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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 2017 HIGHLIGHTS

- **European equity markets achieved strong, above-average gains in 2017.** The [S&P Europe 350](#) ended the year 10.75% higher, as historically low levels of volatility in the markets indicated investors' confidence in the strength of the continent's economy and stability of its pro-EU leadership.
- **Continued global expansion throughout the year supported strong bull rallies across international markets.** Despite robust global growth, the weakening of the U.S. dollar throughout the year reduced returns for European investors holding global and U.S. equities. The [S&P Global 1200](#) and the [S&P 500[®]](#) finished the year up 8.57% and 7.01%, respectively, in euro terms. Meanwhile, the broad emerging equity benchmark recorded an impressive one-year return of 21.12% in euro terms, as measured by the [S&P/IFCI](#).
- **The majority of active fund categories in Europe underperformed over the past 10 years.** Nine out of 23 active fund categories across the European-domiciled equity funds analyzed were able to provide average asset-weighted returns above their corresponding benchmarks over a 10-year period. Furthermore, in those nine outperforming categories, less than one-third of the funds beat the benchmark. This indicates that a minority of funds were responsible for each group's success.
- **U.S. and Emerging Market Equity funds domiciled in Europe remained among the region's worst-performing active fund categories.** Euro- and pound sterling-denominated funds investing solely in U.S. equities provided average returns that were below their local currency S&P 500 benchmark for all periods analyzed. Less than one-third of these funds outperformed in 2017 and less than one-tenth outperformed since 2008.

- Likewise, **European funds managing global emerging equities failed to deliver average returns above the benchmark over any period analyzed.** Interestingly, this finding is in stark contrast to the widely held belief that inefficient markets provide the best opportunities for stock pickers to outperform.
- **One-year performance of active pan-European equity funds (euro-denominated) relative to the [S&P Europe 350](#) was fairly evenly split.** In 2017, 53% of funds in the category outperformed the benchmark. Over the 10-year period, 15% of funds in the same category beat the S&P Europe 350. Of the funds that were in existence in the category at the start of 2008, 45% survived to the end of 2017.

The average asset-weighted performance for the fund category was 11.97% for the year, compared with a return of 10.75% for the benchmark. Over the 10-year period, the equivalent average return figure was lower than that of the benchmark, at 3.37% and 4.08%, respectively.

- **In contrast to pan-European equities, only 26% of actively managed funds investing solely in Eurozone equities beat the [S&P Eurozone BMI](#) in 2017, dropping to 12% over the 10-year period.** The average asset-weighted performance for the group was consistently lower than the S&P Eurozone BMI by one percentage point on an annualized basis over all periods analyzed.
- **Single-country fund categories across Europe had mixed results in 2017.** A majority of funds in Italy, Switzerland, Germany, the UK, and Sweden outperformed over the one-year period. The same categories also provided average asset-weighted returns above their corresponding benchmarks. However, the majority of funds investing in equities in Denmark, Poland, The Netherlands, Spain, or France were beaten by their corresponding benchmarks in 2017.

Only Italy maintained a majority of active funds outperforming over the one-, three-, and five- year periods. In no fund category did a majority of funds outperform over the 10-year period.

- **UK Small-Cap Equity funds performed markedly better than their UK Large-/Mid-Cap counterparts in 2017.** Of actively managed UK Small-Cap Equity funds, 80% outperformed their benchmark for the year, compared with 46% for the UK Large-/Mid-Cap Equity fund category. Average asset-weighted returns for these UK small-cap funds exceeded the S&P United Kingdom Small-Cap by nine percentage points for the year.

The recent success of these small-cap funds over large-cap funds in the UK was in contrast to the long-term picture; the reverse was true over the 10-year period. **In both categories, however, 10-year outperformance was achieved by less than one-quarter of the funds.**

A UNIQUE SCORECARD FOR THE ACTIVE VERSUS PASSIVE DEBATE

Since its first publication 16 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For more than a decade, we have heard passionate arguments from believers in both camps when headline numbers have deviated from their beliefs.

