

SPIVA[®] Europe Scorecard

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

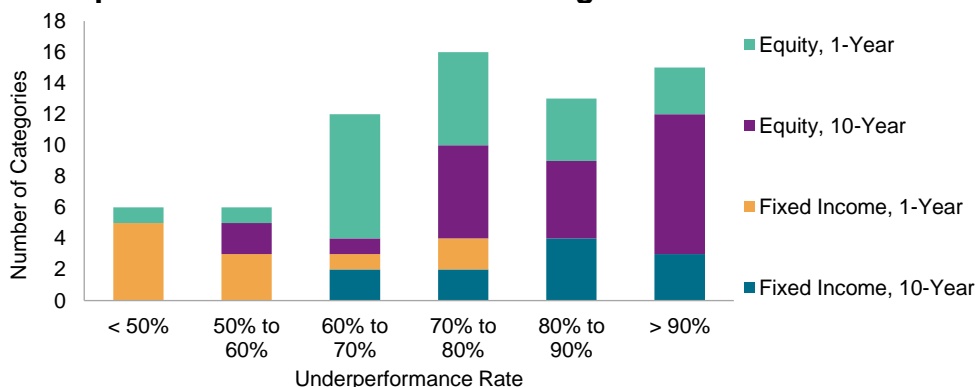
Inaugurated in 2002, the S&P Indices versus Active (SPIVA) U.S. Scorecard has since been extended to Australia, Canada, Europe, India, Japan, Latin America, South Africa and the Middle East & North Africa (MENA), allowing investors to experience the active versus passive debate on a global scale. First published in 2014, the semiannual SPIVA Europe Scorecard reports on the performance of actively managed funds domiciled across Europe.

For the first time, the 2022 edition of the SPIVA Europe Scorecard expands the universe of actively managed funds to include fixed income categories.

Year-End 2022 Highlights

It was a challenging year for active managers in European equities, with the Pan-European Equity category recording its highest annual underperformance rate since the SPIVA Europe Scorecard's inception in 2014. Fixed income managers had a better year in relative terms, with the majority outperforming in 5 of 11 categories over the one-year horizon. Across both asset classes, however, underperformance rates increased to a similarly high average over a 10-year horizon.

Exhibit 1: Distribution of Equity and Fixed Income Underperformance Rates across Categories



Source: S&P Dow Jones Indices LLC, Morningstar, Bloomberg LLC. Data as of Dec. 31, 2022. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

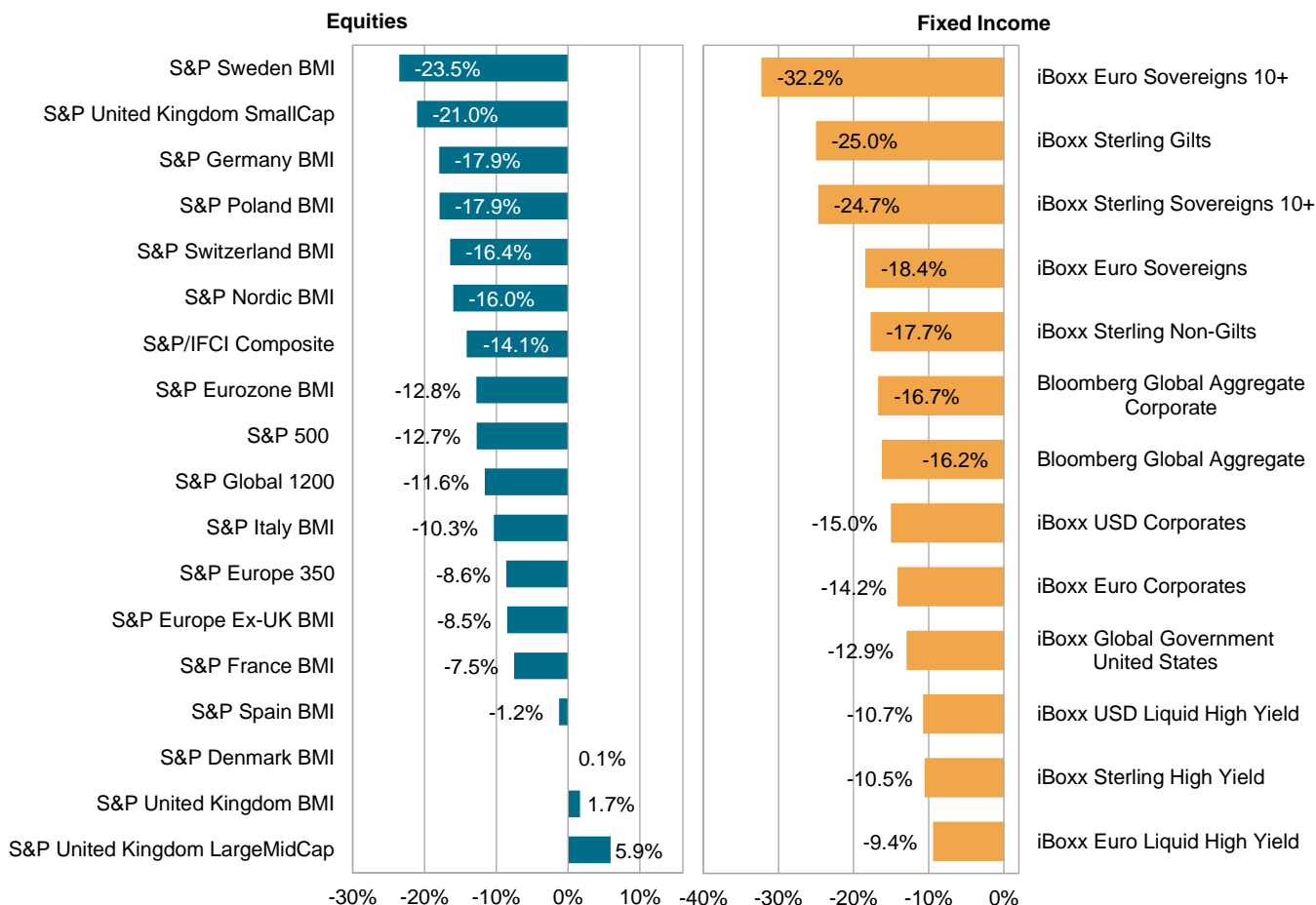
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- **83%** of British pound sterling-denominated and **87%** of euro-denominated actively managed **Europe Equity funds** underperformed the [S&P Europe 350®](#) in 2022, while **68% of Eurozone funds** underperformed the [S&P Eurozone BMI](#).
- Euro-denominated **Global Equity** funds maintained a relatively high underperformance rate over longer time horizons. Over the 10-year period ending December 2022, **98% of funds underperformed the [S&P Global 1200®](#)**.
- **British pound sterling- and euro-denominated U.S. Equity funds performed similarly, with 67%** underperforming in 2022 and **98%** underperforming over a 10-year horizon.
- **63% of Poland Equity funds lagged the [S&P Poland BMI](#) in 2022**, the lowest underperformance rate among major single-country categories.
- Among country categories, **89%, 84% and 75% of France, Italy and Spain Equity funds lagged their benchmarks**, respectively, in 2022.
- Actively managed **U.K. Equity and U.K Large-/Mid-Cap Equity funds** recorded underperformance rates of 92% and 97%, respectively, in 2022—**the highest ever for these categories**.
- Meanwhile, only **67% of actively managed U.K. Small-Cap Equity funds** underperformed the [S&P United Kingdom SmallCap](#).
- **77% of GBP-denominated High Yield Bond funds** underperformed the iBoxx Sterling High Yield Index in 2022, the highest underperformance rate among our newly launched fixed income categories. Meanwhile, **USD-denominated High Yield Bond funds** performed relatively better, with **52% underperforming the iBoxx USD Liquid High Yield Index** in 2022, although underperformance increased to 84% when measured over a 10-year period.
- European corporate and government bond funds outperformed their high yield peers. **Only 41% and 23% of euro-denominated Corporate Bond and Government Bond funds** underperformed the iBoxx Euro Corporates and the iBoxx Euro Sovereigns, respectively. Meanwhile, **72% of Euro-denominated High Yield Bond funds** underperformed the iBoxx Euro Liquid High Yield Index.
- **USD-denominated Corporate Bond funds** performed worse than their EUR and GBP peers, with **63%** underperforming the iBoxx USD Corporates.

Market Context

2022 was a turbulent year globally, as rate hikes and inflation concerns rocked markets, and Europe was no exception. Losses permeated across geographies, with the S&P Global 1200 down 12%, accompanied by high dispersion among stocks, sectors and country performances. Across European equities, there was an approximately 30% spread among our reported benchmarks, with U.K. large and mid caps gaining 6% and Swedish equities falling 24% in local currency terms. There was a similar gap between large and small companies in the U.K. alone, with the S&P United Kingdom SmallCap seeing a 21% decline. All of our European fixed income benchmarks posted losses, with iBoxx Sterling Gilts taking the bottom spot among our reported benchmarks, while the iBoxx Euro Liquid High Yield Index came out a relative winner, down only 9%.

