021, Emerging Markets Equity funds and benchmarks fared worse than their developed market counterparts. As various COVID-19 vaccines arrived at the end of 2020, thanks to the relative wealth at their disposal, developed market nations were more successful at obtaining supplies. The [S&P/IFCI Composite](#), measuring the performance of emerging market equities, lagged behind many developed nation benchmarks but still posted a positive return of 8.1% over the year.

- Emerging Markets Equity fund managers failed to beat the benchmark in 74.2% of cases during the one-year period.
- Emerging Markets Equity funds' asset-weighted returns were far lower than all other categories, returning 3.5% during 2021. Emerging Markets Equity funds returned 8.7% less than the next lowest fund category (Spain Equity funds).
- The 75th percentile Emerging Markets Equity funds returned less than the 25th percentile funds in all other categories.

U.K. Highlights

- Over the one-year period, 55.5% of U.K. Equity funds underperformed the [S&P United Kingdom BMI](#).
- Large- and mid-cap fund managers fared worse on a risk-adjusted basis; over 85% of both U.K. Equity and U.K. Large-/Mid-Cap Equity funds were worse off than the benchmark over the one-year period.
- U.K. Small-Cap Equity funds continued their trend of outperforming the benchmark in large numbers; 75.6% outperformed over the one-year period. However, this number fell to 42.4% over the 10-year time horizon.

U.S. Highlights

- U.S. Equity fund managers were eclipsed only by their Swedish counterparts, posting the second-highest asset-weighted fund return during the one-year period. Despite the exceptional 32.9% return for 2021, fund managers were still outperformed by the [S&P 500[®]](#) by 5.6% over the same period, with over 86.5% of fund managers failing to beat the benchmark. Over the 10-year period, only 5.1% of U.S. Equity fund managers were able to beat the benchmark.
- On a risk-adjusted basis, the figures supported a similar verdict; 83.8% underperformed over the 1-year period and 98.3% underperformed over the 10-year period.

Other Highlights

- Global Equity fund managers continued to struggle against the [S&P Global 1200](#). Over the one-year period, 81.6% underperformed and, on an asset-weighted basis, were 4.5% below the benchmark by year-end 2021.
- There were pockets of relative success in regional fund categories throughout continental Europe. In the Italy, France, Germany and Sweden Equity categories, the majority of fund managers beat their respective benchmark in 2021.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

Since its first publication 20 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For two decades, 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 two decades 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 1a: Percentage of European Equity Funds Outperformed by Benchmarks (Based on Absolute Returns)					
FUND CATEGORY	COMPARISON INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR
EURO-DENOMINATED FUNDS (EUR)					
Europe Equity	S&P Europe 350	74.79	62.22	72.63	83.23
Eurozone Equity	S&P Eurozone BMI	65.43	72.47	83.36	93.20
Nordic Equity	S&P Nordic BMI	71.43	71.43	91.67	82.61
Global Equity	S&P Global 1200	81.56	80.19	85.73	96.36
Emerging Markets Equity	S&P/IFCI Composite	74.21	70.11	83.80	94.31
U.S. Equity	S&P 500	86.54	79.30	85.42	94.88
France Equity	S&P France BMI	83.33	71.69	93.18	92.86
Germany Equity	S&P Germany BMI	40.45	49.48	62.64	76.34
Italy Equity	S&P Italy BMI	32.69	76.27	77.36	78.18
Spain Equity	S&P Spain BMI	45.88	75.82	76.74	83.33
Netherlands Equity	S&P Netherlands BMI	80.00	83.33	100.00	100.00
BRITISH POUND STERLING-DENOMINATED FUNDS (GBP)					
Europe Equity	S&P Europe 350	61.76	48.00	65.71	74.19
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	64.08	65.49	70.59	82.09
U.K. Equity	S&P United Kingdom BMI	55.49	33.91	44.29	62.09
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	66.67	34.16	51.81	61.90
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	24.39	18.52	27.63	57.65
Global Equity	S&P Global 1200	80.35	68.97	76.83	89.69
Emerging Markets Equity	S&P/IFCI Composite	66.19	59.24	70.35	86.11
U.S. Equity	S&P 500	82.41	67.80	73.84	94.74
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES					
Denmark Equity	S&P Denmark BMI	100.00	94.44	96.97	82.35
Poland Equity	S&P Poland BMI	75.00	14.71	59.46	57.50
Switzerland Equity	S&P Switzerland BMI	55.36	58.69	74.07	73.54
Sweden Equity	S&P Sweden BMI	38.46	55.96	63.72	71.97