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

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

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

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

REPORTS

Report 1: Percentage of European Equity Funds Outperformed by Benchmarks					
FUND CATEGORY	COMPARISON INDEX	ONE-YEAR	THREE-YEAR	FIVE-YEAR	TEN-YEAR
EURO-DENOMINATED FUNDS (EUR)					
Europe Equity	S&P Europe 350	46.59	59.21	73.26	85.44
Eurozone Equity	S&P Eurozone BMI	73.70	77.41	87.54	88.01
Nordic Equity	S&P Nordic BMI	73.17	50.00	63.16	65.71
Global Equity	S&P Global 1200	53.76	91.37	94.46	98.85
Emerging Markets Equity	S&P/IFCI	71.61	92.41	91.75	97.35
U.S. Equity	S&P 500	71.24	89.78	95.88	97.80
France Equity	S&P France BMI	52.91	58.67	70.12	81.85
Germany Equity	S&P Germany BMI	39.33	61.05	71.58	75.42
Italy Equity	S&P Italy BMI	28.30	39.58	42.31	71.43
Spain Equity	S&P Spain BMI	68.24	53.85	71.60	79.20
Netherlands Equity	S&P Netherlands BMI	75.00	77.78	92.86	93.94
POUND STERLING-DENOMINATED FUNDS (GBP)					
Europe Equity	S&P Europe 350	38.89	45.83	59.57	75.82
Europe Ex-UK Equity	S&P Europe Ex-UK BMI	56.15	69.11	74.80	73.51
UK Equity	S&P United Kingdom BMI	46.40	59.61	54.14	75.19
UK Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	54.10	64.71	47.66	73.35
UK Small-Cap Equity	S&P United Kingdom SmallCap	19.70	41.10	56.58	72.84
Global Equity	S&P Global 1200	52.72	82.35	86.24	94.89
Emerging Markets Equity	S&P/IFCI	62.43	80.98	79.53	84.85
U.S. Equity	S&P 500	67.11	88.37	92.94	93.41
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES					
Denmark Equity	S&P Denmark BMI	100.00	24.24	29.41	82.86
Poland Equity	S&P Poland BMI	93.48	76.60	65.31	94.29
Switzerland Equity	S&P Switzerland BMI	37.99	33.52	53.07	72.78
Sweden Equity	S&P Sweden BMI	49.11	45.54	53.72	75.59

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. 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	1096	95.89
Eurozone Equity	564	96.63
Nordic Equity	43	90.70
Global Equity	1273	93.95
Emerging Markets Equity	324	95.37
U.S. Equity	388	95.10
France Equity	224	95.98
Germany Equity	90	96.67
Italy Equity	53	94.34
Spain Equity	85	95.29
Netherlands Equity	8	87.50
ONE-YEAR (GBP)		
Europe Equity	115	94.78
Europe Ex-UK Equity	136	95.59
UK Equity	362	95.30
UK Large-/Mid-Cap Equity	194	95.88
UK Small-Cap Equity	68	98.53
Global Equity	454	95.59
Emerging Markets Equity	182	95.60
U.S. Equity	234	93.16
ONE-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	34	97.06
Poland Equity	64	100.00
Switzerland Equity	184	95.65
Sweden Equity	113	93.81
THREE-YEAR (EUR)		
Europe Equity	1059	84.23
Eurozone Equity	584	86.47
Nordic Equity	46	76.09
Global Equity	1205	81.99
Emerging Markets Equity	330	79.09
U.S. Equity	382	85.34
France Equity	227	90.31
Germany Equity	98	85.71
Italy Equity	48	85.42
Spain Equity	80	87.50
Netherlands Equity	9	77.78