Exhibit 2: Losses Were Prevalent across Most Asset Classes and Countries

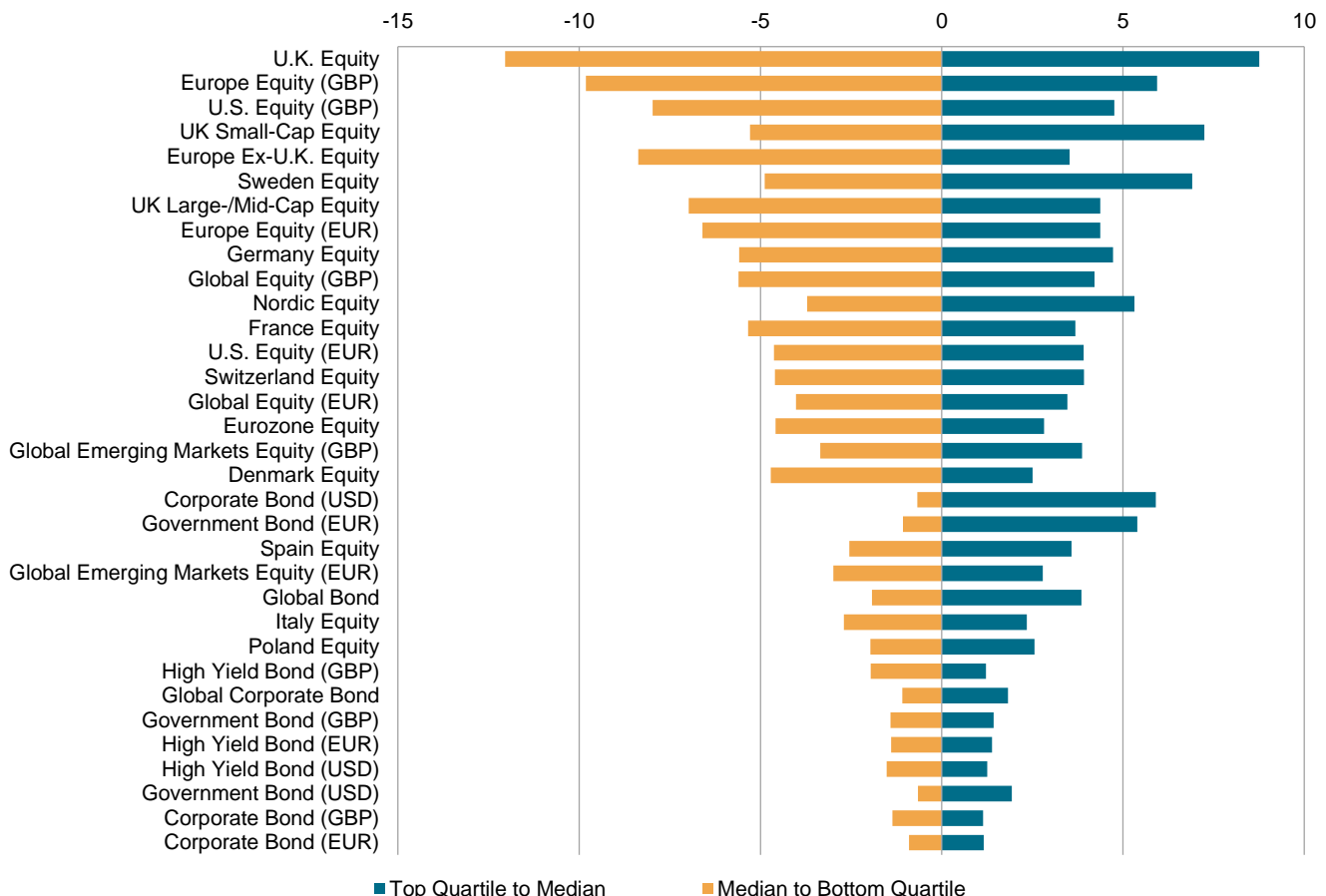


Source: S&P Dow Jones Indices LLC, Bloomberg LLC. Data as of Dec. 31, 2022. Index performance based on total returns in local currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Conditions such as those endured by markets in 2022, replete with high volatility, high dispersion and high potential rewards for playing defense amid a downturn, are sometimes argued to be those most conducive to an actively managed approach.¹ Certainly, there was a high potential for outperformance in European markets last year. Unfortunately, in many categories, there was also considerable potential for material *under*performance. As Exhibit 3 illustrates, the risk of selecting a fund that was far below (or above) average was considerable in many categories, and uncommonly extreme in some. Exhibit 3 shows the difference in returns that distinguished funds in the bottom quartile among peers to the median performer, and the difference again to be in the top quartile over the 2022 calendar year (the quartile breakpoints themselves are provided later in Report 5 and Report 10 of this Scorecard). At the greatest extreme, more than 20% in return separated the best-performing fund in the bottom quartile of U.K. equity funds from the worst-performing fund in the top quartile.

Exhibit 3: Fund Selection Risk Was More Acute in Equities; Nowhere More So Than the U.K.

Difference Between Quartile Boundaries for 2022 Fund Performance



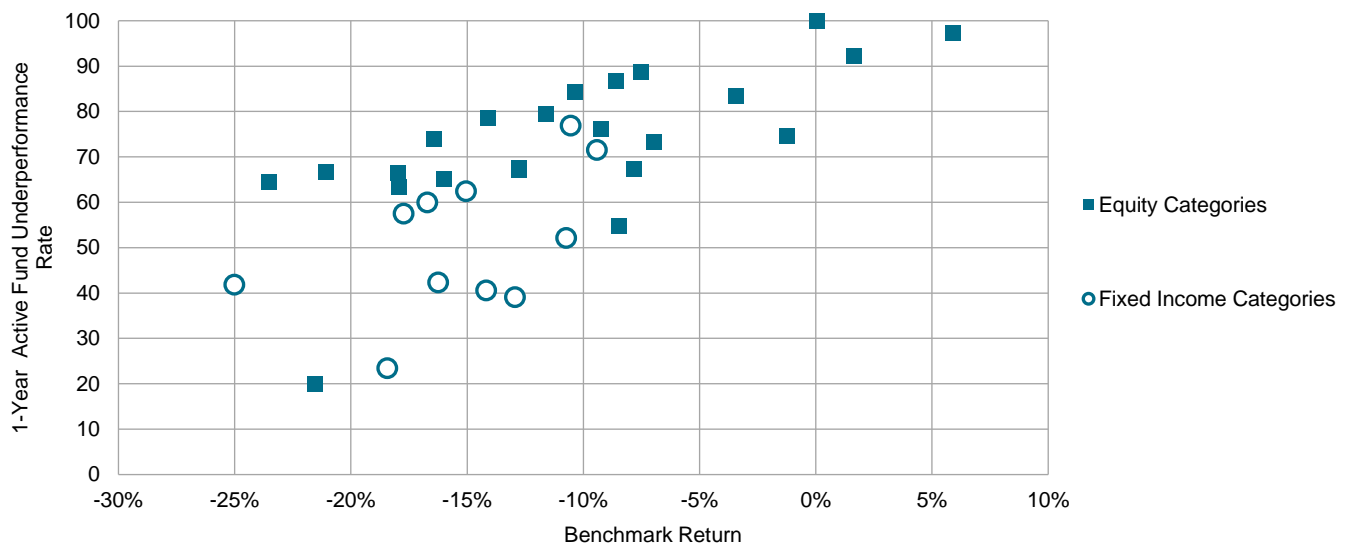
Source: S&P Dow Jones Indices LLC, Morningstar, Bloomberg LLC. Data as of Dec. 31, 2022. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

¹ Chan, Fei Mei, and Craig J. Lazzara, [“Degrees of Difficulty: Indications of Active Success,”](#) S&P Dow Jones Indices (2022).

Turning to outperformance rates, our 2022 scorecard does give some support to the notion that market downturns give active managers fertile grounds to add value, but with an important qualification. It may be more accurate to say that market downturns are useful to an active manager’s performance, *provided that other markets performed better*. Consider: if a manager is primarily investing in a category that suffers a deep downturn but nearby categories were overall much better, then they are likely to be rewarded with higher returns for venturing outside their category. U.K. small caps in 2022 offer a particularly germane example, with the nearby category U.K. large caps performing admirably.² Note that this is different from the absolute opportunity of an unusually poor year compared to history: managers cannot venture into the past to generate outperformance.

This cross-sectional aspect is illustrated in Exhibit 4, which compares the one-year underperformance rate in each of our reported categories to the benchmark performance of that category. Generally speaking, when the category benchmark performance was higher, so was the percentage of underperforming funds in that category (see the Reports following this section for the underlying data).

