
SPIVA[®] Europe Scorecard

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SUMMARY

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. 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.

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 benchmark indices over 1-, 3-, 5-, and 10-year investment horizons. The range of fund categories covered in the SPIVA Europe Scorecard has recently been expanded to include domestic equity funds from Italy, the Netherlands, Poland, Spain, Switzerland, and the Nordic region, with specific data for Denmark and Sweden.

Equity Funds Denominated in Euros (EUR)

Global equity markets, as measured by the S&P Global 1200, increased 10.4%¹ over the past one-year period in euro terms. However, this positive performance masked the heightened volatility markets experienced throughout this period, which was mainly a result of poor Chinese growth prospects, a substantial decline in energy prices, and policy divergence among central banks. Normally, these would be the ideal conditions in which active managers might be expected to outperform, as they could theoretically use their stock-picking skills to take advantage of the perceived discrepancies in the market. However, our report indicates that only 68% of euro-denominated active funds invested in European equities outperformed their benchmarks over the one-year period but the majority underperformed their benchmarks over the 3-, 5-, and 10- year periods. In terms of emerging market equities, performance was anemic, principally owing to unfavorable economic performance in China and other emerging countries.

¹ It should be noted that the positive performance resulted from the weakness of the euro. In U.S. dollar terms, the performance was down 0.86% over the same period.

There is a widely held belief that active portfolio management can be most effective in less efficient markets, such as emerging market equities, as these markets can provide managers the opportunity to exploit perceived mispricing. However, this view was not substantiated by our research, as over 70% of active funds underperformed their benchmarks across all observed time horizons.

In the U.S., the performance of equity markets remained solid, albeit weaker than previous years. However, over 84% of U.S. active funds underperformed the S&P 500[®] over the past one-year period. This poor performance continued over the longer term, as over 98% of active funds trailed the benchmark over the past 10 years.

The size of funds (i.e., the amount of assets under management) appears to matter for larger category funds. Results from Reports 3 and 4 highlight that asset-weighted returns were generally higher across the different time horizons examined. Over the 10-year period, over 40% of euro-denominated active funds invested in European equities were either liquidated or merged.

Funds Denominated in Pound Sterling (GBP)

With respect to GBP-denominated categories, actively managed funds invested in U.K. equities performed well and the majority of U.K. large- and mid-cap funds posted higher returns than their respective benchmarks across the one-, three-, and five-year periods. This stands in stark contrast with U.K. small-cap funds, which underperformed their corresponding benchmark over the same time horizons. Moreover, over the 10-year time horizon, all U.K. fund categories lagged their respective benchmarks. In addition, GBP-denominated funds invested in emerging, U.S., and international equities underperformed their corresponding benchmarks across all the time horizons studied.

Funds Denominated in Other European Local Currencies

For the first time, the SPIVA Europe Scorecard includes fund categories denominated in other European local currencies. Similar to the euro- and pound-sterling categories, all active funds denominated in other European local currencies underperformed their benchmarks over the 5- and 10-year periods, even if outperformance was achievable over a shorter time horizon for certain categories.

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

Since its first publication 14 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For more than a decade, we have heard passionate arguments from believers in both camps when headline numbers have deviated from their beliefs.

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 investors fared in a particular period can be ascertained by calculating weighted average returns where each fund's return is weighted by net assets. SPIVA Scorecards show both equal- and asset-weighted averages.
- **Data Cleaning:** SPIVA Scorecards avoid double counting multiple share classes in all count-based calculations by using only the share class with greater assets. Index, leveraged and inverse funds, along with other index-linked products, are excluded because this is meant to be a scorecard for active managers.