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. 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	101	86.14
Europe Ex-UK Equity	128	85.94
UK Equity	368	84.24
UK Large-/Mid-Cap Equity	193	84.46
UK Small-Cap Equity	74	82.43
Global Equity	400	82.25
Emerging Markets Equity	169	81.07
U.S. Equity	224	78.13
THREE-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	33	93.94
Poland Equity	65	98.46
Switzerland Equity	180	88.89
Sweden Equity	114	82.46
FIVE-YEAR (EUR)		
Europe Equity	1069	73.06
Eurozone Equity	617	74.39
Nordic Equity	41	65.85
Global Equity	1198	70.12
Emerging Markets Equity	314	69.75
U.S. Equity	361	72.30
France Equity	243	75.31
Germany Equity	96	76.04
Italy Equity	52	75.00
Spain Equity	83	74.70
Netherlands Equity	14	50.00
FIVE-YEAR (GBP)		
Europe Equity	96	66.67
Europe Ex-UK Equity	127	71.65
UK Equity	407	70.02
UK Large-/Mid-Cap Equity	219	68.95
UK Small-Cap Equity	77	72.73
Global Equity	350	69.71
Emerging Markets Equity	132	71.21
U.S. Equity	178	66.29
FIVE-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	34	88.24
Poland Equity	67	94.03
Switzerland Equity	181	77.35
Sweden Equity	122	70.49

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. 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	1394	44.55
Eurozone Equity	793	46.66
Nordic Equity	38	60.53
Global Equity	1445	42.28
Emerging Markets Equity	231	53.68
U.S. Equity	516	38.37
France Equity	305	50.49
Germany Equity	118	50.85
Italy Equity	91	34.07
Spain Equity	126	46.03
Netherlands Equity	33	18.18
TEN-YEAR (GBP)		
Europe Equity	91	35.16
Europe Ex-UK Equity	154	53.90
UK Equity	538	42.94
UK Large-/Mid-Cap Equity	323	39.32
UK Small-Cap Equity	81	55.56
Global Equity	326	46.01
Emerging Markets Equity	67	59.70
U.S. Equity	186	39.25
TEN-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)		
Denmark Equity	35	68.57
Poland Equity	48	89.58
Switzerland Equity	159	62.89
Sweden Equity	130	50.77

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. 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 %)
EURO-DENOMINATED FUNDS (EUR)				
Europe Equity	12.65	8.55	10.22	3.37
S&P Europe 350	10.75	7.55	10.18	4.08
Eurozone Equity	13.70	9.64	10.58	2.44
S&P Eurozone BMI	14.76	10.58	12.35	3.30
Nordic Equity	9.96	12.45	12.93	6.62
S&P Nordic BMI	10.49	10.13	12.31	6.03
Global Equity	8.81	7.85	10.86	3.92
S&P Global 1200	8.57	10.48	14.29	7.76
Emerging Markets Equity	18.56	7.91	5.18	1.54
S&P/IFCI	21.12	10.49	7.64	4.54
U.S. Equity	4.85	8.49	14.76	7.29
S&P 500	7.01	11.70	17.97	10.65
France Equity	15.34	13.51	13.37	4.36
S&P France BMI	14.59	12.21	12.89	4.75
Germany Equity	19.12	11.51	12.11	5.31
S&P Germany BMI	15.52	11.13	12.46	5.30
Italy Equity	20.99	10.44	11.58	-0.01
S&P Italy BMI	17.61	8.92	10.10	-1.45
Spain Equity	11.49	4.84	9.01	0.42
S&P Spain BMI	11.72	3.19	8.88	0.19
Netherlands Equity	14.04	12.70	12.51	3.14
S&P Netherlands BMI	18.59	13.90	15.92	6.73
POUND STERLING-DENOMINATED FUNDS (GBP)				
Europe Equity	18.06	14.64	13.68	6.84
S&P Europe 350	15.14	12.49	12.20	6.11
Europe Ex-UK Equity	17.99	15.12	14.13	7.43
S&P Europe Ex-UK BMI	17.86	15.09	14.39	6.68
UK Equity	15.13	10.56	11.87	7.27
S&P United Kingdom BMI	12.97	9.92	10.18	6.48
UK Large-/Mid-Cap Equity	12.06	8.92	10.52	6.30
S&P United Kingdom LargeMidCap	11.88	9.18	9.10	5.56
U.K. Small-Cap Equity	27.53	16.74	16.61	10.94
S&P United Kingdom SmallCap	19.00	12.87	15.09	11.11
Global Equity	13.49	13.43	14.02	7.46
S&P Global 1200	12.98	15.57	16.36	9.83
Emerging Markets Equity	24.62	13.93	8.05	6.38
S&P/IFCI	25.95	15.55	9.60	6.53
U.S. Equity	9.78	14.35	18.19	10.58
S&P 500	11.29	16.81	20.12	12.77
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES				
Denmark Equity	13.24	16.48	21.38	9.62
S&P Denmark BMI	19.79	14.54	18.80	10.04
Poland Equity	15.89	3.91	2.52	4.56
S&P Poland BMI	27.58	7.72	6.07	1.80
Switzerland Equity	23.50	10.60	13.47	4.49
S&P Switzerland BMI	19.58	6.69	11.46	5.06
Sweden Equity	10.39	11.61	15.61	9.11
S&P Sweden BMI	9.73	9.70	14.05	8.83