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2021. 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 1b: Percentage of European Equity Funds Outperformed by Benchmarks (Based on Risk-Adjusted Returns)					
FUND CATEGORY	COMPARISON INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR
EURO-DENOMINATED FUNDS (EUR)					
Europe Equity	S&P Europe 350	79.70	65.53	75.76	84.33
Eurozone Equity	S&P Eurozone BMI	64.37	65.33	81.09	90.19
Nordic Equity	S&P Nordic BMI	71.43	90.48	100.00	100.00
Global Equity	S&P Global 1200	76.80	74.85	83.79	97.73
Emerging Markets Equity	S&P/IFCI Composite	75.64	77.59	87.85	95.65
U.S. Equity	S&P 500®	83.79	82.17	86.10	98.29
France Equity	S&P France BMI	74.76	68.95	91.82	89.50
Germany Equity	S&P Germany BMI	43.82	54.64	68.13	80.65
Italy Equity	S&P Italy BMI	28.85	55.93	71.70	67.27
Spain Equity	S&P Spain BMI	45.88	74.73	76.74	81.11
Netherlands Equity	S&P Netherlands BMI	80.00	100.00	100.00	100.00
BRITISH POUND STERLING-DENOMINATED FUNDS (GBP)					
Europe Equity	S&P Europe 350	82.35	61.00	70.48	78.49
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	69.72	67.61	74.26	80.60
U.K. Equity	S&P United Kingdom BMI	85.16	41.67	52.29	69.91
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	87.58	47.20	57.83	63.81
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	21.95	22.22	31.58	61.18
Global Equity	S&P Global 1200	78.42	68.30	78.54	95.63
Emerging Markets Equity	S&P/IFCI Composite	65.71	69.02	76.74	89.81
U.S. Equity	S&P 500	64.82	75.14	81.40	100.00
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES					
Denmark Equity	S&P Denmark BMI	91.67	100.00	96.97	76.47
Poland Equity	S&P Poland BMI	21.88	11.76	48.65	50.00
Switzerland Equity	S&P Switzerland BMI	42.86	74.18	84.66	82.01
Sweden Equity	S&P Sweden BMI	39.42	62.39	70.80	77.27

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2021. Risk-adjusted return is computed as annualized average monthly return divided by annualized standard deviation of the monthly return for the measured periods. Index performance based on total return. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 1c: Percentage of European Equity Funds Outperformed by Benchmarks Each Year (Based on Absolute Returns)											
FUND CATEGORY	COMPARISON INDEX	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
EURO-DENOMINATED FUNDS (EUR)											
Europe Equity	S&P Europe 350	52.72	60.56	82.14	31.31	80.21	46.12	86.39	70.40	37.34	74.79
Eurozone Equity	S&P Eurozone BMI	68.99	81.16	82.70	57.95	80.84	73.20	76.22	77.00	57.24	65.43
Global Equity	S&P Global 1200	81.26	74.32	89.36	71.39	92.09	53.87	86.10	79.00	54.54	81.56
Emerging Markets Equity	S&P/IFCI Composite	80.94	74.68	75.85	77.02	71.74	70.72	79.77	49.14	58.69	74.21
U.S. Equity	S&P 500®	92.15	67.14	94.72	80.76	82.01	71.19	78.71	77.71	49.52	86.54
BRITISH POUND STERLING-DENOMINATED FUNDS (GBP)											
U.K. Equity	S&P United Kingdom BMI	37.68	28.14	58.92	22.63	87.43	43.71	72.25	26.72	19.23	55.49