REPORTS

Report 1: Percentage of European Equity Funds Outperformed by Benchmarks					
Fund Category	Comparison Index	One-Year	Three-Year	Five-Year	Ten-Year
Data in Euros (EUR)					
Europe Equity	S&P Europe 350	31.94	63.77	80.63	86.25
Eurozone Equity	S&P Eurozone BMI	57.88	84.75	88.35	91.35
Nordic Equity	S&P Nordic BMI	38.64	56.41	71.43	86.96
Global Equity	S&P Global 1200	73.60	89.44	96.36	97.83
Emerging Markets Equity	S&P/IFCI	74.92	82.33	89.11	97.01
U.S. Equity	S&P 500	83.91	93.38	97.23	98.87
France Equity	S&P France BMI	44.69	67.77	83.27	84.54
Germany Equity	S&P Germany BMI	46.24	63.74	71.91	79.09
Italy Equity	S&P Italy BMI	31.91	40.00	51.61	72.53
Spain Equity	S&P Spain BMI	24.05	67.07	69.07	82.35
Netherlands Equity	S&P Netherlands BMI	36.36	93.33	100.00	96.77
Data in Pound Sterling (GBP)					
Europe Equity	S&P Europe 350	17.35	45.16	57.73	72.58
Europe Ex-U.K. Equity	S&P Europe Ex-U.K. BMI	24.79	55.46	59.84	72.66
U.K. Equity	S&P United Kingdom BMI	22.16	33.76	52.91	71.82
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	14.14	26.70	46.09	70.67
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	49.25	64.29	78.08	81.16
Global Equity	S&P Global 1200	61.19	77.72	89.73	89.08
Emerging Markets Equity	S&P/IFCI	71.93	73.28	73.74	85.42
U.S. Equity	S&P 500	78.04	80.26	94.97	94.52
Data in Other European Local Currencies					
Denmark Equity	S&P Denmark BMI	69.70	63.64	87.88	94.44
Poland Equity	S&P Poland BMI	19.57	40.82	58.70	81.25
Switzerland Equity	S&P Switzerland BMI	37.78	62.70	95.19	77.94
Sweden Equity	S&P Sweden BMI	41.82	47.50	76.30	76.52

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2015. Outperformance is based on equal-weighted fund counts. Index performance based on total return. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship Consistency of European Equity Funds		
Fund Category	No. of Funds at Start	Survivorship (%)
One-Year (EUR)		
Europe Equity	1067	92.88
Eurozone Equity	592	93.58
Nordic Equity	48	93.75
Global Equity	1245	93.01
Emerging Markets Equity	352	90.34
U.S. Equity	406	94.09
France Equity	230	96.52
Germany Equity	99	93.94
Italy Equity	47	93.62
Spain Equity	81	93.83
Netherlands Equity	11	90.91
One-Year (GBP)		
Europe Equity	109	97.25
Europe Ex-U.K. Equity	128	95.31
U.K. Equity	381	95.54
U.K. Large-/Mid-Cap Equity	216	95.83
U.K. Small-Cap Equity	69	94.20
Global Equity	468	93.59
Emerging Markets Equity	182	92.31
U.S. Equity	232	93.10
One-Year (Other European Local Currencies)		
Denmark Equity	33	100.00
Poland Equity	64	98.44
Switzerland Equity	183	96.72
Sweden Equity	113	95.58
Three-Year (EUR)		
Europe Equity	1073	80.71
Eurozone Equity	624	80.13
Nordic Equity	43	86.05
Global Equity	1228	79.07
Emerging Markets Equity	327	80.12
U.S. Equity	378	80.69
France Equity	246	80.89
Germany Equity	96	83.33
Italy Equity	51	82.35
Spain Equity	84	80.95
Netherlands Equity	15	60.00

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2015. 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 (%)
Three-Year (GBP)		
Europe Equity	100	78.00
Europe Ex-U.K. Equity	126	80.95
U.K. Equity	413	79.66
U.K. Large-/Mid-Cap Equity	236	80.08
U.K. Small-Cap Equity	72	80.56
Global Equity	407	82.80
Emerging Markets Equity	140	82.86
U.S. Equity	186	79.57
Three-Year (Other European Local Currencies)		
Denmark Equity	34	94.12
Poland Equity	67	94.03
Switzerland Equity	188	85.11
Sweden Equity	121	81.82
Five-Year (EUR)		
Europe Equity	1220	63.85
Eurozone Equity	713	65.50
Nordic Equity	38	84.21
Global Equity	1287	65.89
Emerging Markets Equity	276	74.28
U.S. Equity	411	65.69
France Equity	267	70.41
Germany Equity	94	79.79
Italy Equity	63	61.90
Spain Equity	99	68.69
Netherlands Equity	22	31.82
Five-Year (GBP)		
Europe Equity	100	61.00
Europe Ex-U.K. Equity	134	71.64
U.K. Equity	464	64.66
U.K. Large-/Mid-Cap Equity	270	63.33
U.K. Small-Cap Equity	75	70.67
Global Equity	400	69.50
Emerging Markets Equity	108	78.70
U.S. Equity	183	65.03
Five-Year (Other European Local Currencies)		
Denmark Equity	33	84.85
Poland Equity	62	95.16
Switzerland Equity	191	76.96
Sweden Equity	136	66.91