Exhibit 4: 2022 Underperformance Rates Were Positively Correlated to Category Benchmark Underperformance



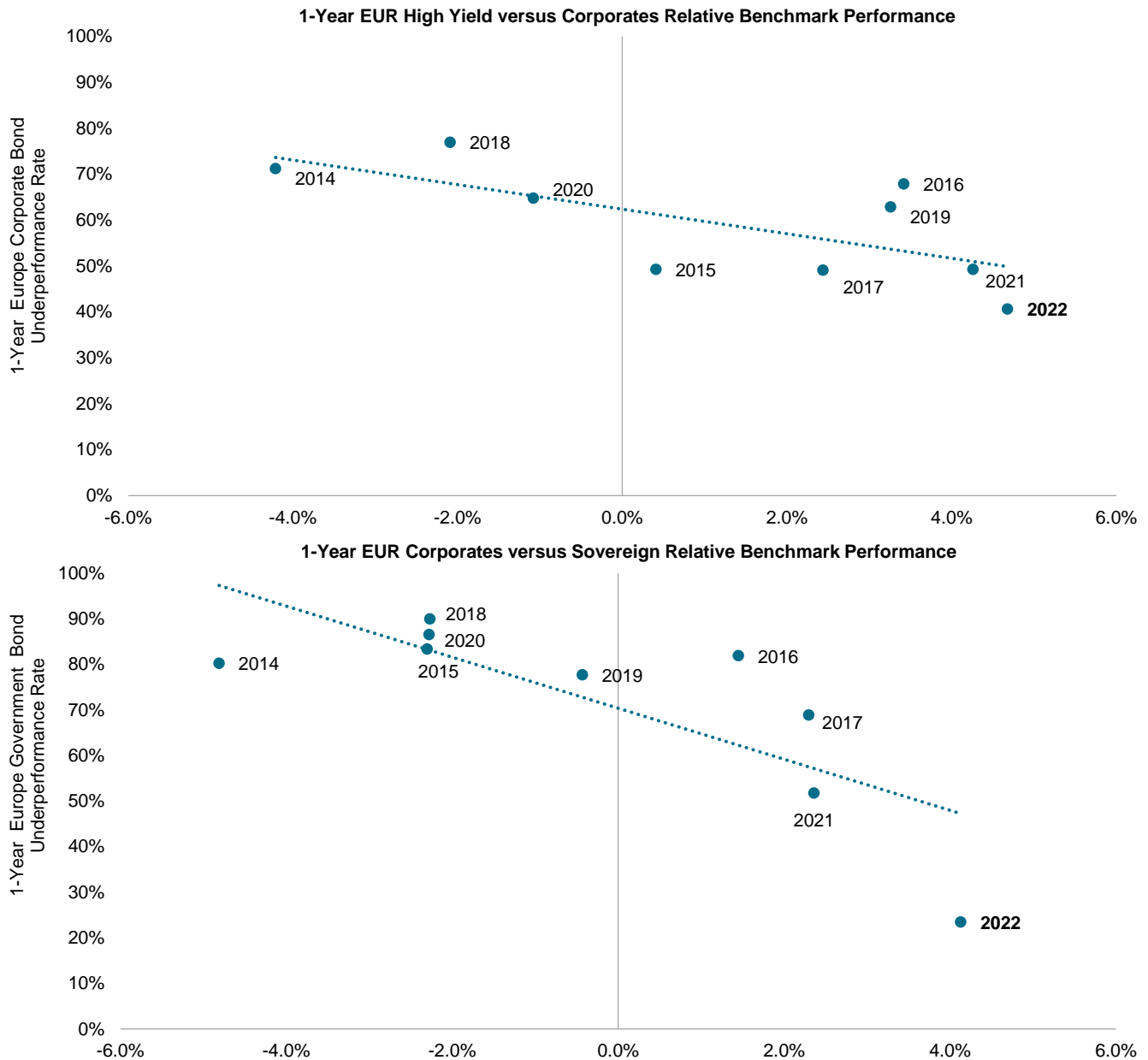
Source: S&P Dow Jones Indices LLC, Morningstar, Bloomberg LLC. Data as of Dec. 31, 2022. Index performance based on total returns in local currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

The ability of active managers to select securities from outside their benchmark also appears to offer a degree of explanatory power for European active fixed income fund performances. Based on trailing annual calendar year underperformance rates going back to 2014, Exhibit 5 illustrates that a higher percentage of euro-denominated corporate bond funds tended to outperform when the iBoxx Euro Liquid High Yield outperformed the iBoxx Euro Corporates.

² This particular example was a focus of commentary in our [SPIVA Europe Mid-Year 2022 Scorecard](#).

Similarly, a higher percentage of government bond funds typically outperformed when the iBoxx Euro Corporates outperformed the iBoxx Euro Sovereigns. Note that 2022 is an example when both of these instances occurred in both euro and pound sterling, offering a potential insight into the majority outperformance shown in Report 6 for three out of the four respective corporate and government bond categories.

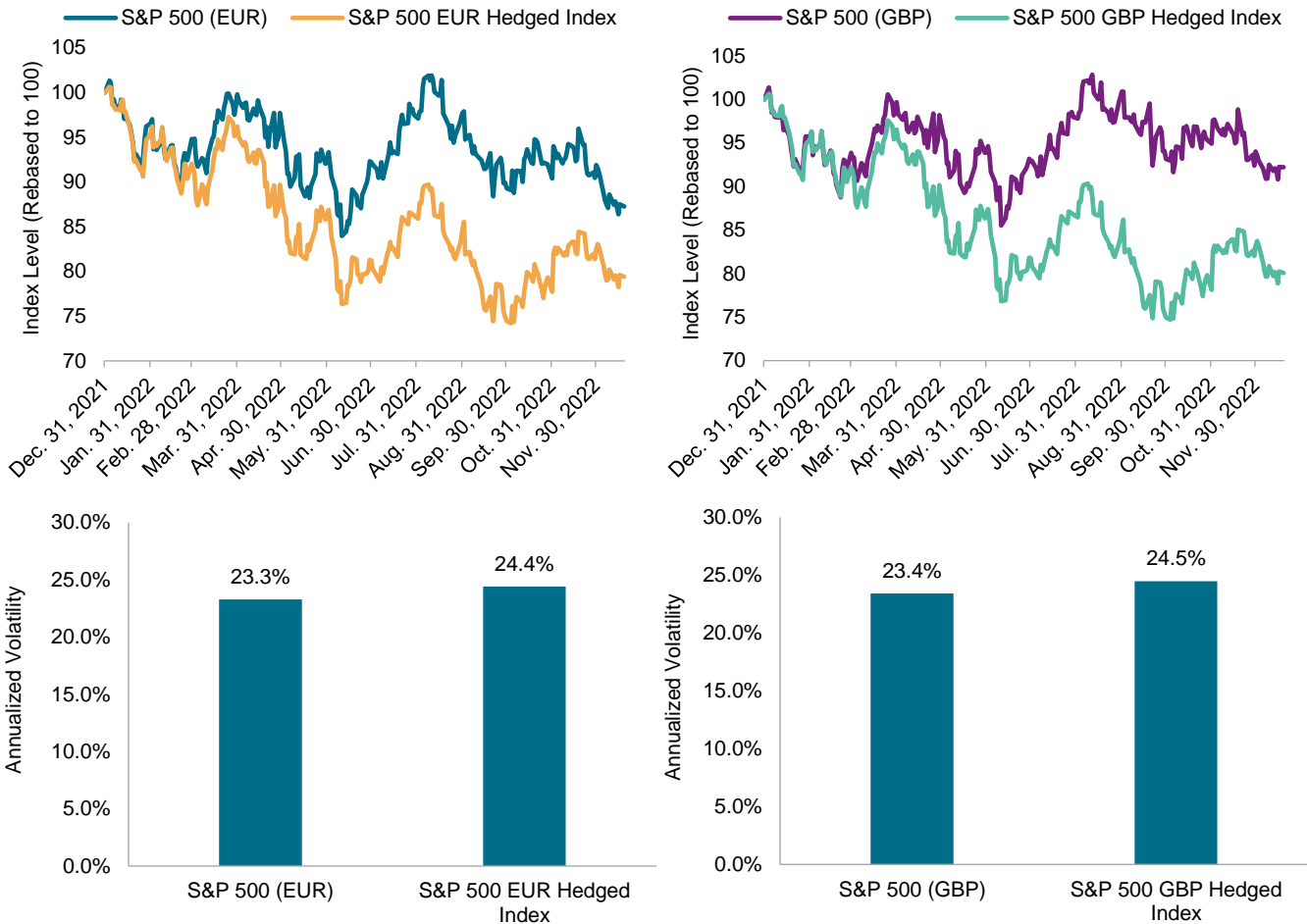
Exhibit 5: Differentiating Style Bias from Skill: Outperformance for Corporate Bond and Government Managers Typically Coincided with the Outperformance of High Yield and Corporates



Source: S&P Dow Jones Indices LLC, Morningstar. Data as of Dec. 31, 2022. Index performance based on total returns in local currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Less obviously, another market dynamic that might have affected active fund performance in Europe—particularly those invested in U.S. stocks or bonds—was the dramatic swing in the U.S. dollar in 2022. In addition to generating greater volatility, rate hikes in the U.S. strengthened the U.S. dollar, which would have been relatively detrimental to European managers investing in the U.S. who chose to hedge their exposure to the U.S. dollar. Quantifying the effect, Exhibit 6 shows that the S&P 500 EUR and S&P 500 GBP outperformed their currency hedged counterparts by 7.8% and 12.2%, respectively, and with lower volatility.