Source: S&P Dow Jones Indices LLC, Morningstar. Annual data as of Dec. 31, 2021. 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	1059	94.52
Eurozone Equity	567	94.18
Nordic Equity	21	100.00
Global Equity	1323	96.60
Emerging Markets Equity	349	95.99
U.S. Equity	327	93.27
France Equity	210	95.24
Germany Equity	89	97.75
Italy Equity	52	96.15
Spain Equity	85	89.41
Netherlands Equity	5	100.00
1-YEAR (GBP)		
Europe Equity	102	93.14
Europe Ex-U.K. Equity	142	92.25
U.K. Equity	337	94.66
U.K. Large-/Mid-Cap Equity	153	93.46
U.K. Small-Cap Equity	82	97.56
Global Equity	519	94.03
Emerging Markets Equity	210	97.14
U.S. Equity	199	95.98
1-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	36	91.67
Poland Equity	32	100.00
Switzerland Equity	224	97.32
Sweden Equity	104	99.04
3-YEAR (EUR)		
Europe Equity	1088	82.90
Eurozone Equity	574	86.93
Nordic Equity	21	95.24
Global Equity	1181	87.13
Emerging Markets Equity	348	81.03
U.S. Equity	314	79.62
France Equity	219	88.13
Germany Equity	97	83.51
Italy Equity	59	77.97
Spain Equity	91	79.12
Netherlands Equity	6	83.33

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2021. 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	100	79.00
Europe Ex-U.K. Equity	142	78.17
U.K. Equity	348	83.91
U.K. Large-/Mid-Cap Equity	161	77.64
U.K. Small-Cap Equity	81	93.83
Global Equity	448	81.25
Emerging Markets Equity	184	80.98
U.S. Equity	177	83.62
3-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	36	80.56
Poland Equity	34	94.12
Switzerland Equity	213	88.73
Sweden Equity	109	84.40
5-YEAR (EUR)		
Europe Equity	1056	74.43
Eurozone Equity	571	80.04
Nordic Equity	24	75.00
Global Equity	1086	75.78
Emerging Markets Equity	321	73.21
U.S. Equity	295	68.81
France Equity	220	80.45
Germany Equity	91	78.02
Italy Equity	53	66.04
Spain Equity	86	75.58
Netherlands Equity	8	50.00
5-YEAR (GBP)		
Europe Equity	105	63.81
Europe Ex-U.K. Equity	136	72.79
U.K. Equity	350	74.57
U.K. Large-/Mid-Cap Equity	166	66.87
U.K. Small-Cap Equity	76	86.84
Global Equity	410	71.46
Emerging Markets Equity	172	72.67
U.S. Equity	172	71.51
5-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	33	75.76
Poland Equity	37	86.49
Switzerland Equity	189	81.48
Sweden Equity	113	74.34

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2021. 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	1085	53.18
Eurozone Equity	632	57.91
Nordic Equity	23	47.83
Global Equity	1099	50.41
Emerging Markets Equity	299	54.85
U.S. Equity	293	49.49
France Equity	238	60.08
Germany Equity	93	62.37
Italy Equity	55	49.09
Spain Equity	90	52.22
Netherlands Equity	15	20.00
10-YEAR (GBP)		
Europe Equity	93	39.78
Europe Ex-U.K. Equity	134	52.24
U.K. Equity	422	49.29
U.K. Large-/Mid-Cap Equity	210	44.76
U.K. Small-Cap Equity	85	60.00
Global Equity	320	50.00
Emerging Markets Equity	108	50.93
U.S. Equity	133	47.37
10-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	34	64.71
Poland Equity	40	77.50
Switzerland Equity	189	61.90
Sweden Equity	132	50.76

