S&P Dow Jones Indices

A Division of S&P Global

SPIVA® Europe Scorecard

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 2020 HIGHLIGHTS

The year 2020 proved to be a tumultuous one for European investors, with COVID-19 and subsequent national lockdowns grinding the economies of Europe to a halt. The uncertainty surrounding the pandemic provided an ideal opportunity for active fund managers to prove their worth in what was an extremely volatile period.

 Of active euro-denominated Europe Equity funds, 37% underperformed the <u>S&P Europe 350®</u> in 2020. This figure rose to 75% over 5 years and 86% over 10 years.

As the first wave of COVID-19 peaked in March 2020, the S&P Europe 350 benchmark saw its biggest single-month loss in more than 10 years.

 Active fund investors were not immune to the troubles; on an assetweighted basis Europe Equity funds also suffered their largest singlemonth loss in more than 10 years. This tail-risk event was similarly seen in 13 of the remaining 22 fund categories and 19 of the 22 benchmarks.

The sharp drawdown was followed by a modest recovery, aided by monetary and fiscal stimulus packages swiftly assembled by central banks and governments. As the first wave of COVID-19 began to settle, markets calmed and grew at a steady pace over the summer months. News of a vaccine broke in early November and immediately sent markets soaring.

 The renewed optimism saw the majority of fund categories and benchmarks post their largest single-month gains in the past 10 years. Out of 23 categories, 14 exhibited their largest single-month return in over 10 years when measured on an asset-weighted basis. The same was true for 17 out of 23 benchmarks.

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Experience the active vs. passive debate on a global scale.

A Most Volatile Year

The volatile market conditions seen throughout 2020 might have affected the dispersion in performance across funds. Therefore, some funds may have significantly underperformed other funds in the same category.

- The interquartile range (IQR)—the difference between the 75th and 25th percentile funds—revealed double-digit return differences over the one-year period in 16 out of 23 fund categories, considerably larger than the IQR in previous years.
- Taking Europe as an example, the 2019 one-year IQR was 7.5%, whereas the 2020 one-year IQR stood at 12.4%.

U.K. Funds (Especially Small Caps) Stood Out over the Short Term

- U.K.-focused equity funds scored one of the best comparative performances with respect to their benchmark, with 20% underperforming the <u>S&P United Kingdom BMI</u>, with little variation across size buckets. This percentage increased over longer time periods under scrutiny, reaching 65% over the 10-year period.
- While these numbers were similar across U.K. Large-/Mid-Cap and Small-Cap Equity funds, the return performance was not. U.K. Large-/Mid-Cap Equity funds experienced a -7.9% assetweighted average return in 2020, compared with the 7.9% attained by Small-Cap Equity funds.
- The size performance gap was not due to outliers skewing the average. Looking at percentiles, the 25th percentile best large-/mid-cap fund achieved lower returns than the 75th percentile best small-cap fund (-5.7% versus -0.6%).

Country Highlights

- France Equity funds bucked their recent trend of underperforming the benchmark. Over the one-year period, 66% beat the benchmark. Despite this strong relative performance, French equity funds were unable to recover their losses made during the year—on an asset-weighted basis, they finished the year 1.5% lower, and 3% above the benchmark. Over the three-year period, only 9% of France Equity funds were able to beat the S&P France BMI and trailed by 3.8% annually on an asset-weighted basis.
- Nordic countries were comparatively less affected by the COVID-19 pandemic and its economic backlash.
 - While Nordic-focused equity funds reached an impressive 18% asset-weighted average return in 2020, this exceptional performance was not enough to top the S&P Nordic BMI, standing at 19.7%. Moreover, more than 59% of funds underperformed the benchmark.
 - Denmark-focused equity funds stood out by obtaining a 29.4% average return on an assetweighted basis. Despite this outstanding performance, Denmark Equity fund managers still trailed the S&P Denmark BMI after it recorded a 31.0% return for the one-year period.
- Conversely, some countries experiencing harsher outbreaks, such as Spain and Italy, had their average fund returns sitting in deep negative territory. Italian equity funds' average returns trailed

the S&P Italy BMI by 0.76% over the one-year period on an asset-weighted basis. Similarly, Spain Equity funds lagged the S&P Spain BMI over the same period (-12.23% versus -11.91%).