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2015. 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 (%)
Ten-Year (EUR)		
Europe Equity	1208	47.85
Eurozone Equity	757	46.24
Nordic Equity	25	60.00
Global Equity	1254	44.26
Emerging Markets Equity	176	60.80
U.S. Equity	477	38.57
France Equity	292	50.00
Germany Equity	114	55.26
Italy Equity	92	33.70
Spain Equity	122	46.72
Netherlands Equity	31	22.58
Ten-Year (GBP)		
Europe Equity	65	40.00
Europe Ex-U.K. Equity	134	56.72
U.K. Equity	498	45.38
U.K. Large-/Mid-Cap Equity	315	41.90
U.K. Small-Cap Equity	70	55.71
Global Equity	307	53.75
Emerging Markets Equity	52	67.31
U.S. Equity	161	44.72
Ten-Year (Other European Local Currencies)		
Denmark Equity	36	55.56
Poland Equity	24	100.00
Switzerland Equity	142	64.08
Sweden Equity	117	54.70

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2015. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3: Average European Equity Fund Performance (Equal Weighted)				
Category	One-Year (%)	Three-Year (Annualized %)	Five-Year (Annualized %)	Ten-Year (Annualized %)
Data in EUR				
Europe Equity	13.75	13.04	8.41	4.03
S&P Europe 350	8.61	12.33	9.18	4.93
Eurozone Equity	13.03	12.31	7.23	2.98
S&P Eurozone BMI	12.01	14.03	8.75	4.39
Nordic Equity	21.98	16.04	8.68	7.69
S&P Nordic BMI	17.08	16.14	10.07	7.85
Global Equity	8.29	13.07	7.98	3.30
S&P Global 1200	10.42	16.88	12.42	6.51
Emerging Markets Equity	-4.96	-0.74	-1.96	2.69
S&P/IFCI	-2.40	1.49	0.48	5.60
U.S. Equity	7.71	18.59	12.80	5.12
S&P 500	12.93	22.80	17.42	8.19
France Equity	17.51	14.41	8.31	3.96
S&P France BMI	13.77	13.86	9.43	4.74
Germany Equity	14.46	13.49	9.39	6.62
S&P Germany BMI	11.37	13.43	9.99	7.40
Italy Equity	21.49	16.04	6.99	0.14
S&P Italy BMI	17.90	13.86	5.59	-0.90
Spain Equity	1.35	10.60	5.00	2.55
S&P Spain BMI	-4.37	10.01	4.53	2.86
Netherlands Equity	16.18	13.62	7.03	3.13
S&P Netherlands BMI	14.44	17.47	11.53	7.18
Data in GBP				
Europe Equity	11.17	11.89	7.48	7.04
S&P Europe 350	3.13	8.81	5.93	5.68
Europe Ex-U.K. Equity	11.04	12.16	7.51	7.00
S&P Europe Ex-U.K. BMI	6.86	11.14	6.50	6.42
U.K. Equity	6.35	11.30	8.62	6.61
S&P United Kingdom BMI	0.40	7.07	6.12	5.67
U.K. Large-/Mid-Cap Equity	4.18	10.07	7.74	5.91
S&P United Kingdom LargeMidCap	-2.59	4.98	4.48	4.74
U.K. Small-Cap Equity	15.53	16.04	12.19	9.13
S&P United Kingdom SmallCap	14.45	17.14	14.19	10.45
Global Equity	3.92	10.78	6.45	5.43
S&P Global 1200	4.84	13.14	9.06	7.25
Emerging Markets Equity	-9.58	-3.27	-3.92	5.42
S&P/IFCI	-7.30	-1.69	-2.50	6.34
U.S. Equity	3.57	16.83	10.88	7.17
S&P 500	7.25	18.95	13.94	8.96
Data in Other European Local Currencies				
Denmark Equity	36.89	31.72	17.67	10.99
S&P Denmark BMI	38.98	29.84	19.68	12.84
Poland Equity	-9.96	-2.80	-4.93	2.21
S&P Poland BMI	-12.18	-1.92	-0.43	1.60
Switzerland Equity	5.27	13.56	7.74	4.51
S&P Switzerland BMI	2.88	13.38	10.13	5.13
Sweden Equity	15.30	19.64	10.46	8.98
S&P Sweden BMI	9.30	16.90	10.13	8.78