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

Report 3a: Average European Equity Fund Performance (Equal Weighted)				
FUND CATEGORY	1-YEAR (%)	3-YEAR (ANNUALIZED %)	5-YEAR (ANNUALIZED %)	10-YEAR (ANNUALIZED %)
EUR-DENOMINATED FUNDS				
Europe Equity	22.78	16.10	8.52	9.78
S&P Europe 350	26.07	15.96	9.24	10.41
Eurozone Equity	21.76	14.74	7.54	9.38
S&P Eurozone BMI	23.17	16.20	9.44	11.45
Nordic Equity	24.17	22.63	12.51	12.54
S&P Nordic BMI	26.83	23.90	14.35	14.48
Global Equity	23.92	18.43	10.56	10.83
S&P Global 1200	30.60	21.82	13.55	14.54
Emerging Markets Equity	4.47	10.64	6.93	5.62
S&P/IFCI Composite	8.05	11.92	8.88	7.89
U.S. Equity	32.22	23.95	14.29	14.90
S&P 500	38.48	26.29	16.70	18.10
France Equity	22.50	14.92	7.18	10.38
S&P France BMI	28.81	16.71	10.77	12.47
Germany Equity	15.92	15.19	7.64	10.25
S&P Germany BMI	13.51	13.82	6.91	10.89
Italy Equity	31.82	16.81	10.14	10.24
S&P Italy BMI	27.81	17.61	10.44	9.91
Spain Equity	12.27	2.42	1.10	4.14
S&P Spain BMI	10.67	3.98	2.24	4.66
Netherlands Equity	25.54	21.38	12.04	12.18
S&P Netherlands BMI	38.30	30.81	19.36	17.73
GBP-DENOMINATED FUNDS				
Europe Equity	17.12	15.41	9.75	11.70
S&P Europe 350	18.30	13.42	8.88	10.47
Europe Ex-U.K. Equity	16.10	15.75	9.98	12.03
S&P Europe Ex-UK BMI	17.07	15.96	10.65	12.45
U.K. Equity	18.78	12.07	7.64	9.82
S&P United Kingdom BMI	18.39	7.47	4.93	7.49
U.K. Large-/Mid-Cap Equity	18.59	10.00	6.11	8.63
S&P United Kingdom LargeMidCap	18.24	6.49	4.26	6.42
U.K. Small-Cap Equity	22.41	18.03	12.68	13.77
S&P United Kingdom SmallCap	18.74	12.81	8.46	12.82
Global Equity	17.83	18.18	12.24	12.80
S&P Global 1200	22.84	19.29	13.27	14.68
Emerging Markets Equity	-1.09	9.45	7.62	6.85
S&P/IFCI Composite	1.35	9.46	8.52	7.95
U.S. Equity	24.29	22.99	15.51	16.54
S&P 500	29.89	23.51	16.32	18.17
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES				
Denmark Equity	19.79	24.89	14.12	18.76
S&P Denmark BMI	25.96	29.18	18.56	19.66
Poland Equity	25.48	13.72	7.10	5.38
S&P Poland BMI	24.23	4.66	6.19	6.20
Switzerland Equity	22.70	18.22	11.82	11.76
S&P Switzerland BMI	23.16	18.76	12.98	12.11
Sweden Equity	34.23	29.75	17.90	17.14
S&P Sweden BMI	30.15	27.08	16.42	16.08