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. 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 %)
EURO-DENOMINATED FUNDS (EUR)				
Europe Equity	11.97	8.02	9.92	3.37
S&P Europe 350	10.75	7.55	10.18	4.08
Eurozone Equity	13.36	9.49	10.58	2.15
S&P Eurozone BMI	14.76	10.58	12.35	3.30
Nordic Equity	8.36	10.91	11.65	5.75
S&P Nordic BMI	10.49	10.13	12.31	6.03
Global Equity	8.03	7.72	11.20	4.23
S&P Global 1200	8.57	10.48	14.29	7.76
Emerging Markets Equity	19.18	8.35	5.84	1.94
S&P/IFCI	21.12	10.49	7.64	4.54
U.S. Equity	4.52	8.35	14.61	7.33
S&P 500	7.01	11.70	17.97	10.65
France Equity	13.97	11.70	12.00	3.57
S&P France BMI	14.59	12.21	12.89	4.75
Germany Equity	18.45	11.99	12.77	5.57
S&P Germany BMI	15.52	11.13	12.46	5.30
Italy Equity	19.06	9.79	10.97	-0.31
S&P Italy BMI	17.61	8.92	10.10	-1.45
Spain Equity	12.28	5.64	9.19	0.84
S&P Spain BMI	11.72	3.19	8.88	0.19
Netherlands Equity	13.90	12.81	12.08	3.12
S&P Netherlands BMI	18.59	13.90	15.92	6.73
POUND STERLING-DENOMINATED FUNDS (GBP)				
Europe Equity	21.55	15.97	14.14	8.00
S&P Europe 350	15.14	12.49	12.20	6.11
Europe Ex-UK Equity	19.36	15.13	13.98	7.04
S&P Europe Ex-UK BMI	17.86	15.09	14.39	6.68
UK Equity	14.65	10.40	11.30	6.88
S&P United Kingdom BMI	12.97	9.92	10.18	6.48
UK Large-/Mid-Cap Equity	12.41	9.38	10.68	6.39
S&P United Kingdom LargeMidCap	11.88	9.18	9.10	5.56
UK Small-Cap Equity	28.07	17.36	16.99	11.71
S&P United Kingdom SmallCap	19.00	12.87	15.09	11.11
Global Equity	15.09	14.92	15.49	8.14
S&P Global 1200	12.98	15.57	16.36	9.83
Emerging Markets Equity	23.36	13.99	8.32	6.31
S&P/IFCI	25.95	15.55	9.60	6.53
U.S. Equity	9.60	14.74	18.43	10.67
S&P 500	11.29	16.81	20.12	12.77
FUNDS DENOMINATED IN OTHER EUROPEAN LOCAL CURRENCIES				
Denmark Equity	12.79	15.90	20.81	9.50
S&P Denmark BMI	19.79	14.54	18.80	10.04
Poland Equity	15.37	2.83	2.41	1.31
S&P Poland BMI	27.58	7.72	6.07	1.80
Switzerland Equity	23.97	10.64	13.74	4.80
S&P Switzerland BMI	19.58	6.69	11.46	5.06
Sweden Equity	10.98	11.53	15.51	9.00
S&P Sweden BMI	9.73	9.70	14.05	8.83