Exhibit 6: Hedging U.S. Equity Exposures Was Detrimental to Performance



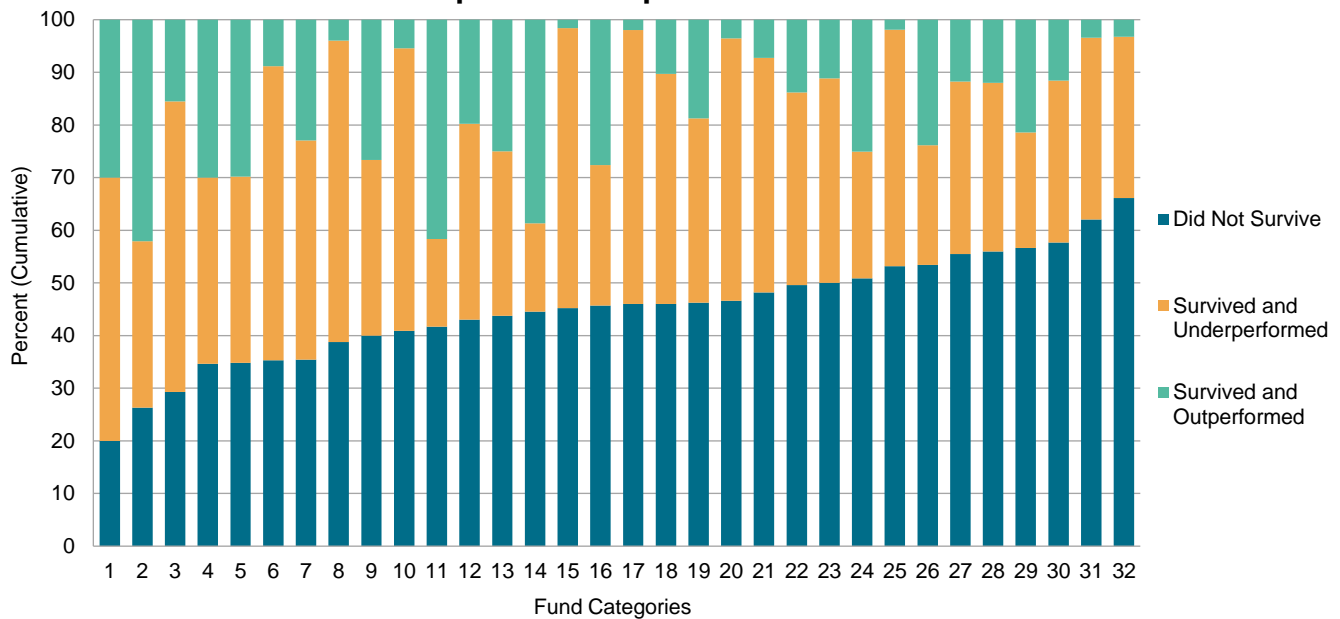
Source: S&P Dow Jones Indices LLC. Data as of Dec. 31, 2022. Index performance based on total returns in local currency. Past performance is no guarantee of future results. Chart is provided for illustrative purposes

This may help explain why euro- and pound sterling-denominated U.S. Equity managers displayed a considerably higher underperformance rate than their counterparts across the Atlantic: 67% of European-based U.S. large-cap funds underperformed the S&P 500 (in either reported currency), while our U.S. Scorecard reported that only 51% of U.S.-based large-cap funds did similarly.³

³ From our [SPIVA U.S. 2022 Scorecard](#).

While market dynamics vary from year to year, Exhibit 7 illustrates that over the long-term, survivorship continued to play an influential role in determining underperformance rates across all the categories included in this Scorecard—a relationship that cuts both ways: over the 10-year horizon, on average, more than 40% of funds within our reported equity and fixed income categories were merged or liquidated. Since funds have to at least survive in order to be counted as outperformers, a low survivorship rate makes outperformance rarer. Conversely, and as confirmed in our Persistence Scorecards,⁴ underperforming funds tend to be less likely to survive in the consequent years—meaning that categories with a high underperformance rate this year may suffer from a lower survival rate in the near future.

Exhibit 7: 10-Year Survivorship and Underperformance Rates



Source: S&P Dow Jones Indices LLC, Morningstar, Bloomberg LLC. Data as of Dec. 31, 2022. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Overall, while declining markets across asset classes, heightened dispersion and favorable style bias prospects could have created pockets of opportunity for outperformance, the outperformance of large caps combined with currency headwinds for overseas exposures to diminish the chances of success for active equity managers. Meanwhile, fixed income active managers can boast of a relatively successful year, but their long-term statistics suggest that finding a fund that outperforms over 10 years was just as challenging in European fixed income as it was in European equities.

⁴ Please refer to the [2021 Europe Persistence Scorecard](#) for more details.

A Unique Scorecard for the Active Versus Passive Debate

Since the publication of the first U.S. Scorecard 20 years ago, the SPIVA Scorecard has served as the de facto scorekeeper of the active versus passive debate. For two decades, we have heard passionate arguments from believers in both camps when headline numbers have deviated from their beliefs.

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 far less frequently discussed but are often much more fascinating. These data sets are rooted in the following fundamental principles of the SPIVA Scorecard, with which regular readers will be familiar.

- **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.
- **Apples-to-Apples Comparison:** Fund returns are often compared with a popular benchmark regardless of their investment category. The SPIVA Europe Scorecard makes an appropriate comparison by measuring a fund's returns against the returns of a benchmark that reflects the fund's investment category.
- **Asset-Weighted Returns:** Average returns for a fund group are often calculated using only equal weighting, which means the returns of a larger fund affect the average in the same manner as the returns of a smaller fund. An accurate representation of how market participants fared in a particular period can be ascertained by calculating weighted average returns where each fund's return is weighted by net assets. SPIVA Scorecards show both equal- and asset-weighted averages.
- **Data Cleaning:** SPIVA Scorecards avoid double-counting multiple share classes in all count-based calculations by using only the share class with greater assets. Index, leveraged and inverse funds, along with other index-linked products, are excluded because this is meant to be a scorecard for active managers.

Reports

Report 1a: Percentage of European Equity Funds Outperformed by Benchmarks (Based on Absolute Returns)

Fund Category	Comparison Index	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
Euro-Denominated Funds (EUR)					
Europe Equity	S&P Europe 350	86.67	83.01	91.19	89.70
Eurozone Equity	S&P Eurozone BMI	67.57	77.80	87.46	94.55
Nordic Equity	S&P Nordic BMI	65.22	85.00	85.71	88.46
Global Equity	S&P Global 1200	79.41	90.63	94.59	98.03
Emerging Markets Equity	S&P/IFCI Composite	78.57	81.14	85.34	96.49
U.S. Equity	S&P 500	67.02	87.26	95.47	98.40
France Equity	S&P France BMI	88.67	81.16	98.14	96.04
Germany Equity	S&P Germany BMI	66.30	56.25	72.34	77.08
Italy Equity	S&P Italy BMI	84.31	67.92	87.50	75.00
Spain Equity	S&P Spain BMI	74.67	72.22	86.36	81.25
British Pound Sterling-Denominated Funds (GBP)					
Europe Equity	S&P Europe 350	83.33	83.17	84.31	76.14
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	54.74	65.28	77.54	86.18
U.K. Equity	S&P United Kingdom BMI	92.24	77.35	78.74	74.94
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	97.32	91.45	83.13	78.57
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	66.67	20.73	35.44	58.33
Global Equity	S&P Global 1200	73.32	86.08	89.06	92.77
Emerging Markets Equity	S&P/IFCI Composite	76.21	74.38	80.11	88.89
U.S. Equity	S&P 500	67.23	80.72	93.93	98.10
Funds Denominated in Other European Local Currencies					
Denmark Equity	S&P Denmark BMI	100.00	100.00	100.00	91.18
Poland Equity	S&P Poland BMI	63.33	29.03	48.57	57.89
Switzerland Equity	S&P Switzerland BMI	74.03	77.88	88.61	70.22
Sweden Equity	S&P Sweden BMI	64.49	41.67	58.26	61.34

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Outperformance is based on equal-weighted fund counts. Index performance based on total return. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 1b: Percentage of European Equity Funds Outperformed by Benchmarks (Based on Risk-Adjusted Returns)

Fund Category	Comparison Index	3-Year (%)	5-Year (%)	10-Year (%)
Euro-Denominated Funds (EUR)				
Europe Equity	S&P Europe 350	85.89	92.41	92.74
Eurozone Equity	S&P Eurozone BMI	77.62	87.63	94.22
Nordic Equity	S&P Nordic BMI	85.00	90.48	96.15
Global Equity	S&P Global 1200	90.55	93.79	98.40
Emerging Markets Equity	S&P/IFCI Composite	81.14	87.10	97.12
U.S. Equity	S&P 500	89.20	95.47	99.68
France Equity	S&P France BMI	80.68	98.14	94.27
Germany Equity	S&P Germany BMI	-	-	78.13
Italy Equity	S&P Italy BMI	64.15	85.71	70.83
Spain Equity	S&P Spain BMI	-	-	81.25
British Pound Sterling-Denominated Funds (GBP)				
Europe Equity	S&P Europe 350	86.14	89.22	88.64
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	66.67	84.78	87.80
U.K. Equity	S&P United Kingdom BMI	80.59	81.03	84.21
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	92.76	89.38	85.20
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	-	-	63.10
Global Equity	S&P Global 1200	87.28	89.51	96.39
Emerging Markets Equity	S&P/IFCI Composite	75.86	81.22	91.27
U.S. Equity	S&P 500	83.86	95.33	100.00
Funds Denominated in Other European Local Currencies				
Denmark Equity	S&P Denmark BMI	100.00	100.00	91.18
Poland Equity	S&P Poland BMI	-	-	55.26
Switzerland Equity	S&P Switzerland BMI	77.88	90.10	80.34
Sweden Equity	S&P Sweden BMI	47.92	64.35	67.23