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending 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 3b: Average European Equity Fund Performance (Asset Weighted)				
FUND CATEGORY	1-YEAR (%)	3-YEAR (ANNUALIZED %)	5-YEAR (ANNUALIZED %)	10-YEAR (ANNUALIZED %)
EUR-DENOMINATED FUNDS				
Europe Equity	23.62	16.45	8.87	10.07
S&P Europe 350	26.07	15.96	9.24	10.41
Eurozone Equity	22.15	15.33	7.89	9.82
S&P Eurozone BMI	23.17	16.20	9.44	11.45
Nordic Equity	25.15	22.71	12.33	12.46
S&P Nordic BMI	26.83	23.90	14.35	14.48
Global Equity	26.07	19.68	11.28	11.68
S&P Global 1200	30.60	21.82	13.55	14.54
Emerging Markets Equity	3.54	11.06	7.26	6.10
S&P/IFCI Composite	8.05	11.92	8.88	7.89
U.S. Equity	32.85	23.97	14.13	14.94
S&P 500	38.48	26.29	16.70	18.10
France Equity	23.41	14.52	7.26	10.10
S&P France BMI	28.81	16.71	10.77	12.47
Germany Equity	14.73	15.10	7.13	10.95
S&P Germany BMI	13.51	13.82	6.91	10.89
Italy Equity	29.58	15.88	9.23	9.69
S&P Italy BMI	27.81	17.61	10.44	9.91
Spain Equity	12.21	2.82	1.68	4.84
S&P Spain BMI	10.67	3.98	2.24	4.66
Netherlands Equity	24.84	19.26	10.67	11.03
S&P Netherlands BMI	38.30	30.81	19.36	17.73
GBP-DENOMINATED FUNDS				
Europe Equity	16.95	16.31	11.34	12.57
S&P Europe 350	18.30	13.42	8.88	10.47
Europe Ex-U.K. Equity	15.37	15.97	10.68	12.30
S&P Europe Ex-UK BMI	17.07	15.96	10.65	12.45
U.K. Equity	17.51	10.67	6.88	9.19
S&P United Kingdom BMI	18.39	7.47	4.93	7.49
U.K. Large-/Mid-Cap Equity	16.17	9.14	5.95	8.63
S&P United Kingdom LargeMidCap	18.24	6.49	4.26	6.42
U.K. Small-Cap Equity	22.21	18.54	12.97	14.53
S&P United Kingdom SmallCap	18.74	12.81	8.46	12.82
Global Equity	17.33	19.72	13.82	14.05
S&P Global 1200	22.84	19.29	13.27	14.68
Emerging Markets Equity	-1.47	9.78	7.65	7.23
S&P/IFCI Composite	1.35	9.46	8.52	7.95
U.S. Equity	21.64	23.66	15.94	16.81
S&P 500	29.89	23.51	16.32	18.17
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES				
Denmark Equity	20.34	25.56	14.64	18.85
S&P Denmark BMI	25.96	29.18	18.56	19.66
Poland Equity	24.10	9.66	4.96	3.73
S&P Poland BMI	24.23	4.66	6.19	6.20
Switzerland Equity	23.02	19.12	12.81	12.52
S&P Switzerland BMI	23.16	18.76	12.98	12.11
Sweden Equity	33.08	28.57	17.11	16.84
S&P Sweden BMI	30.15	27.08	16.42	16.08

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 4: Return/Volatility Ratio of European Equity Funds and Benchmarks										
FUND CATEGORY	COMPARISON INDEX	BENCHMARK			ASSET-WEIGHTED			EQUAL-WEIGHTED		
		3-YEAR	5-YEAR	10-YEAR	3-YEAR	5-YEAR	10-YEAR	3-YEAR	5-YEAR	10-YEAR
EUR-DENOMINATED FUNDS										
Europe Equity	S&P Europe 350	0.97	0.65	0.79	0.99	0.62	0.78	0.95	0.58	0.75
Eurozone Equity	S&P Eurozone BMI	0.85	0.57	0.76	0.85	0.50	0.68	0.83	0.49	0.67
Nordic Equity	S&P Nordic BMI	1.46	1.00	1.06	1.30	0.81	0.88	1.26	0.81	0.89
Global Equity	S&P Global 1200	1.39	0.98	1.20	1.36	0.86	1.00	1.26	0.81	0.93
Emerging Markets Equity	S&P/IFCI Composite	0.75	0.64	0.57	0.68	0.52	0.45	0.66	0.49	0.41
U.S. Equity	S&P 500	1.64	1.14	1.42	1.50	0.97	1.16	1.48	0.97	1.15
France Equity	S&P France BMI	0.84	0.63	0.82	0.76	0.44	0.69	0.79	0.44	0.72
Germany Equity	S&P Germany BMI	0.70	0.41	0.68	0.72	0.39	0.65	0.80	0.46	0.69
Italy Equity	S&P Italy BMI	0.76	0.51	0.49	0.75	0.49	0.53	0.82	0.55	0.57
Spain Equity	S&P Spain BMI	0.17	0.12	0.24	0.13	0.09	0.28	0.11	0.06	0.23
Netherlands Equity	S&P Netherlands BMI	1.83	1.28	1.27	1.02	0.65	0.75	1.09	0.71	0.82
GBP-DENOMINATED FUNDS										
Europe Equity	S&P Europe 350	0.91	0.69	0.84	1.01	0.80	1.01	0.98	0.71	0.94
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	1.06	0.80	0.95	1.08	0.81	0.99	1.01	0.73	0.94
U.K. Equity	S&P United Kingdom BMI	0.47	0.35	0.62	0.60	0.46	0.72	0.65	0.49	0.76
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	0.42	0.32	0.53	0.54	0.42	0.70	0.57	0.42	0.69
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	0.59	0.47	0.85	0.90	0.74	1.00	0.87	0.72	0.96
Global Equity	S&P Global 1200	1.45	1.09	1.34	1.56	1.16	1.27	1.41	1.03	1.18
Emerging Markets Equity	S&P/IFCI Composite	0.67	0.65	0.57	0.65	0.57	0.52	0.63	0.57	0.49
U.S. Equity	S&P 500	1.68	1.24	1.55	1.61	1.14	1.33	1.59	1.14	1.35
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES										
Denmark Equity	S&P Denmark BMI	2.28	1.51	1.46	1.72	1.07	1.47	1.66	1.03	1.45
Poland Equity	S&P Poland BMI	0.20	0.30	0.35	0.50	0.30	0.25	0.72	0.43	0.36
Switzerland Equity	S&P Switzerland BMI	1.52	1.14	1.09	1.48	1.08	1.12	1.40	0.99	1.06
Sweden Equity	S&P Sweden BMI	1.55	1.07	1.15	1.51	1.03	1.15	1.64	1.12	1.20