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2015. Index performance based on total return. Funds are equal weighted, but indices are not. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 4: Average European Equity Fund Performance (Asset Weighted)				
Category	One-Year (%)	Three-Year (Annualized %)	Five-Year (Annualized %)	Ten-Year (Annualized %)
Data in EUR				
Europe Equity	13.72	13.29	8.99	4.55
S&P Europe 350	8.61	12.33	9.18	4.93
Eurozone Equity	13.15	12.63	7.58	3.09
S&P Eurozone BMI	12.01	14.03	8.75	4.39
Nordic Equity	22.12	15.61	8.92	7.83
S&P Nordic BMI	17.08	16.14	10.07	7.85
Global Equity	8.58	13.93	8.73	4.00
S&P Global 1200	10.42	16.88	12.42	6.51
Emerging Markets Equity	-4.12	0.16	-1.19	3.80
S&P/IFCI	-2.40	1.49	0.48	5.60
U.S. Equity	9.13	19.25	13.34	5.65
S&P 500	12.93	22.80	17.42	8.19
France Equity	15.30	13.45	8.10	3.89
S&P France BMI	13.77	13.86	9.43	4.74
Germany Equity	15.58	14.57	10.21	7.47
S&P Germany BMI	11.37	13.43	9.99	7.40
Italy Equity	21.31	15.75	7.07	0.24
S&P Italy BMI	17.90	13.86	5.59	-0.90
Spain Equity	3.60	11.15	5.67	3.46
S&P Spain BMI	-4.37	10.01	4.53	2.86
Netherlands Equity	17.70	13.46	6.65	3.81
S&P Netherlands BMI	14.44	17.47	11.53	7.18
Data in GBP				
Europe Equity	12.50	12.28	8.43	8.89
S&P Europe 350	3.13	8.81	5.93	5.68
Europe Ex-U.K. Equity	11.90	12.23	7.95	6.89
S&P Europe Ex-U.K. BMI	6.86	11.14	6.50	6.42
U.K. Equity	6.07	10.63	8.16	6.54
S&P United Kingdom BMI	0.40	7.07	6.12	5.67
U.K. Large-/Mid-Cap Equity	4.23	10.07	7.86	6.05
S&P United Kingdom LargeMidCap	-2.59	4.98	4.48	4.74
U.K. Small-Cap Equity	16.63	16.71	12.90	9.67
S&P United Kingdom SmallCap	14.45	17.14	14.19	10.45
Global Equity	5.34	12.38	7.57	6.21
S&P Global 1200	4.84	13.14	9.06	7.25
Emerging Markets Equity	-8.88	-2.77	-2.09	6.69
S&P/IFCI	-7.30	-1.69	-2.50	6.34
U.S. Equity	4.76	17.34	10.96	7.48
S&P 500	7.25	18.95	13.94	8.96
Data in Other European Local Currencies				
Denmark Equity	36.21	31.16	17.37	11.36
S&P Denmark BMI	38.98	29.84	19.68	12.84
Poland Equity	-11.97	-2.91	-9.69	-0.75
S&P Poland BMI	-12.18	-1.92	-0.43	1.60
Switzerland Equity	5.20	13.98	8.65	4.87
S&P Switzerland BMI	2.88	13.38	10.13	5.13
Sweden Equity	13.46	19.00	10.27	9.33
S&P Sweden BMI	9.30	16.90	10.13	8.78