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. 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, %)
ONE-YEAR (EUR)			
Europe Equity	8.83	11.29	14.91
Eurozone Equity	9.76	11.94	15.34
Nordic Equity	7.03	9.17	10.92
Global Equity	6.33	8.53	11.16
Emerging Markets Equity	14.26	18.31	21.90
U.S. Equity	1.89	4.78	8.08
France Equity	10.96	14.42	19.32
Germany Equity	14.34	17.03	21.10
Italy Equity	17.74	20.02	28.25
Spain Equity	7.56	9.69	13.63
Netherlands Equity	10.61	15.10	21.66
ONE-YEAR (GBP)			
Europe Equity	13.55	17.26	22.35
Europe Ex-UK Equity	14.83	17.37	19.51
UK Equity	10.20	13.70	19.63
UK Large-/Mid-Cap Equity	8.71	11.81	13.96
U.K. Small-Cap Equity	21.95	26.79	30.79
Global Equity	10.93	12.96	15.61
Emerging Markets Equity	19.22	24.16	28.64
U.S. Equity	6.34	9.91	13.03
ONE-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	11.55	13.30	14.79
Poland Equity	6.40	11.24	17.99
Switzerland Equity	18.76	20.82	26.10
Sweden Equity	8.11	10.03	12.83
THREE-YEAR (EUR)			
Europe Equity	5.70	7.39	10.26
Eurozone Equity	6.83	8.57	10.76
Nordic Equity	8.90	11.19	15.23
Global Equity	6.28	7.77	9.11
Emerging Markets Equity	6.35	7.68	9.44
U.S. Equity	6.87	8.56	10.11
France Equity	9.47	11.28	16.90
Germany Equity	8.85	10.46	13.89
Italy Equity	8.15	10.10	10.89
Spain Equity	0.95	3.61	7.21
Netherlands Equity	12.46	12.89	17.40
THREE-YEAR (GBP)			
Europe Equity	11.10	14.12	17.05
Europe Ex-UK Equity	12.86	14.35	16.18
UK Equity	7.97	9.68	12.84
UK Large-/Mid-Cap Equity	7.56	8.94	10.01
UK Small-Cap Equity	12.65	16.12	19.57
Global Equity	11.67	13.61	15.29
Emerging Markets Equity	11.76	13.78	15.44
U.S. Equity	12.71	14.57	15.98
THREE-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	14.92	15.88	17.52
Poland Equity	2.60	5.16	7.52
Switzerland Equity	6.72	9.04	13.26
Sweden Equity	8.57	10.93	14.76

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 29, 2017. 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, %)
FIVE-YEAR (EUR)			
Europe Equity	7.71	9.25	11.44
Eurozone Equity	8.41	9.77	11.58
Nordic Equity	10.86	12.63	15.22
Global Equity	9.00	10.88	12.46
Emerging Markets Equity	3.81	5.17	6.30
U.S. Equity	13.07	14.71	16.08
France Equity	10.13	11.35	15.46
Germany Equity	9.45	11.11	14.60
Italy Equity	10.17	11.08	12.40
Spain Equity	6.01	8.11	9.85
Netherlands Equity	12.63	13.09	13.98
FIVE-YEAR (GBP)			
Europe Equity	11.47	12.79	14.34
Europe Ex-UK Equity	12.22	13.28	15.18
UK Equity	9.55	11.42	14.10
UK Large-/Mid-Cap Equity	9.15	10.10	11.58
UK Small-Cap Equity	14.03	16.34	18.97
Global Equity	12.41	14.13	15.97
Emerging Markets Equity	6.98	7.96	10.14
U.S. Equity	16.86	18.28	19.51
FIVE-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	19.26	20.23	22.48
Poland Equity	1.72	4.72	7.60
Switzerland Equity	10.66	12.43	16.03
Sweden Equity	13.53	15.20	19.25
TEN-YEAR (EUR)			
Europe Equity	1.59	2.94	4.89
Eurozone Equity	0.73	1.81	3.38
Nordic Equity	4.57	6.45	8.07
Global Equity	2.82	4.07	5.32
Emerging Markets Equity	0.29	1.66	2.68
U.S. Equity	6.11	7.41	8.56
France Equity	2.09	3.28	6.33
Germany Equity	3.90	5.28	6.84
Italy Equity	-1.01	-0.05	1.14
Spain Equity	-1.21	-0.07	1.31
Netherlands Equity	2.93	3.55	8.36
TEN-YEAR (GBP)			
Europe Equity	5.96	6.69	8.97
Europe Ex-UK Equity	5.44	6.66	8.01
UK Equity	5.80	7.18	9.35
UK Large-/Mid-Cap Equity	5.10	6.12	7.43
UK Small-Cap Equity	8.96	11.06	12.20
Global Equity	6.71	7.52	8.55
Emerging Markets Equity	4.26	5.46	6.68
U.S. Equity	10.01	11.22	12.25
TEN-YEAR (OTHER EUROPEAN LOCAL CURRENCIES)			
Denmark Equity	8.77	9.25	10.04
Poland Equity	-3.19	-1.57	0.84
Switzerland Equity	3.37	4.71	6.04
Sweden Equity	7.66	8.79	10.94