Risk-Adjusted Returns

The SPIVA Europe Mid-Year 2020 Scorecard introduced Report 1b: Risk-Adjusted Fund Underperformance for the first time in the SPIVA Europe Scorecard. In this year-end 2020 report, we have also introduced Report 4: Return/Volatility Ratio of European Equity Funds and Benchmarks, where the return-to-volatility ratio is computed by dividing the average equity fund performance from Reports 3a and 3b by the annualized standard deviation of fund returns over the same period.

One of the most common arguments in the active versus passive debate is that active managers may invest with less risk than their respective benchmarks. Reports 1b and 4 counter this argument with risk-adjusted results, highlighting the following.

- For the three-year period, 70% of Europe Equity funds had worse risk-adjusted returns than the S&P Europe 350. Over the 10-year period, this figure rose to 87%.
- Over the 3-, 5-, and 10-year periods, Europe Equity funds had worse return-to-volatility ratios than the S&P Europe 350 when measured on an asset-weighted basis.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

Since its first publication 19 years ago, the SPIVA Scorecard has served as the defacto 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

FUND CATEGORY	COMPARISON INDEX	1-YEAR	3-YEAR	5-YEAR	10-YEAR
EURO-DENOMINATED FUNI	OS (EUR)	_	_	_	
Europe Equity	S&P Europe 350	37.27	69.76	75.17	85.89
Eurozone Equity	S&P Eurozone BMI	58.38	79.23	86.52	92.26
Nordic Equity	S&P Nordic BMI	59.09	73.91	79.31	83.33
Global Equity	S&P Global 1200	54.69	81.60	90.52	97.85
Emerging Markets Equity	S&P/IFCI Composite	59.04	75.73	81.79	93.98
U.S. Equity	S&P 500 [®]	54.34	81.56	88.19	94.62
France Equity	S&P France BMI	34.27	91.40	85.59	91.53
Germany Equity	S&P Germany BMI	46.32	64.52	74.19	79.57
Italy Equity	S&P Italy BMI	55.36	88.33	82.35	79.69
Spain Equity	S&P Spain BMI	61.96	77.78	73.56	83.33
Netherlands Equity	S&P Netherlands BMI	83.33	100.00	100.00	100.00
BRITISH POUND STERLING	-DENOMINATED FUNDS (GBP)				
Europe Equity	S&P Europe 350	33.33	64.08	63.27	75.28
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	53.06	66.67	76.12	82.96
U.K. Equity	S&P United Kingdom BMI	20.40	34.36	56.37	64.77
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	19.38	36.59	69.14	67.37
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	14.81	32.05	31.58	61.90
Global Equity	S&P Global 1200	50.72	69.14	81.43	92.97
Emerging Markets Equity	S&P/IFCI Composite	53.73	62.22	72.12	82.65
U.S. Equity	S&P 500	53.25	71.24	80.54	92.90
FUNDS DENOMINATED IN C	THER EUROPEAN LOCAL CURRENCIE	s			
Denmark Equity	S&P Denmark BMI	68.42	88.89	52.94	85.29
Poland Equity	S&P Poland BMI	5.88	31.58	60.53	63.16
Switzerland Equity	S&P Switzerland BMI	40.00	84.50	61.11	84.15
Sweden Equity	S&P Sweden BMI	48.45	64.66	68.70	81.02

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2020. 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.