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2015. 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	Second Quartile	First Quartile
One-Year (EUR)			
Europe Equity	8.44	12.08	16.57
Eurozone Equity	8.67	11.43	14.65
Nordic Equity	16.08	21.40	27.71
Global Equity	5.19	8.36	10.88
Emerging Markets Equity	-7.49	-4.82	-1.92
U.S. Equity	5.23	9.06	11.73
France Equity	12.04	14.70	21.85
Germany Equity	8.62	12.51	19.17
Italy Equity	17.75	20.88	23.50
Spain Equity	-4.04	0.31	4.25
Netherlands Equity	12.25	18.91	20.00
One-Year (GBP)			
Europe Equity	5.05	9.17	15.95
Europe Ex-U.K. Equity	7.44	9.51	13.07
U.K. Equity	1.44	5.74	11.52
U.K. Large-/Mid-Cap Equity	0.42	3.28	6.82
U.K. Small-Cap Equity	10.53	15.55	19.33
Global Equity	1.69	3.99	6.86
Emerging Markets Equity	-11.92	-9.73	-6.33
U.S. Equity	0.72	3.76	7.07
One-Year (Other European Local Currencies)			
Denmark Equity	32.47	33.65	40.65
Poland Equity	-10.17	-5.24	3.78
Switzerland Equity	2.34	4.20	8.03
Sweden Equity	6.91	12.98	24.55
Three-Year (EUR)			
Europe Equity	9.94	11.92	14.70
Eurozone Equity	9.92	11.82	13.49
Nordic Equity	12.57	16.24	18.27
Global Equity	10.52	13.26	15.55
Emerging Markets Equity	-2.44	-0.60	1.08
U.S. Equity	17.21	19.23	21.04
France Equity	11.30	12.70	16.61
Germany Equity	10.09	12.33	16.16
Italy Equity	13.41	14.78	17.55
Spain Equity	7.90	9.22	12.13
Netherlands Equity	11.60	14.19	15.00
Three-Year (GBP)			
Europe Equity	8.75	10.95	13.59
Europe Ex-U.K. Equity	9.77	11.53	13.02
U.K. Equity	8.24	10.86	14.30
U.K. Large-/Mid-Cap Equity	7.55	9.42	11.66
U.K. Small-Cap Equity	13.32	16.85	18.50
Global Equity	8.83	10.90	13.33
Emerging Markets Equity	-4.94	-3.45	-0.49
U.S. Equity	14.96	17.31	19.00
Three-Year (Other European Local Currencies)			
Denmark Equity	27.68	29.32	33.97
Poland Equity	-3.15	2.90	6.94
Switzerland Equity	11.59	13.05	14.72
Sweden Equity	16.19	17.53	23.95

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2015. 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	Second Quartile	First Quartile
Five-Year (EUR)			
Europe Equity	5.92	7.73	9.80
Eurozone Equity	5.38	6.77	8.07
Nordic Equity	6.65	9.19	10.69
Global Equity	5.89	8.22	10.03
Emerging Markets Equity	-3.22	-1.86	-0.61
U.S. Equity	11.40	13.01	14.72
France Equity	6.37	7.54	9.13
Germany Equity	6.89	8.84	11.39
Italy Equity	5.65	6.61	8.46
Spain Equity	2.71	4.16	6.11
Netherlands Equity	6.85	7.85	8.04
Five-Year (GBP)			
Europe Equity	5.63	7.54	9.28
Europe Ex-U.K. Equity	5.83	6.86	8.30
U.K. Equity	6.07	8.12	11.05
U.K. Large-/Mid-Cap Equity	5.55	6.85	8.90
U.K. Small-Cap Equity	10.79	12.95	14.56
Global Equity	5.09	6.56	8.02
Emerging Markets Equity	-4.95	-3.90	-1.87
U.S. Equity	9.35	11.36	12.79
Five-Year (Other European Local Currencies)			
Denmark Equity	15.40	17.00	18.67
Poland Equity	-4.65	-0.79	1.60
Switzerland Equity	6.53	7.80	8.95
Sweden Equity	8.59	9.63	12.79
Ten-Year (EUR)			
Europe Equity	2.36	3.61	5.50
Eurozone Equity	1.51	2.56	3.94
Nordic Equity	5.85	6.64	7.62
Global Equity	2.62	3.59	4.74
Emerging Markets Equity	1.36	2.55	3.53
U.S. Equity	4.26	5.30	6.58
France Equity	2.50	3.28	5.40
Germany Equity	5.78	6.65	8.31
Italy Equity	-0.55	0.30	0.88
Spain Equity	1.46	2.66	3.42
Netherlands Equity	2.98	3.40	4.57
Ten-Year (GBP)			
Europe Equity	6.04	6.91	8.63
Europe Ex-U.K. Equity	5.71	6.42	8.08
U.K. Equity	5.24	6.76	8.51
U.K. Large-/Mid-Cap Equity	4.76	5.68	7.25
U.K. Small-Cap Equity	8.01	9.88	11.26
Global Equity	4.50	5.76	6.86
Emerging Markets Equity	4.08	5.23	6.16
U.S. Equity	6.36	7.61	8.58
Ten-Year (Other European Local Currencies)			
Denmark Equity	9.90	10.87	12.28
Poland Equity	-1.24	-0.13	1.18
Switzerland Equity	3.22	4.13	6.24
Sweden Equity	7.73	8.65	10.69