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Results not shown for periods in which the benchmark return was negative. Risk-adjusted return is computed as annualized average monthly return divided by annualized standard deviation of the monthly return for the measured periods. Index performance based on total return. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 1c: Percentage of European Equity Funds Outperformed by Benchmarks Each Year (Based on Absolute Returns)

Fund Category	Comparison Index	2014	2015	2016	2017	2018	2019	2020	2021	2022
Euro-Denominated Funds (EUR)										
Europe Equity	S&P Europe 350	82.96	31.94	80.41	46.59	85.65	71.12	37.27	74.79	86.67
Eurozone Equity	S&P Eurozone BMI	84.59	57.88	79.96	73.70	77.17	78.80	58.38	65.43	67.57
Nordic Equity	S&P Nordic BMI	-	38.64	39.13	73.17	86.96	60.87	59.09	71.43	65.22
Global Equity	S&P Global 1200	89.99	73.60	88.52	53.76	87.00	81.56	54.69	81.56	79.41
Emerging Markets Equity	S&P/IFCI Composite	75.55	74.92	93.62	71.61	79.33	50.14	59.04	74.21	78.57
U.S. Equity	S&P 500	93.70	83.91	77.20	71.24	82.68	81.20	54.34	86.54	67.02
France Equity	S&P France BMI	68.83	44.69	66.97	52.91	98.19	90.05	34.27	83.33	88.67
Germany Equity	S&P Germany BMI	74.19	46.24	87.91	39.33	74.44	57.29	46.32	40.45	66.30
Italy Equity	S&P Italy BMI	-	31.91	60.78	28.30	74.58	94.83	55.36	32.69	84.31
Spain Equity	S&P Spain BMI	-	24.05	65.52	68.24	59.09	85.71	61.96	45.88	74.67
British Pound Sterling-Denominated Funds (GBP)										
Europe Equity	S&P Europe 350	39.22	17.35	84.47	38.89	80.58	45.63	33.33	61.76	83.33
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	71.07	24.79	75.78	56.15	81.48	67.63	53.06	64.08	54.74
U.K. Equity	S&P United Kingdom BMI	54.85	22.16	87.22	46.40	73.41	27.47	20.40	55.49	92.24
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	41.71	14.14	92.54	54.10	78.21	29.59	19.38	66.67	97.32
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	72.31	49.25	36.92	19.70	57.14	60.00	14.81	24.39	66.67
Global Equity	S&P Global 1200	85.31	61.19	93.81	52.72	76.73	64.55	50.72	80.35	73.32
Emerging Markets Equity	S&P/IFCI Composite	63.27	71.93	93.83	62.43	76.97	35.64	53.73	66.19	76.21
U.S. Equity	S&P 500	84.29	78.04	67.29	67.11	76.32	67.52	53.25	82.41	67.23
Funds Denominated in Other European Local Currencies										
Denmark Equity	S&P Denmark BMI	-	69.70	2.94	100	83.78	77.78	68.42	100.0	100.0
Poland Equity	S&P Poland BMI	-	19.57	68.89	93.48	93.18	20.00	5.88	75.00	63.33
Switzerland Equity	S&P Switzerland BMI	-	37.78	22.29	37.99	88.38	75.00	40.00	55.36	74.03
Sweden Equity	S&P Sweden BMI	-	41.82	54.55	49.11	61.74	56.36	48.45	38.46	64.49

Source: S&P Dow Jones Indices LLC, Morningstar. Data as of publication in respective SPIVA Scorecards. 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 of European Equity Funds

Fund Category	Number of Funds at Start	Survivorship (%)
1-Year (EUR)		
Europe Equity	1058	94.42
Eurozone Equity	552	95.11
Nordic Equity	23	100.00
Global Equity	1447	96.61
Emerging Markets Equity	364	95.33
U.S. Equity	382	97.38
France Equity	203	96.55
Germany Equity	92	96.74
Italy Equity	51	92.16
Spain Equity	75	92.00
1-Year (GBP)		
Europe Equity	108	95.37
Europe Ex-U.K. Equity	137	94.16
U.K. Equity	335	93.43
U.K. Large-/Mid-Cap Equity	149	93.96
U.K. Small-Cap Equity	81	98.77
Global Equity	566	96.64
Emerging Markets Equity	227	92.07
U.S. Equity	238	95.38
1-Year (Other European Local Currencies)		
Denmark Equity	35	97.14
Poland Equity	30	96.67
Switzerland Equity	231	96.97
Sweden Equity	107	95.33

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec 31, 2022. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship of European Equity Funds (cont.)

Fund Category	Number of Funds at Start	Survivorship (%)
3-Year (EUR)		
Europe Equity	1077	82.82
Eurozone Equity	572	85.84
Nordic Equity	20	95.00
Global Equity	1281	87.82
Emerging Markets Equity	350	84.57
U.S. Equity	361	87.53
France Equity	207	89.37
Germany Equity	96	84.38
Italy Equity	53	81.13
Spain Equity	90	74.44
3-Year (GBP)		
Europe Equity	101	81.19
Europe Ex-U.K. Equity	144	77.78
U.K. Equity	340	84.41
U.K. Large-/Mid-Cap Equity	152	82.24
U.K. Small-Cap Equity	82	92.68
Global Equity	503	84.10
Emerging Markets Equity	203	82.27
U.S. Equity	223	83.41
3-Year (Other European Local Currencies)		
Denmark Equity	38	81.58
Poland Equity	31	93.55
Switzerland Equity	217	88.94
Sweden Equity	96	93.75

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship of European Equity Funds (cont.)

Fund Category	Number of Funds at Start	Survivorship (%)
5-Year (EUR)		
Europe Equity	1067	72.45
Eurozone Equity	574	78.40
Nordic Equity	21	85.71
Global Equity	1128	78.37
Emerging Markets Equity	341	71.85
U.S. Equity	353	70.82
France Equity	215	80.93
Germany Equity	94	76.60
Italy Equity	56	76.79
Spain Equity	88	70.45
5-Year (GBP)		
Europe Equity	102	63.73
Europe Ex-U.K. Equity	138	68.84
U.K. Equity	348	73.28
U.K. Large-/Mid-Cap Equity	160	66.25
U.K. Small-Cap Equity	79	88.61
Global Equity	448	72.10
Emerging Markets Equity	181	69.06
U.S. Equity	214	69.16
5-Year (Other European Local Currencies)		
Denmark Equity	36	75.00
Poland Equity	35	82.86
Switzerland Equity	202	83.66
Sweden Equity	115	73.91

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 2: Survivorship of European Equity Funds (cont.)

Fund Category	Number of Funds at Start	Survivorship (%)
10-Year (EUR)		
Europe Equity	1019	53.97
Eurozone Equity	606	59.08
Nordic Equity	26	42.31
Global Equity	1065	53.99
Emerging Markets Equity	313	53.35
U.S. Equity	312	54.81
France Equity	227	61.23
Germany Equity	96	64.58
Italy Equity	48	56.25
Spain Equity	80	53.75
10-Year (GBP)		
Europe Equity	88	46.59
Europe Ex-U.K. Equity	123	50.41
U.K. Equity	399	49.12
U.K. Large-/Mid-Cap Equity	196	43.37
U.K. Small-Cap Equity	84	58.33
Global Equity	332	51.81
Emerging Markets Equity	126	50.00
U.S. Equity	158	46.84
10-Year (Other European Local Currencies)		
Denmark Equity	34	64.71
Poland Equity	38	73.68
Switzerland Equity	178	65.17
Sweden Equity	119	55.46

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3a: Average European Equity Fund Performance (Equal-Weighted)

Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
Euro-Denominated Funds (EUR)				
Europe Equity	-16.95	1.41	2.09	6.00
S&P Europe 350	-8.58	3.86	5.13	7.63
Eurozone Equity	-15.44	1.15	1.46	5.75
S&P Eurozone BMI	-12.75	2.52	3.60	7.88
Nordic Equity	-19.58	5.88	5.82	8.13
S&P Nordic BMI	-16.01	8.44	8.25	10.26
Global Equity	-16.09	3.35	4.90	7.70
S&P Global 1200	-11.58	6.97	9.05	11.64
Emerging Markets Equity	-17.36	-2.49	-0.45	2.29
S&P/IFCI Composite	-14.10	0.05	1.65	4.60
U.S. Equity	-16.51	6.36	8.49	11.47
S&P 500	-12.74	9.49	12.04	14.97
France Equity	-14.06	2.24	1.08	6.92
S&P France BMI	-7.49	4.38	6.13	9.45
Germany Equity	-21.25	-0.70	-0.87	5.22
S&P Germany BMI	-17.95	-0.99	-0.16	5.96
Italy Equity	-13.83	3.30	3.02	7.36
S&P Italy BMI	-10.34	3.34	4.61	7.32
Spain Equity	-3.87	-2.08	-1.80	3.27
S&P Spain BMI	-1.24	-1.26	-0.25	4.22

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. 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 3a: Average European Equity Fund Performance (Equal-Weighted) (cont.)