FUND CATEGORY	COMPARISON INDEX	3-YEAR	5-YEAR	10-YEAR
EURO-DENOMINATED FUN	DS (EUR)	•	•	
Europe Equity	S&P Europe 350	70.32	77.52	87.12
Eurozone Equity	S&P Eurozone BMI	76.94	84.93	90.71
Nordic Equity	S&P Nordic BMI	86.96	96.55	91.67
Global Equity	S&P Global 1200	80.43	90.33	97.85
Emerging Markets Equity	S&P/IFCI Composite	77.78	85.80	93.61
U.S. Equity	S&P 500	82.60	89.56	97.31
France Equity	S&P France BMI	91.86	88.29	88.14
Germany Equity	S&P Germany BMI	65.59	79.57	80.65
Italy Equity	S&P Italy BMI	88.33	80.39	71.88
Spain Equity	S&P Spain BMI	77.78	73.56	82.29
Netherlands Equity	S&P Netherlands BMI	100.00	100.00	100.00
BRITISH POUND STERLING	G-DENOMINATED FUNDS (GBP)			
Europe Equity	S&P Europe 350	66.02	71.43	77.53
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	68.09	82.09	82.96
U.K. Equity	S&P United Kingdom BMI	30.17	64.77	70.46
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	31.71	78.86	71.61
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	30.77	35.53	59.52
Global Equity	S&P Global 1200	69.84	83.29	96.17
Emerging Markets Equity	S&P/IFCI Composite	67.78	78.79	86.73
U.S. Equity	S&P 500	77.25	88.69	98.82
FUNDS DENOMINATED IN C	OTHER EUROPEAN LOCAL CURRENCIES			
Denmark Equity	S&P Denmark BMI	97.22	73.53	82.35
Poland Equity	S&P Poland BMI	34.21	50.00	60.53
Switzerland Equity	S&P Switzerland BMI	88.00	68.89	92.35
Sweden Equity	S&P Sweden BMI	67.24	77.39	82.48

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2020. Risk-adjusted return is computed as annualized average monthly return divided by annualized standard deviation of the monthly return for the mea sured periods. Index performance based on total return. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
1-YEAR (EUR)		
Europe Equity	1076	93.87
Eurozone Equity	567	96.30
Nordic Equity	22	100.00
Global Equity	1280	95.63
Emerging Markets Equity	354	93.22
U.S. Equity	392	95.15
France Equity	213	98.59
Germany Equity	95	90.53
Italy Equity	56	85.71
Spain Equity	92	92.39
Netherlands Equity	6	83.33
1-YEAR (GBP)		
Europe Equity	102	93.14
Europe Ex-U.K. Equity	147	95.24
U.K. Equity	353	95.47
U.K. Large-/Mid-Cap Equity	160	94.38
U.K. Small-Cap Equity	81	95.06
Global Equity	487	95.07
Emerging Markets Equity	201	94.03
U.S. Equity	246	94.72
1-YEAR (OTHER EUROPEAN LOCAL CURF	RENCIES)	
Denmark Equity	38	92.11
Poland Equity	34	97.06
Switzerland Equity	215	94.88
Sweden Equity	97	100.00
3-YEAR (EUR)		
Europe Equity	1068	82.87
Eurozone Equity	568	88.38
Nordic Equity	23	86.96
Global Equity	1114	84.74
Emerging Markets Equity	342	80.70
U.S. Equity	385	79.22
France Equity	221	90.05
Germany Equity	93	81.72
Italy Equity	60	78.33
Spain Equity	90	85.56
Netherlands Equity	7	57.14

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
3-YEAR (GBP)	NO. OF FORDO AT START	OOKVIVOROIIII (70)
Europe Equity	103	75.73
Europe Ex-U.K. Equity	141	86.52
U.K. Equity	358	85.20
U.K. Large-/Mid-Cap Equity	164	78.05
U.K. Small-Cap Equity	78	93.59
Global Equity	431	83.29
Emerging Markets Equity	180	82.78
U.S. Equity	233	81.97
3-YEAR (OTHER EUROPEAN LOCAL CURRENCI		01.07
Denmark Equity	36	86.11
Poland Equity	38	86.84
	200	89.00
Switzerland Equity Sweden Equity	116	78.45
	110	76.45
5-YEAR (EUR)	4000	74.00
Europe Equity	1023	74.88
Eurozone Equity	564	81.56
Nordic Equity	29	65.52
Global Equity	1065	73.80
Emerging Markets Equity	324	72.53
U.S. Equity	364	70.88
France Equity	222	83.33
Germany Equity	93	76.34
Italy Equity	51	68.63
Spain Equity	87	78.16
Netherlands Equity	8	50.00
5-YEAR (GBP)		
Europe Equity	98	67.35
Europe Ex-U.K. Equity	134	77.61
U.K. Equity	369	74.80
U.K. Large-/Mid-Cap Equity	175	67.43
U.K. Small-Cap Equity	76	81.58
Global Equity	377	76.66
Emerging Markets Equity	165	72.12
U.S. Equity	221	70.14
5-YEAR (OTHER EUROPEAN LOCAL CURRENCI	ES)	
Denmark Equity	34	82.35
Poland Equity	38	86.84
Switzerland Equity	180	82.22
Sweden Equity	115	69.57