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 5: Quartile Breakpoints of European Equity Funds			
FUND CATEGORY	THIRD QUARTILE (ANNUALIZED, %)	SECOND QUARTILE (ANNUALIZED, %)	FIRST QUARTILE (ANNUALIZED, %)
1-YEAR (EUR)			
Europe Equity	19.00	22.86	26.35
Eurozone Equity	18.40	21.78	24.83
Nordic Equity	19.90	22.72	27.33
Global Equity	19.49	24.86	29.43
Emerging Markets Equity	1.29	4.81	8.49
U.S. Equity	29.47	33.93	36.83
France Equity	18.94	24.40	27.95
Germany Equity	11.56	14.70	18.87
Italy Equity	27.69	30.52	33.49
Spain Equity	9.24	11.82	13.83
Netherlands Equity	27.05	28.31	28.74
1-YEAR (GBP)			
Europe Equity	13.63	16.92	20.53
Europe Ex-U.K. Equity	13.22	15.92	18.83
U.K. Equity	14.42	18.25	21.86
U.K. Large-/Mid-Cap Equity	14.07	16.43	18.95
U.K. Small-Cap Equity	19.62	23.11	27.02
Global Equity	14.24	19.11	22.20
Emerging Markets Equity	-4.96	-0.39	3.99
U.S. Equity	21.91	26.33	28.82
1-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	17.38	18.68	22.45
Poland Equity	17.36	20.66	24.30
Switzerland Equity	20.32	22.82	25.14
Sweden Equity	28.27	32.10	39.87
3-YEAR (EUR)			
Europe Equity	12.51	15.42	19.21
Eurozone Equity	11.94	14.71	17.34
Nordic Equity	19.87	22.01	24.39
Global Equity	15.67	18.48	21.57
Emerging Markets Equity	9.00	10.89	12.98
U.S. Equity	21.42	23.84	26.40
France Equity	13.06	15.00	17.26
Germany Equity	12.24	14.81	19.24
Italy Equity	14.75	16.71	18.19
Spain Equity	0.70	2.40	5.24
Netherlands Equity	19.19	20.44	26.79