Index/Fund Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
British Pound Sterling-Denominated Funds (GBP)				
Europe Equity	-13.46	3.17	3.17	8.24
S&P Europe 350	-3.43	5.48	5.11	8.60
Europe Ex-U.K. Equity	-10.68	4.95	3.97	8.88
S&P Europe Ex-UK BMI	-8.47	5.55	5.20	9.70
U.K. Equity	-12.95	-0.06	1.71	6.71
S&P United Kingdom BMI	1.66	2.08	2.74	6.39
U.K. Large-/Mid-Cap Equity	-6.90	0.78	2.12	6.46
S&P United Kingdom LargeMidCap	5.91	3.05	3.13	6.07
U.K. Small-Cap Equity	-24.54	-0.36	1.76	8.44
S&P United Kingdom SmallCap	-21.05	-4.21	-0.09	7.23
Global Equity	-12.06	5.85	6.49	10.19
S&P Global 1200	-6.94	8.58	8.96	12.6
Emerging Markets Equity	-12.35	-0.13	0.37	4.25
S&P/IFCI Composite	-9.23	1.60	1.64	5.54
U.S. Equity	-12.96	8.46	9.42	13.77
S&P 500	-7.79	11.18	12.02	16.00
Funds Denominated in Other European Local Currencies				
Denmark Equity	-16.25	9.02	7.54	14.22
S&P Denmark BMI	0.06	18.19	14.37	16.56
Poland Equity	-16.23	4.74	0.37	1.76
S&P Poland BMI	-17.92	-1.36	-2.78	1.55
Switzerland Equity	-20.41	1.10	2.55	7.68
S&P Switzerland BMI	-16.43	2.29	5.17	8.27
Sweden Equity	-25.68	6.58	8.98	12.22
S&P Sweden BMI	-23.52	5.40	8.31	11.14

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Index performance based on total return. Funds are equal weighted, but indices are not. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3b: Average European Equity Fund Performance (Asset-Weighted)

Index/Fund Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
Euro-Denominated Funds (EUR)				
Europe Equity	-17.54	1.11	2.38	6.10
S&P Europe 350	-8.58	3.86	5.13	7.63
Eurozone Equity	-15.05	1.49	1.85	6.08
S&P Eurozone BMI	-12.75	2.52	3.60	7.88
Nordic Equity	-18.80	6.04	6.12	7.99
S&P Nordic BMI	-16.01	8.44	8.25	10.26
Global Equity	-16.03	4.09	5.77	8.52
S&P Global 1200	-11.58	6.97	9.05	11.64
Emerging Markets Equity	-17.92	-2.65	-0.42	2.66
S&P/IFCI Composite	-14.10	0.05	1.65	4.60
U.S. Equity	-15.73	6.74	8.86	11.64
S&P 500	-12.74	9.49	12.04	14.97
France Equity	-12.05	2.22	1.87	6.82
S&P France BMI	-7.49	4.38	6.13	9.45
Germany Equity	-22.11	-1.85	-1.49	5.40
S&P Germany BMI	-17.95	-0.99	-0.16	5.96
Italy Equity	-13.33	2.44	2.48	6.63
S&P Italy BMI	-10.34	3.34	4.61	7.32
Spain Equity	-3.64	-1.72	-1.39	3.77
S&P Spain BMI	-1.24	-1.26	-0.25	4.22

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Index performance based on total return. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 3b: Average European Equity Fund Performance (Asset-Weighted) (cont.)

Index/Fund Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
British Pound Sterling-Denominated Funds (GBP)				
Europe Equity	-18.87	1.38	2.65	8.35
S&P Europe 350	-3.43	5.48	5.11	8.60
Europe Ex-U.K. Equity	-11.97	4.45	4.20	8.96
S&P Europe Ex-UK BMI	-8.47	5.55	5.20	9.70
U.K. Equity	-11.01	-0.37	1.46	6.31
S&P United Kingdom BMI	1.66	2.08	2.74	6.39
U.K. Large-/Mid-Cap Equity	-6.10	0.18	1.82	6.33
S&P United Kingdom LargeMidCap	5.91	3.05	3.13	6.07
U.K. Small-Cap Equity	-25.99	-0.86	1.33	8.75
S&P United Kingdom SmallCap	-21.05	-4.21	-0.09	7.23
Global Equity	-12.83	6.66	7.61	11.38
S&P Global 1200	-6.94	8.58	8.96	12.60
Emerging Markets Equity	-13.64	-0.40	0.25	4.17
S&P/IFCI Composite	-9.23	1.60	1.64	5.54
U.S. Equity	-15.56	8.28	9.37	13.90
S&P 500	-7.79	11.18	12.02	16.00
Funds Denominated in Other European Local Currencies				
Denmark Equity	-15.89	9.40	8.14	14.31
S&P Denmark BMI	0.06	18.19	14.37	16.56
Poland Equity	-15.38	2.25	-1.35	0.52
S&P Poland BMI	-17.92	-1.36	-2.78	1.55
Switzerland Equity	-20.17	1.40	3.31	8.43
S&P Switzerland BMI	-16.43	2.29	5.17	8.27
Sweden Equity	-26.65	5.35	7.83	11.65
S&P Sweden BMI	-23.52	5.40	8.31	11.14

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Index performance based on total return. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 4: Return/Volatility Ratio of European Equity Funds and Benchmarks

Category	Benchmark	Benchmark			Asset-Weighted			Equal-Weighted		
		3-Year	5-Year	10-Year	3-Year	5-Year	10-Year	3-Year	5-Year	10-Year
Euro-Denominated Funds (EUR)										
Europe Equity	S&P Europe 350	0.21	0.32	0.55	0.06	0.14	0.43	0.07	0.12	0.42
Eurozone Equity	S&P Eurozone BMI	0.12	0.20	0.50	0.07	0.10	0.40	0.06	0.08	0.39
Nordic Equity	S&P Nordic BMI	0.40	0.46	0.68	0.28	0.33	0.53	0.27	0.31	0.53
Global Equity	S&P Global 1200	0.39	0.57	0.87	0.24	0.38	0.66	0.20	0.32	0.60
Emerging Markets Equity	S&P/IFCI Composite	0.00	0.11	0.33	-0.16	-0.03	0.19	-0.15	-0.03	0.17
U.S. Equity	S&P 500	0.49	0.70	1.04	0.36	0.52	0.81	0.33	0.49	0.79
France Equity	S&P France BMI	0.20	0.33	0.59	0.10	0.10	0.44	0.11	0.06	0.46
Germany Equity	S&P Germany BMI	-0.04	-0.01	0.35	-0.08	-0.07	0.30	-0.03	-0.05	0.33
Italy Equity	S&P Italy BMI	0.13	0.21	0.36	0.11	0.12	0.35	0.15	0.15	0.40
Spain Equity	S&P Spain BMI	-0.05	-0.01	0.23	-0.07	-0.07	0.23	-0.09	-0.09	0.19
British Pound Sterling-Denominated Funds (GBP)										
Europe Equity	S&P Europe 350	0.34	0.36	0.68	0.07	0.16	0.60	0.17	0.20	0.62
Europe Ex-U.K. Equity	S&P Europe Ex-UK BMI	0.32	0.35	0.72	0.25	0.27	0.67	0.27	0.25	0.66
U.K. Equity	S&P United Kingdom BMI	0.12	0.19	0.52	-0.02	0.09	0.47	0.00	0.10	0.49
U.K. Large-/Mid-Cap Equity	S&P United Kingdom LargeMidCap	0.19	0.22	0.49	0.01	0.12	0.49	0.04	0.13	0.50
U.K. Small-Cap Equity	S&P United Kingdom SmallCap	-0.17	0.00	0.45	-0.04	0.07	0.57	-0.02	0.09	0.55
Global Equity	S&P Global 1200	0.57	0.65	1.07	0.45	0.56	0.96	0.39	0.48	0.87
Emerging Markets Equity	S&P/IFCI Composite	0.10	0.12	0.39	-0.02	0.02	0.29	-0.01	0.03	0.30
U.S. Equity	S&P 500	0.68	0.80	1.24	0.48	0.57	1.00	0.50	0.59	1.02
Funds Denominated in Other European Local Currencies										
Denmark Equity	S&P Denmark BMI	1.00	0.90	1.13	0.46	0.47	0.98	0.44	0.43	0.97
Poland Equity	S&P Poland BMI	-0.05	-0.12	0.08	0.10	-0.07	0.03	0.21	0.02	0.11
Switzerland Equity	S&P Switzerland BMI	0.16	0.39	0.69	0.09	0.24	0.68	0.07	0.18	0.63
Sweden Equity	S&P Sweden BMI	0.25	0.44	0.70	0.22	0.38	0.69	0.28	0.45	0.75

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 5: Quartile Breakpoints of European Equity Funds

Fund Category	Third Quartile (Annualized, %)	Second Quartile (Annualized, %)	First Quartile (Annualized, %)
1-Year (EUR)			
Europe Equity	-22.10	-15.50	-11.13
Eurozone Equity	-19.24	-14.66	-11.83
Nordic Equity	-23.33	-19.61	-14.30
Global Equity	-19.75	-15.72	-12.25
Emerging Markets Equity	-20.29	-17.30	-14.51
U.S. Equity	-19.50	-14.87	-10.96
France Equity	-18.55	-13.22	-9.53
Germany Equity	-26.51	-20.93	-16.20
Italy Equity	-16.17	-13.48	-11.13
Spain Equity	-7.00	-4.45	-0.87
1-Year (GBP)			
Europe Equity	-21.26	-11.44	-5.50
Europe Ex-U.K. Equity	-17.26	-8.89	-5.37
U.K. Equity	-23.01	-10.96	-2.20
U.K. Large-/Mid-Cap Equity	-11.00	-4.02	0.35
U.K. Small-Cap Equity	-30.18	-24.89	-17.64
Global Equity	-16.29	-10.69	-6.47
Emerging Markets Equity	-16.06	-12.71	-8.83
U.S. Equity	-18.09	-10.12	-5.36
1-Year (Other European Local Currencies)			
Denmark Equity	-19.59	-14.87	-12.36
Poland Equity	-20.54	-18.58	-16.02
Switzerland Equity	-24.71	-20.12	-16.19
Sweden Equity	-31.89	-27.00	-20.09