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship Consistency of European Equ	· · · ·	
FUND CATEGORY	NO. OF FUNDS AT START	SURVIVORSHIP (%)
10-YEAR (EUR)		
Europe Equity	1141	49.61
Eurozone Equity	646	57.43
Nordic Equity	24	50.00
Global Equity	1117	48.79
Emerging Markets Equity	266	58.27
U.S. Equity	372	48.12
France Equity	236	63.98
Germany Equity	93	61.29
Italy Equity	64	46.88
Spain Equity	96	54.17
Netherlands Equity	21	14.29
10-YEAR (GBP)		
Europe Equity	89	41.57
Europe Ex-U.K. Equity	135	57.78
U.K. Equity	457	49.45
U.K. Large-/Mid-Cap Equity	236	41.53
U.K. Small-Cap Equity	84	61.90
Global Equity	313	47.92
Emerging Markets Equity	98	56.12
U.S. Equity	169	44.97
10-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	34	70.59
Poland Equity	38	78.95
Switzerland Equity	183	62.30
Sweden Equity	137	48.18

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2020. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

FUND CATEGORY	1-YEAR (%)	3-YEAR (ANNUALIZED %)	5-YEAR (ANNUALIZED %)	10-YEAR (ANNUALIZED %)
EUR-DENOMINATED FUNDS	•			
Europe Equity	2.10	2.79	4.16	6.01
S&P Europe 350	-2.79	3.68	5.01	7.07
Eurozone Equity	0.41	1.34	3.86	5.30
S&P Eurozone BMI	0.28	3.56	6.04	7.38
Nordic Equity	19.12	10.02	8.18	7.77
S&P Nordic BMI	19.71	11.74	9.74	9.91
Global Equity	6.40	7.04	7.19	7.41
S&P Global 1200	6.01	10.12	10.28	11.34
Emerging Markets Equity	7.25	4.14	8.32	3.02
S&P/IFCI Composite	7.90	5.35	10.07	5.17
U.S. Equity	9.16	10.88	9.93	11.39
S&P 500	8.62	13.47	12.51	14.94
France Equity	1.74	0.11	4.49	6.29
S&P France BMI	-4.56	4.15	7.01	8.21
Germany Equity	7.27	1.66	4.98	6.94
S&P Germany BMI	4.20	2.12	5.59	7.77
Italy Equity	-3.63	0.24	2.43	4.49
S&P Italy BMI	-3.70	3.01	3.67	4.63
Spain Equity	-13.02	-5.40	-0.84	1.87
S&P Spain BMI	-11.91	-3.32	0.76	2.63
Netherlands Equity	7.71	6.54	8.62	7.87
S&P Netherlands BMI	18.32	13.89	13.79	12.65
GBP-DENOMINATED FUNDS				
Europe Equity	8.55	4.98	9.46	8.34
S&P Europe 350	2.73	3.95	9.16	7.53
Europe Ex-U.K. Equity	11.38	5.35	10.01	8.50
S&P Europe Ex-UK BMI	9.72	6.33	11.25	8.92
U.K. Equity	-3.65	1.62	5.96	7.13
S&P United Kingdom BMI	-11.63	-1.66	4.70	5.41
U.K. Large-/Mid-Cap Equity	-7.72	-0.05	4.48	5.91
S&P United Kingdom LargeMidCap	-12.61	-2.34	4.47	4.48
U.K. Small-Cap Equity	7.96	5.95	10.07	10.57
S&P United Kingdom SmallCap	-6.25	2.03	5.94	9.99
Global Equity	14.80	9.94	13.34	9.91
S&P Global 1200	11.96	10.35	14.62	11.81
Emerging Markets Equity	14.67	5.44	13.90	4.59
S&P/IFCI Composite	13.98	5.64	14.44	5.63
U.S. Equity	17.63	13.05	15.76	13.44
S&P 500	14.74	13.78	16.97	15.44
FUNDS DENOMINATED IN OTHER EURO			10.91	10.44
Denmark Equity	29.19	12.72	10.50	14.05
S&P Denmark BMI	31.01	15.79	10.92	15.22
Poland Equity	9.33	-1.05	3.84	-0.80
S&P Poland BMI	-5.89	-5.21	3.93	1.73
	5.82	5.13	8.09	7.77
Switzerland Equity				
S&P Switzerland BMI	3.98	7.72	8.09	9.10
Sweden Equity S&P Sweden BMI	21.48 17.63	15.58 14.41	13.24	11.81