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods Dec. 31, 2015. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

APPENDIX A

SPIVA Styles and Morningstar Fund Classifications

Data from Morningstar Europe is obtained for all managed funds for which month-end data is available during the performance period. The data includes funds domiciled in European markets as well as major Asian markets where material numbers of European UCITS funds are available (chiefly Hong Kong, Singapore, Taiwan, and South Africa). Offshore European equity funds are excluded. Funds are classified based on the Morningstar fund classification system, and the SPIVA Scorecard covers European and global equity categories.

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

The SPIVA Europe Scorecard covers both regional and country-specific funds that are denominated in EUR, GBP, and other European local currencies, and they have been mapped to the relevant Morningstar fund categories as we here indicate. 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
Europe Open-Ended Europe Flex-Cap Equity	
Europe Open-Ended Europe Large-Cap Blend Equity	
Europe Open-Ended Europe Large-Cap Growth Equity	S&P Europe 350 (EUR) Gross Total Return
Europe Open-Ended Europe Large-Cap Value Equity	
Europe Open-Ended Mid-Cap Equity	
Europe Open-Ended Small-Cap Equity	
Europe Open-Ended Eurozone Flex-Cap Equity	
Europe Open-Ended Eurozone Large-Cap Equity	S&P Eurozone BMI (EUR) Gross Total Return
Europe Open-Ended Eurozone Mid-Cap Equity	
Europe Open-Ended Eurozone Small-Cap Equity	
Europe Open-Ended France Large-Cap Equity	S&P France BMI (EUR) Gross Total Return
Europe Open-Ended France Small-/Mid-Cap Equity	
Europe Open-Ended Germany Large-Cap Equity	S&P Germany BMI (EUR) Gross Total Return
Europe Open-Ended Germany Small-/Mid-Cap Equity	
Europe Open-Ended Italy Equity	S&P Italy BMI (EUR) Gross Total Return
Europe Open-Ended Netherlands Equity	S&P Netherlands BMI (EUR) Gross Total Return
Europe Open-Ended Nordic Equity	S&P Nordic BMI (EUR) Gross Total Return
Europe Open-Ended Spain Equity	S&P Spain BMI (EUR) Gross Total Return