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods Dec. 29, 2017. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

APPENDIX A

SPIVA Styles and Morningstar Fund Classifications

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

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

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

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

Exhibit 1: Morningstar Categories and SPIVA Peer Groups for European Equity Funds	
EUROPEAN FUNDS DENOMINATED IN EUROS (EUR)	
MORNINGSTAR CATEGORY	SPIVA CATEGORY
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 Europe Mid-Cap Equity	
Europe Open-Ended Europe 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-UK Large-Cap Equity	S&P Europe Ex-UK BMI (GBP) Gross Total Return
Europe Open-Ended Europe Ex-UK Small-/Mid-Cap Equity	
Europe Open-Ended UK Large-Cap Blend Equity	
Europe Open-Ended UK Large-Cap Growth Equity	S&P United Kingdom LargeMidCap (GBP) Gross Total Return
Europe Open-Ended UK Large-Cap Value Equity	
Europe Open-Ended UK Mid-Cap Equity	
Europe Open-Ended UK Small-Cap Equity	S&P United Kingdom SmallCap (GBP) Gross Total Return
Europe Open-Ended UK Large-Cap Blend Equity	
Europe Open-Ended UK Large-Cap Growth Equity	
Europe Open-Ended UK Large-Cap Value Equity	S&P United Kingdom BMI (GBP) Gross Total Return
Europe Open-Ended UK Mid-Cap Equity	
Europe Open-Ended UK Small-Cap Equity	
Europe Open-Ended UK 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 and GBP-DENOMINATED INTERNATIONAL FUNDS

MORNINGSTAR CATEGORY	SPIVA CATEGORY
Europe Open-Ended Global Large-Cap Blend Equity	
Europe Open-Ended Global Large-Cap Growth Equity	
Europe Open-Ended Global Large-Cap Value Equity	S&P Global 1200 Total Return (EUR)
Europe Open-Ended Global Small-Cap Equity	
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	
Europe Open-Ended Global Emerging Markets Equity	S&P/IFCI Total Return (EUR)
Europe Open-Ended Global Large-Cap Blend Equity	
Europe Open-Ended Global Large-Cap Growth Equity	
Europe Open-Ended Global Large-Cap Value Equity	S&P Global 1200 Total Return (GBP)
Europe Open-Ended Global Small-Cap Equity	
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 (GBP)
Europe Open-Ended U.S. Mid-Cap Equity	
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

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

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-UK BMI

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

S&P EUROZONE BMI

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

S&P FRANCE BMI

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

S&P GERMANY BMI

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

S&P GLOBAL 1200

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

S&P ITALY BMI

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

S&P NETHERLANDS BMI

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

S&P NORDIC BMI

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

S&P POLAND BMI

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

S&P SPAIN BMI

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

S&P SWEDEN BMI

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

S&P SWITZERLAND BMI

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

S&P UNITED KINGDOM BMI

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

S&P UNITED KINGDOM LARGEMIDCAP

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

S&P UNITED KINGDOM SMALLCAP

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

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