FUND CATEGORY	1-YEAR (%)	3-YEAR (ANNUALIZED %)	5-YEAR (ANNUALIZED %)	10-YEAR (ANNUALIZED %)
EUR-DENOMINATED FUNDS	L	((/ . / . / . / . / . / . / .	((
Europe Equity	1.44	3.35	4.16	6.42
S&P Europe 350	-2.79	3.68	5.01	7.07
Eurozone Equity	0.81	1.82	4.12	5.76
S&P Eurozone BMI	0.28	3.56	6.04	7.38
Nordic Equity	17.95	10.01	7.40	7.64
S&P Nordic BMI	19.71	11.74	9.74	9.91
Global Equity	6.35	7.65	7.56	8.05
S&P Global 1200	6.01	10.12	10.28	11.34
Emerging Markets Equity	8.52	4.80	8.89	3.64
S&P/IFCI Composite	7.90	5.35	10.07	5.17
U.S. Equity	8.68	11.03	9.85	11.50
S&P 500	8.62	13.47	12.51	14.94
France Equity	-1.52	0.32	4.09	6.02
S&P France BMI	-4.56	4.15	7.01	8.21
Germany Equity	5.83	1.26	4.81	7.37
S&P Germany BMI	4.20	2.12	5.59	7.77
Italy Equity	-4.46	0.16	1.92	4.33
S&P Italy BMI	-3.70	3.01	3.67	4.63
Spain Equity	-12.23	-4.81	-0.31	2.46
S&P Spain BMI	-11.91	-3.32	0.76	2.63
	4.62	5.38	7.38	6.87
Netherlands Equity S&P Netherlands BMI	18.32	13.89	13.79	12.65
GBP-DENOMINATED FUNDS	10.32	13.09	13.79	12.00
Europe Equity	18.98	9.75	12.87	10.47
S&P Europe 350	2.73	3.95	9.16	7.53
<u>_</u>	11.26	6.18	10.35	8.93
Europe Ex-U.K. Equity	9.72	6.33	11.25	8.92
S&P Europe Ex-UK BMI	-5.00		5.68	6.64
U.K. Equity S&P United Kingdom BMI		1.13		5.41
•	-11.63	-1.66	4.70	
U.K. Large-/Mid-Cap Equity	-7.87	-0.09	4.75	6.01
S&P United Kingdom LargeMidCap	-12.61	-2.34	4.47	4.48
U.K. Small-Cap Equity	7.85	5.84	10.27	11.39
S&P United Kingdom SmallCap	-6.25	2.03	5.94	9.99
Global Equity	18.81	12.23	15.41	11.17
S&P Global 1200	11.96	10.35	14.62	11.81
Emerging Markets Equity	16.28	6.02	14.17	5.48
S&P/IFCI Composite	13.98	5.64	14.44	5.63
U.S. Equity	22.05	14.40	16.68	13.74
S&P 500	14.74	13.78	16.97	15.44
FUNDS DENOMINATED IN OTHER EURO				
Denmark Equity	29.39	13.41	10.80	13.99
S&P Denmark BMI	31.01	15.79	10.92	15.22
Poland Equity	1.78	-3.83	1.92	-4.12
S&P Poland BMI	-5.89	-5.21	3.93	1.73
Switzerland Equity	6.16	6.26	8.90	8.63
S&P Switzerland BMI	3.98	7.72	8.09	9.10
Sweden Equity	19.73	14.33	12.84	11.55
S&P Sweden BMI	17.63	14.41	12.59	11.35