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

Exhibit 1: Morningstar Categories and SPIVA Peer Groups for European Equity Funds (cont.)	
European Funds Denominated in Pound Sterling (GBP)	
Morningstar Category	SPIVA Category
Europe Open-Ended Europe Flex-Cap Equity	
Europe Open-Ended Europe Large-Cap Blend Equity	
Europe Open-Ended Europe Large-Cap Growth Equity	S&P Europe 350 (GBP) (WM) Gross Total Return
Europe Open-Ended Europe Large-Cap Value Equity	
Europe Open-Ended Europe Mid-Cap Equity	
Europe Open-Ended Europe Small-Cap Equity	
Europe Open-Ended Europe Ex-U.K. Large-Cap Equity	S&P Europe Ex-U.K. BMI (GBP) Gross Total Return
Europe Open-Ended Europe Ex-U.K. Small-/Mid-Cap Equity	
Europe Open-Ended U.K. Large-Cap Blend Equity	
Europe Open-Ended U.K. Large-Cap Growth Equity	S&P United Kingdom LargeMidCap (GBP) Gross Total Return
Europe Open-Ended U.K. Large-Cap Value Equity	
Europe Open-Ended U.K. Mid-Cap Equity	
Europe Open-Ended U.K. Small-Cap Equity	S&P United Kingdom SmallCap (GBP) Gross Total Return
Europe Open-Ended U.K. Large-Cap Blend Equity	
Europe Open-Ended U.K. Large-Cap Growth Equity	
Europe Open-Ended U.K. Large-Cap Value Equity	S&P United Kingdom BMI (GBP) Gross Total Return
Europe Open-Ended U.K. Mid-Cap Equity	
Europe Open-Ended U.K. Small-Cap Equity	
Europe Open-Ended U.K. Flex-Cap Equity	
European Funds Denominated in Other European Local Currencies	
Europe Open-Ended Denmark Equity	S&P Denmark BMI (Local Currency) Gross Total Return
Europe Open-Ended Poland Equity	S&P Poland BMI (Local Currency) Gross Total Return
Europe Open-Ended Sweden Large-Cap Equity	S&P Sweden BMI (Local Currency) Gross Total Return
Europe Open-Ended Sweden Small/Mid-Cap Equity	
Europe Open-Ended Switzerland Small/Mid-Cap Equity	S&P Switzerland BMI (Local Currency) Gross Total Return
Europe Open-Ended Switzerland Large-Cap Equity	

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

International Funds Denominated in EUR and GBP

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

Exhibit 2: Morningstar Categories and SPIVA Peer Groups for International Equity Funds	
EUR-Denominated International Funds	
Morningstar Category	SPIVA Category
Europe Open-Ended Global Large-Cap Blend Equity	S&P Global 1200 Total Return (EUR)
Europe Open-Ended Global Large-Cap Growth Equity	
Europe Open-Ended Global Large-Cap Value Equity	
Europe Open-Ended Global Small-Cap Equity	S&P 500 Total Return (EUR)
Europe Open-Ended U.S. Large-Cap Blend Equity	
Europe Open-Ended U.S. Large-Cap Growth Equity	
Europe Open-Ended U.S. Large-Cap Value Equity	S&P 500 Total Return (EUR)
Europe Open-Ended U.S. Mid-Cap Equity	
Europe Open-Ended U.S. Flex-Cap Equity	
Europe Open-Ended U.S. Small-Cap Equity	S&P/IFCI Total Return (EUR)
Europe Open-Ended Global Emerging Markets Equity	
Europe Open-Ended Global Large-Cap Blend Equity	
Europe Open-Ended Global Large-Cap Growth Equity	S&P Global 1200 Total Return (GBP)
Europe Open-Ended Global Large-Cap Value Equity	
Europe Open-Ended Global Small-Cap Equity	
Europe Open-Ended U.S. Large-Cap Blend Equity	S&P 500 Total Return (GBP)
Europe Open-Ended U.S. Large-Cap Growth Equity	
Europe Open-Ended U.S. Large-Cap Value Equity	
Europe Open-Ended U.S. Mid-Cap Equity	S&P 500 Total Return (GBP)
Europe Open-Ended U.S. Small-Cap Equity	
Europe Open-Ended U.S. Flex-Cap Equity	
Europe Open-Ended Global Emerging Markets Equity	S&P/IFCI (GBP)

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

APPENDIX B

Glossary-Reports

Percentage of Funds Outperformed by the Index

We use funds with returns available for the entire period as the denominator. We determine the count of funds that have survived and beat the index, and then we 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 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

The S&P/IFCI 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-U.K. BMI

The S&P Europe ex-U.K. 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 currency.

S&P France BMI

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

S&P Germany BMI

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

S&P Global 1200

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

S&P Italy BMI

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

S&P Netherlands BMI

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

S&P Nordic BMI

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

S&P Poland BMI

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

S&P Spain BMI

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

S&P Sweden BMI

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

S&P Switzerland BMI

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

S&P United Kingdom BMI

The S&P United Kingdom BMI, a subset of the S&P Global BMI, is an equity index that is designed to represent the 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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