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. 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, %)
3-Year (EUR)			
Europe Equity	-0.54	1.44	3.28
Eurozone Equity	-0.52	1.22	2.67
Nordic Equity	4.15	5.61	8.06
Global Equity	1.76	3.77	5.56
Emerging Markets Equity	-3.80	-2.27	-0.29
U.S. Equity	5.21	7.17	8.72
France Equity	0.47	2.28	3.94
Germany Equity	-2.75	-0.78	2.10
Italy Equity	1.44	2.79	4.77
Spain Equity	-3.60	-2.17	-0.41
3-Year (GBP)			
Europe Equity	1.38	3.18	5.14
Europe Ex-U.K. Equity	3.64	5.09	7.27
U.K. Equity	-2.34	0.10	2.28
U.K. Large-/Mid-Cap Equity	-1.43	0.90	2.27
U.K. Small-Cap Equity	-3.49	-0.96	2.70
Global Equity	4.29	6.39	7.85
Emerging Markets Equity	-1.26	0.10	2.23
U.S. Equity	6.93	9.29	10.85
3-Year (Other European Local Currencies)			
Denmark Equity	7.96	9.27	10.71
Poland Equity	0.70	2.49	5.71
Switzerland Equity	0.09	1.30	2.28
Sweden Equity	4.08	6.13	8.82

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. 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, %)
5-Year (EUR)			
Europe Equity	0.46	2.33	3.95
Eurozone Equity	0.02	1.56	2.85
Nordic Equity	5.07	5.93	7.67
Global Equity	3.26	5.21	7.11
Emerging Markets Equity	-1.47	-0.21	1.09
U.S. Equity	7.39	9.12	10.43
France Equity	-1.05	1.05	3.16
Germany Equity	-2.49	-1.13	0.39
Italy Equity	1.59	2.60	4.11
Spain Equity	-3.06	-1.82	-0.51
5-Year (GBP)			
Europe Equity	1.07	3.53	5.11
Europe Ex-U.K. Equity	2.85	4.40	5.55
U.K. Equity	0.17	1.54	3.26
U.K. Large-/Mid-Cap Equity	0.50	1.84	3.26
U.K. Small-Cap Equity	-0.41	1.28	4.13
Global Equity	4.82	6.52	8.39
Emerging Markets Equity	-0.49	0.56	1.98
U.S. Equity	8.15	9.72	10.98
5-Year (Other European Local Currencies)			
Denmark Equity	7.32	7.95	9.50
Poland Equity	-2.83	-1.03	1.85
Switzerland Equity	1.22	3.08	4.64
Sweden Equity	6.24	8.70	11.16

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 5: Quartile Breakpoints of European Equity Funds (cont.)

Fund Category	Third Quartile (Annualized, %)	Second Quartile (Annualized, %)	First Quartile (Annualized, %)
10-Year (EUR)			
Europe Equity	4.81	5.96	7.20
Eurozone Equity	4.63	5.80	6.71
Nordic Equity	8.37	8.87	9.98
Global Equity	6.51	8.03	9.66
Emerging Markets Equity	1.30	2.43	3.45
U.S. Equity	10.20	11.80	13.04
France Equity	5.76	6.91	7.92
Germany Equity	3.77	5.34	6.44
Italy Equity	6.00	7.13	8.01
Spain Equity	1.79	2.91	4.64
10-Year (GBP)			
Europe Equity	7.21	8.60	9.68
Europe Ex-U.K. Equity	8.12	9.14	9.77
U.K. Equity	5.36	6.56	8.38
U.K. Large-/Mid-Cap Equity	5.17	6.02	6.90
U.K. Small-Cap Equity	6.99	8.75	9.88
Global Equity	8.40	10.13	11.85
Emerging Markets Equity	3.11	4.01	5.39
U.S. Equity	12.57	13.79	15.09
10-Year (Other European Local Currencies)			
Denmark Equity	13.52	14.45	15.11
Poland Equity	1.15	3.03	4.83
Switzerland Equity	6.96	8.11	8.82
Sweden Equity	10.94	12.02	14.99

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 6a: Percentage of European Fixed Income Funds Outperformed by Benchmarks (Based on Absolute Returns)

Fund Category	Comparison Index	1-Year (%)	3-Year (%)	5-Year (%)	10-Year (%)
Corporate Bond (EUR)	iBoxx Euro Corporates	40.62	53.18	69.54	80.23
Government Bond (EUR)	iBoxx Euro Sovereigns	23.46	49.52	73.52	88.24
High Yield Bond (EUR)	iBoxx Euro Liquid High Yield	71.59	72.07	81.48	70.00
Corporate Bond (GBP)	iBoxx Sterling Non-Gilts	57.52	44.25	59.02	72.41
Government Bond (GBP)	iBoxx Sterling Gilts	41.86	52.00	70.59	96.77
High Yield Bond (GBP)	iBoxx Sterling High Yield	76.92	73.33	100.00	-
Corporate Bond (USD)	iBoxx USD Corporates	62.50	50.85	60.00	73.33
Government Bond (USD)	iBoxx Global Government United States	39.13	73.08	80.00	96.55
High Yield Bond (USD)	iBoxx USD Liquid High Yield	52.17	48.91	71.91	84.48
Global Bond (USD)	Bloomberg Global Aggregate	42.35	53.01	68.18	88.00
Global Corporate Bond (USD)	Bloomberg Global Aggregate Corporate	60.00	52.17	57.69	70.00

Source: S&P Dow Jones Indices LLC, Morningstar, Bloomberg LLC. Data for periods ending Dec. 31, 2022. Outperformance is based on equal-weighted fund counts. Index performance based on total return. Underperformance rates for the High Yield Bond (GBP) category are reported for time horizons over which its comparison index was live. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 6b: Percentage of European Fixed Income Funds Outperformed by Benchmarks (Based on Risk-Adjusted Returns)

Fund Category	Comparison Index	3-Year (%)	5-Year (%)	10-Year (%)
Corporate Bond (EUR)	iBoxx Euro Corporates	-	-	79.36
Government Bond (EUR)	iBoxx Euro Sovereigns	-	-	87.50
High Yield Bond (EUR)	iBoxx Euro Liquid High Yield	-	80.86	75.38
Corporate Bond (GBP)	iBoxx Sterling Non-Gilts	-	-	75.00
Government Bond (GBP)	iBoxx Sterling Gilts	-	-	98.39
High Yield Bond (GBP)	iBoxx Sterling High Yield	-	100.00	-
Corporate Bond (USD)	iBoxx USD Corporates	-	60.00	80.00
Government Bond (USD)	iBoxx Global Government United States	-	-	96.55
High Yield Bond (USD)	iBoxx USD Liquid High Yield	-	64.04	74.14
Global Bond (USD)	Bloomberg Global Aggregate	-	-	-
Global Corporate Bond (USD)	Bloomberg Global Aggregate Corporate	-	-	70.00

Source: S&P Dow Jones Indices LLC, Morningstar, Bloomberg LLC. Data for periods ending Dec. 31, 2022. Index performance based on total returns. Results not shown for periods in which the benchmark return was negative. Underperformance rates for the High Yield Bond (GBP) category are reported for time horizons over which its comparison index was live. Risk-adjusted return is computed as annualized average monthly return divided by annualized standard deviation of the monthly return for the measured periods. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 7: Survivorship of European Fixed Income Funds

Fund Category	Number of Funds at Start	Survivorship (%)
1-Year		
Corporate Bond (EUR)	357	96.08
Government Bond (EUR)	179	94.97
High Yield Bond (EUR)	176	95.45
Corporate Bond (GBP)	113	95.58
Government Bond (GBP)	43	95.35
High Yield Bond (GBP)	13	92.31
Corporate Bond (USD)	56	98.21
Government Bond (USD)	23	86.96
High Yield Bond (USD)	92	95.65
Global Bond (USD)	85	92.94
Global Corporate Bond (USD)	30	90.00
3-Year		
Corporate Bond (EUR)	346	88.73
Government Bond (EUR)	208	79.33
High Yield Bond (EUR)	179	84.92
Corporate Bond (GBP)	113	90.27
Government Bond (GBP)	50	78.00
High Yield Bond (GBP)	15	80.00
Corporate Bond (USD)	59	88.14
Government Bond (USD)	26	73.08
High Yield Bond (USD)	92	84.78
Global Bond (USD)	83	81.93
Global Corporate Bond (USD)	23	82.61

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 7: Survivorship of European Fixed Income Funds (cont.)