Report 4: Return/Volatility	Ratio of European Equity Fu	ınds and	l Benchn	narks	I					
EUND GATEGORY	COMPARIO NA INIDEN	ВІ	ENCHMA	RK	ASSE	T-WEIG	HTED	EQUA	AL-WEIG	HTED
FUND CATEGORY	COMPARISON INDEX	3- 5- 10- YEAR YEAR YEAR		3- YEAR	5- YEAR	10- YEAR	3- YEAR	5- YEAR	10- YEAR	
EUR-DENOMINATED FUN	DS									
Europe Equity	S&P Europe 350	0.22	0.35	0.52	0.19	0.28	0.47	0.16	0.28	0.44
Eurozone Equity	S&P Eurozone BMI	0.18	0.36	0.46	0.10	0.25	0.37	0.07	0.24	0.35
Nordic Equity	S&P Nordic BMI	0.70	0.69	0.68	0.55	0.48	0.50	0.54	0.52	0.51
Global Equity	S&P Global 1200	0.61	0.75	0.92	0.48	0.57	0.66	0.44	0.54	0.61
Emerging Markets Equity	S&P/IFCI Composite	0.32	0.70	0.35	0.28	0.62	0.25	0.24	0.58	0.21
U.S. Equity	S&P 500	0.78	0.87	1.17	0.63	0.66	0.87	0.60	0.65	0.85
France Equity	S&P France BMI	0.20	0.41	0.51	0.02	0.24	0.39	0.01	0.27	0.41
Germany Equity	S&P Germany BMI	0.10	0.31	0.44	0.06	0.25	0.40	0.08	0.28	0.43
Italy Equity	S&P Italy BMI	0.12	0.16	0.22	0.01	0.09	0.23	0.01	0.12	0.24
Spain Equity	S&P Spain BMI	-0.14	0.04	0.13	-0.22	-0.02	0.14	-0.24	-0.04	0.10
Netherlands Equity	S&P Netherlands BMI	0.82	0.95	0.89	0.27	0.44	0.44	0.32	0.50	0.50
GBP-DENOMINATED FUN	DS									
Europe Equity	S&P Europe 350	0.26	0.69	0.57	0.59	0.93	0.80	0.30	0.68	0.62
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	0.40	0.81	0.63	0.39	0.76	0.65	0.32	0.70	0.60
U.K. Equity	S&P United Kingdom BMI	-0.10	0.34	0.43	0.06	0.37	0.50	0.08	0.38	0.53
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	-0.15	0.33	0.36	0.00	0.32	0.45	0.00	0.30	0.45
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	0.09	0.33	0.65	0.28	0.57	0.77	0.28	0.56	0.72
Global Equity	S&P Global 1200	0.71	1.17	1.04	0.84	1.24	0.95	0.69	1.08	0.86
Emerging Markets Equity	S&P/IFCI Composite	0.38	0.95	0.37	0.39	0.93	0.37	0.35	0.91	0.30
U.S. Equity	S&P 500	0.89	1.29	1.31	0.85	1.16	1.05	0.76	1.10	1.04
FUNDS DENOMINATED IN	OTHER EUROPEAN LOCAL	CURRE	NCIES							
Denmark Equity	S&P Denmark BMI	1.18	0.86	1.08	0.87	0.78	1.02	0.81	0.75	1.02
Poland Equity	S&P Poland BMI	-0.22	0.19	0.10	-0.20	0.12	-0.24	-0.05	0.23	-0.05
Switzerland Equity	S&P Switzerland BMI	0.61	0.72	0.80	0.47	0.76	0.74	0.38	0.69	0.67
Sweden Equity	S&P Sweden BMI	0.81	0.83	0.77	0.74	0.77	0.74	0.83	0.82	0.78