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 5: Quartile Breakpoints of European Equity Funds			
FUND CATEGORY	THIRD QUARTILE (ANNUALIZED, %)	SECOND QUARTILE (ANNUALIZED, %)	FIRST QUARTILE (ANNUALIZED, %)
3-YEAR (GBP)			
Europe Equity	11.60	14.98	18.92
Europe Ex-U.K. Equity	12.75	15.41	19.28
U.K. Equity	8.03	11.35	16.19
U.K. Large-/Mid-Cap Equity	7.18	8.54	11.06
U.K. Small-Cap Equity	15.58	17.77	22.14
Global Equity	14.73	18.01	21.15
Emerging Markets Equity	7.89	9.51	12.19
U.S. Equity	19.88	22.49	25.54
3-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	23.18	24.71	27.67
Poland Equity	8.63	11.61	19.20
Switzerland Equity	16.59	18.64	20.49
Sweden Equity	23.08	27.65	32.85
5-YEAR (EUR)			
Europe Equity	5.99	8.06	10.69
Eurozone Equity	5.71	7.43	9.03
Nordic Equity	11.08	12.77	13.45
Global Equity	8.48	10.30	12.77
Emerging Markets Equity	5.73	7.03	8.71
U.S. Equity	12.07	13.82	16.23
France Equity	5.33	7.12	9.01
Germany Equity	5.58	6.67	10.00
Italy Equity	8.47	9.79	11.10
Spain Equity	-0.28	0.54	3.18
Netherlands Equity	10.32	13.22	16.46
5-YEAR (GBP)			
Europe Equity	7.04	9.70	12.19
Europe Ex-U.K. Equity	8.25	9.67	12.81
U.K. Equity	4.86	6.90	10.58
U.K. Large-/Mid-Cap Equity	4.21	5.27	6.82
U.K. Small-Cap Equity	9.90	13.29	15.42
Global Equity	9.35	11.60	14.11
Emerging Markets Equity	6.19	7.83	9.89
U.S. Equity	12.93	15.03	17.74
5-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	13.10	14.75	16.29
Poland Equity	4.06	5.94	9.01
Switzerland Equity	10.78	12.25	13.51
Sweden Equity	13.95	16.22	20.52

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 5: Quartile Breakpoints of European Equity Funds (cont.)			
FUND CATEGORY	THIRD QUARTILE (ANNUALIZED, %)	SECOND QUARTILE (ANNUALIZED, %)	FIRST QUARTILE (ANNUALIZED, %)
10-YEAR (EUR)			
Europe Equity	7.88	9.30	11.21
Eurozone Equity	7.87	9.33	10.42
Nordic Equity	11.94	13.58	14.68
Global Equity	9.54	11.07	12.86
Emerging Markets Equity	4.60	5.52	6.48
U.S. Equity	13.17	14.77	16.00
France Equity	9.26	10.28	11.49
Germany Equity	8.17	9.92	11.52
Italy Equity	8.82	9.79	10.92
Spain Equity	2.33	3.37	6.74
Netherlands Equity	13.98	16.33	16.60
10-YEAR (GBP)			
Europe Equity	9.38	11.11	13.90
Europe Ex-U.K. Equity	10.94	11.99	13.21
U.K. Equity	7.64	9.07	12.90
U.K. Large-/Mid-Cap Equity	7.22	8.18	9.39
U.K. Small-Cap Equity	12.45	14.47	15.71
Global Equity	10.67	12.64	14.35
Emerging Markets Equity	5.83	6.53	8.23
U.S. Equity	14.37	16.03	17.38
10-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	17.98	18.83	19.57
Poland Equity	4.78	6.75	8.36
Switzerland Equity	10.75	11.93	13.18
Sweden Equity	15.12	16.27	20.17

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods Dec. 31, 2021. 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 are obtained for all managed funds for which month-end data are available during the performance period. The data include 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 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 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 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 BRITISH 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-U.K. Equity
EAA Fund Europe Ex-UK Large-Cap Equity	
EAA Fund Europe Ex-UK Small/Mid-Cap Equity	U.K. 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	
EAA Fund UK Small-Cap Equity	U.K. Small-Cap Equity
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	
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 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/Mid-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

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 U.K. 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.

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 U.K. 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 U.K. 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 U.K. stock market. The S&P Global BMI is a comprehensive, rules-based index designed to measure global stock market performance.

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