FUND CATEGORY	THIRD QUARTILE (ANNUALIZED, %)	SECOND QUARTILE (ANNUALIZED, %)	FIRST QUARTILE (ANNUALIZED, %)
1-YEAR (EUR)			
Europe Equity	-4.52	0.21	7.89
Eurozone Equity	-4.43	-0.91	4.53
Nordic Equity	11.84	17.88	26.47
Global Equity	0.77	5.69	10.92
Emerging Markets Equity	2.98	6.84	11.87
U.S. Equity	2.47	8.11	13.45
France Equity	-6.01	-0.56	6.73
Germany Equity	0.29	5.51	14.24
Italy Equity	-6.88	-3.19	-0.88
Spain Equity	-17.72	-13.05	-7.97
Netherlands Equity	5.82	6.84	15.89
1-YEAR (GBP)			
Europe Equity	2.05	7.28	16.38
Europe Ex-U.K. Equity	6.10	9.76	16.60
U.K. Equity	-10.22	-5.97	3.25
U.K. Large-/Mid-Cap Equity	-11.03	-8.67	-5.73
U.K. Small-Cap Equity	-0.56	7.03	12.76
Global Equity	6.73	12.32	19.38
Emerging Markets Equity	9.14	13.96	20.56
U.S. Equity	7.99	14.66	24.66
1-YEAR (OTHER EUROPEAN LOCA	AL CURRENCIES)		
Denmark Equity	27.19	29.51	31.93
Poland Equity	5.40	13.17	19.01
Switzerland Equity	3.05	4.93	8.66
Sweden Equity	10.70	18.20	27.26
3-YEAR (EUR)			
Europe Equity	-0.15	2.34	5.52
Eurozone Equity	-0.75	1.50	3.44
Nordic Equity	8.55	10.05	12.20
Global Equity	4.16	6.66	9.57
Emerging Markets Equity	2.27	4.20	6.10
U.S. Equity	7.29	10.41	13.30
France Equity	-2.38	0.30	2.48
Germany Equity	-1.39	0.97	3.62
Italy Equity	-1.21	0.73	1.84
Spain Equity	-6.97	-5.09	-3.14

FUND CATEGORY	THIRD QUARTILE (ANNUALIZED, %)	SECOND QUARTILE (ANNUALIZED, %)	FIRST QUARTILE (ANNUALIZED, %)
3-YEAR (GBP)	, - , -, ,	, , , , , ,	,,
Europe Equity	2.15	3.83	8.66
Europe Ex-U.K. Equity	2.35	4.60	8.82
U.K. Equity	-1.28	1.01	4.40
U.K. Large-/Mid-Cap Equity	-1.81	-0.70	1.09
U.K. Small-Cap Equity	1.90	5.91	9.65
Global Equity	5.83	8.88	12.38
Emerging Markets Equity	2.93	5.45	7.95
U.S. Equity	8.43	11.46	15.62
3-YEAR (OTHER EUROPEAN LOCA	AL CURRENCIES)		
Denmark Equity	11.86	13.45	14.81
Poland Equity	-4.36	-1.08	2.40
Switzerland Equity	3.80	6.02	7.19
Sweden Equity	10.20	13.58	18.17
5-YEAR (EUR)			
Europe Equity	1.93	3.64	6.00
Eurozone Equity	2.18	3.76	5.15
Nordic Equity	7.36	8.05	9.99
Global Equity	5.37	6.82	8.80
Emerging Markets Equity	6.43	8.32	10.14
U.S. Equity	7.30	9.45	11.41
France Equity	3.00	4.45	5.91
Germany Equity	2.77	4.54	6.43
Italy Equity	1.11	2.81	3.60
Spain Equity	-2.54	-1.50	1.76
Netherlands Equity	7.01	9.54	12.20
5-YEAR (GBP)			
Europe Equity	6.59	9.82	11.44
Europe Ex-U.K. Equity	8.05	9.45	11.76
U.K. Equity	3.59	5.32	8.22
U.K. Large-/Mid-Cap Equity	3.26	4.30	5.49
U.K. Small-Cap Equity	8.03	10.42	12.27
Global Equity	10.44	12.58	14.62
Emerging Markets Equity	11.31	14.00	16.06
U.S. Equity	12.63	14.94	17.27
5-YEAR (OTHER EUROPEAN LOCA	AL CURRENCIES)		
Denmark Equity	9.73	11.09	12.20
Poland Equity	2.19	3.61	6.47
Switzerland Equity	6.82	8.01	9.76

FUND CATEGORY	THIRD QUARTILE (ANNUALIZED, %)	SECOND QUARTILE (ANNUALIZED, %)	FIRST QUARTILE (ANNUALIZED, %)
10-YEAR (EUR)	, , , , , , , , , , , , , , , , , , , ,	, - , - , - , - , - , - , - , - , - , -	
Europe Equity	4.22	5.61	7.50
Eurozone Equity	4.00	5.18	6.29
Nordic Equity	7.13	8.78	10.10
Global Equity	6.26	7.57	9.05
Emerging Markets Equity	1.86	2.89	4.02
U.S. Equity	9.88	11.26	12.62
France Equity	5.09	5.92	7.09
Germany Equity	4.77	6.46	8.17
Italy Equity	3.24	4.51	5.89
Spain Equity	-0.08	1.50	3.48
Netherlands Equity	8.79	9.93	10.04
10-YEAR (GBP)			
Europe Equity	6.81	8.11	10.08
Europe Ex-U.K. Equity	6.95	8.08	9.89
U.K. Equity	5.26	6.64	9.33
U.K. Large-/Mid-Cap Equity	4.67	5.80	6.65
U.K. Small-Cap Equity	9.26	11.85	12.94
Global Equity	7.75	9.61	11.04
Emerging Markets Equity	3.59	4.51	6.05
U.S. Equity	11.42	12.75	14.23
10-YEAR (OTHER EUROPEAN LOC	CAL CURRENCIES)		
Denmark Equity	13.37	13.90	14.51
Poland Equity	-0.48	1.49	3.58
Switzerland Equity	7.23	7.95	9.10
Sweden Equity	9.76	10.89	15.53

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 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			
EAA Fund Europe Large-Cap Blend Equity			
EAA Fund Europe Large-Cap Growth Equity	Europe Equity		
EAA Fund Europe Large-Cap Value Equity	Europe Equity		
EAA Fund Europe Mid-Cap Equity			
EAA Fund Europe Small-Cap Equity			
EAA Fund Eurozone Flex-Cap Equity			
EAA Fund Eurozone Large-Cap Equity	Eurozone Equity		
EAA Fund Eurozone Mid-Cap Equity	Luiozone Equity		
EAA Fund Eurozone Small-Cap Equity			
EAA Fund France Large-Cap Equity	France Equity		
EAA Fund France Small/Mid-Cap Equity	France Equity		
EAA Fund Germany Large-Cap Equity	Germany Equity		
EAA Fund Germany Small/Mid-Cap Equity	Germany Equity		
EAA Fund Italy Equity	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			
EAA Fund Europe Large-Cap Blend Equity			
EAA Fund Europe Large-Cap Growth Equity	Form Forth		
EAA Fund Europe Large-Cap Value Equity	— Europe Equity		
EAA Fund Europe Mid-Cap Equity			
EAA Fund Europe Small-Cap Equity			
EAA Fund Europe Ex-UK Large-Cap Equity	Funda Fullik Fanifa		
EAA Fund Europe Ex-UK Small/Mid-Cap Equity	— Europe Ex-U.K. Equity		
EAA Fund UK Large-Cap Blend Equity			
EAA Fund UK Large-Cap Growth Equity			
EAA Fund UK Large-Cap Value Equity	U.K. Large-/Mid-Cap 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			
EAA Fund UK Large-Cap Growth Equity			
EAA Fund UK Large-Cap Value Equity	HIV Facility		
EAA Fund UK Mid-Cap Equity	— U.K. 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	- Swadon Equity		
EAA Fund Sweden Small/Mid-Cap Equity	Sweden 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	·		
EAA Fund Global Large-Cap Growth Equity	Global Equity		
EAA Fund Global Large-Cap Value 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			
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 be at 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 pth 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 <u>S&P/IFCI Composite</u> 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 <u>S&P Global BMI</u>, 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 <u>S&P Eurozone BMI</u>, 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 <u>S&P Global 1200</u> is a composite of seven headline indices, many of which are accepted leaders in their regions. It includes the <u>S&P 500</u> (U.S.), S&P Europe 350 (Europe), <u>S&P/TOPIX 150</u> (Japan), <u>S&P/TSX 60</u> (Canada), <u>S&P/ASX All Australian 50</u> (Australia), <u>S&P Asia 50</u> (Asia Ex-Japan), and <u>S&P Latin America 40</u> (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 <u>S&P United Kingdom BMI</u>, 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 <u>S&P United Kingdom LargeMidCap</u>, 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 <u>S&P United Kingdom SmallCap</u>, 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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