Fund Category	Number. of Funds at Start	Survivorship (%)
5-Year		
Corporate Bond (EUR)	325	78.46
Government Bond (EUR)	219	65.30
High Yield Bond (EUR)	162	77.16
Corporate Bond (GBP)	122	74.59
Government Bond (GBP)	51	64.71
High Yield Bond (GBP)	16	75.00
Corporate Bond (USD)	55	74.55
Government Bond (USD)	25	68.00
High Yield Bond (USD)	89	79.78
Global Bond (USD)	88	65.91
Global Corporate Bond (USD)	26	65.38
10-Year		
Corporate Bond (EUR)	344	56.98
Government Bond (EUR)	272	44.49
High Yield Bond (EUR)	130	65.38
Corporate Bond (GBP)	116	54.31
Government Bond (GBP)	62	33.87
High Yield Bond (GBP)	15	66.67
Corporate Bond (USD)	30	60.00
Government Bond (USD)	29	37.93
High Yield Bond (USD)	58	70.69
Global Bond (USD)	75	44.00
Global Corporate Bond (USD)	10	80.00

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 8a: Average European Fixed Income Fund Performance (Equal-Weighted)

Index/Fund Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
Corporate Bond (EUR)	-13.32	-4.26	-1.97	0.38
iBoxx Euro Corporates	-14.17	-4.46	-1.76	0.76
Government Bond (EUR)	-15.19	-5.29	-2.38	0.14
iBoxx Euro Sovereigns	-18.44	-6.14	-2.28	0.79
High Yield Bond (EUR)	-10.28	-2.44	-0.72	1.98
iBoxx Euro Liquid High Yield	-9.41	-1.69	0.11	2.47
Corporate Bond (GBP)	-19.29	-5.01	-1.59	1.93
iBoxx Sterling Non-Gilts	-17.73	-4.92	-1.55	1.96
Government Bond (GBP)	-24.18	-7.81	-3.34	0.51
iBoxx Sterling Gilts	-25.02	-8.20	-3.57	0.36
High Yield Bond (GBP)	-12.44	-1.76	0.12	3.09
iBoxx Sterling High Yield	-10.52	-1.25	1.50	-
Corporate Bond (USD)	-14.10	-2.70	0.25	1.43
iBoxx USD Corporates	-15.04	-2.66	0.55	1.92
Government Bond (USD)	-12.10	-2.96	-0.58	0.02
iBoxx Global Government United States	-12.95	-2.75	-0.17	0.60
High Yield Bond (USD)	-10.75	-0.80	1.32	2.61
iBoxx USD Liquid High Yield	-10.74	-0.80	1.97	3.34
Global Bond (USD)	-14.07	-3.94	-1.50	-0.54
Bloomberg Global Aggregate	-16.25	-4.48	-1.66	-0.44
Global Corporate Bond (USD)	-15.82	-3.46	-0.66	0.73
Bloomberg Global Aggregate Corporate	-16.72	-3.72	-0.82	0.86

Source: S&P Dow Jones Indices LLC, Morningstar, Bloomberg LLC. Data for periods ending Dec. 31, 2022. Index performance based on total returns. Funds are equal weighted, but indices are not. Index returns for iBoxx Sterling High Yield are reported for time horizons over which the index was live. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 8b: Average European Fixed Income Fund Performance (Asset-Weighted)

Index/Fund Category	1-Year (%)	3-Year (Annualized, %)	5-Year (Annualized, %)	10-Year (Annualized, %)
Corporate Bond (EUR)	-13.82	-4.21	-1.71	0.79
iBoxx Euro Corporates	-14.17	-4.46	-1.76	0.76
Government Bond (EUR)	-14.79	-5.00	-2.18	0.33
iBoxx Euro Sovereign	-18.44	-6.14	-2.28	0.79
High Yield Bond (EUR)	-10.21	-2.10	-0.38	2.26
iBoxx Euro Liquid High Yield	-9.41	-1.69	0.11	2.47
Corporate Bond (GBP)	-18.03	-4.54	-1.30	2.15
iBoxx Sterling Non-Gilts	-17.73	-4.92	-1.55	1.96
Government Bond (GBP)	-17.68	-6.27	-2.64	0.68
iBoxx Sterling Gilts	-25.02	-8.20	-3.57	0.36
High Yield Bond (GBP)	-11.93	-1.58	0.36	3.03
iBoxx Sterling High Yield	-10.52	-1.25	1.50	-
Corporate Bond (USD)	-12.96	-1.92	0.88	1.95
iBoxx USD Corporates	-15.04	-2.66	0.55	1.92
Government Bond (USD)	-11.61	-2.97	-0.59	0.08
iBoxx Global Government United States	-12.95	-2.75	-0.17	0.60
High Yield Bond (USD)	-10.54	-0.45	1.64	2.84
iBoxx USD Liquid High Yield	-10.74	-0.80	1.97	3.34
Global Bond (USD)	-13.05	-4.42	-1.84	-0.56
Bloomberg Global Aggregate	-16.25	-4.48	-1.66	-0.44
Global Corporate Bond (USD)	-14.88	-2.21	0.53	1.64
Bloomberg Global Aggregate Corporate	-16.72	-3.72	-0.82	0.86

Source: S&P Dow Jones Indices LLC, Morningstar, Bloomberg LLC. Data for periods ending Dec. 31, 2022. Index performance based on total returns. Index return for iBoxx Sterling High Yield are reported for time horizons over which the index was live. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 9: Return/Volatility Ratio of European Fixed Income Funds and Benchmarks

Category	Benchmark	Benchmark			Asset-Weighted			Equal-Weighted		
		3-Year	5-Year	10-Year	3-Year	5-Year	10-Year	3-Year	5-Year	10-Year
Corporate Bond (EUR)	iBoxx Euro Corporates	-0.59	-0.29	0.16	-0.57	-0.29	0.17	-0.60	-0.35	0.09
Government Bond (EUR)	iBoxx Euro Sovereigns	-0.88	-0.38	0.15	-0.92	-0.47	0.08	-0.97	-0.51	0.03
High Yield Bond (EUR)	iBoxx Euro Liquid High Yield	-0.15	0.01	0.36	-0.20	-0.04	0.34	-0.23	-0.09	0.31
Corporate Bond (GBP)	iBoxx Sterling Non-Gilts	-0.52	-0.20	0.29	-0.44	-0.16	0.30	-0.47	-0.19	0.27
Government Bond (GBP)	iBoxx Sterling Gilts	-0.75	-0.38	0.04	-0.78	-0.38	0.10	-0.75	-0.37	0.06
High Yield Bond (GBP)	iBoxx Sterling High Yield	-0.11	0.17	-	-0.13	0.04	0.40	-0.15	0.01	0.42
Corporate Bond (USD)	iBoxx USD Corporates	-0.30	0.07	0.33	-0.24	0.13	0.37	-0.33	0.04	0.27
Government Bond (USD)	iBoxx Global Government United States	-0.47	-0.03	0.13	-0.62	-0.14	0.02	-0.60	-0.13	0.01
High Yield Bond (USD)	iBoxx USD Liquid High Yield	-0.07	0.22	0.45	-0.04	0.19	0.42	-0.08	0.15	0.38
Global Bond (USD)	Bloomberg Global Aggregate	-0.60	-0.26	-0.08	-0.63	-0.31	-0.11	-0.55	-0.25	-0.11
Global Corporate Bond (USD)	Bloomberg Global Aggregate Corporate	-0.38	-0.10	0.14	-0.25	0.07	0.28	-0.38	-0.09	0.12

Source: S&P Dow Jones Indices LLC, Morningstar, Bloomberg LLC. Data for periods ending Dec. 31, 2022. Index performance based on total returns. Return/volatility ratios for iBoxx Sterling High Yield are reported for time horizons over which the index was live. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 10: Quartile Breakpoints of European Fixed Income Funds

Fund Category	Third Quartile (Annualized, %)	Second Quartile (Annualized, %)	First Quartile (Annualized, %)
1-Year			
Corporate Bond (EUR)	-14.69	-13.79	-12.63
Government Bond (EUR)	-18.14	-17.07	-11.68
High Yield Bond (EUR)	-11.85	-10.46	-9.06
Corporate Bond (GBP)	-19.36	-18.00	-16.85
Government Bond (GBP)	-25.55	-24.13	-22.70
High Yield Bond (GBP)	-13.84	-11.88	-10.66
Corporate Bond (USD)	-16.48	-15.81	-9.90
Government Bond (USD)	-13.12	-12.47	-10.53
High Yield Bond (USD)	-12.21	-10.69	-9.44
Global Bond (USD)	-16.97	-15.05	-11.20
Global Corporate Bond (USD)	-18.05	-16.96	-15.13
3-Year			
Corporate Bond (EUR)	-4.79	-4.34	-3.81
Government Bond (EUR)	-6.32	-5.80	-4.20
High Yield Bond (EUR)	-2.99	-2.08	-1.30
Corporate Bond (GBP)	-5.27	-4.54	-3.92
Government Bond (GBP)	-8.70	-7.90	-7.49
High Yield Bond (GBP)	-2.87	-1.96	-0.67
Corporate Bond (USD)	-3.19	-2.57	-1.72
Government Bond (USD)	-3.47	-3.09	-2.67
High Yield Bond (USD)	-1.16	-0.53	0.36
Global Bond (USD)	-5.12	-4.26	-2.97
Global Corporate Bond (USD)	-4.37	-3.49	-3.02

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. Index performance based on total returns. Past performance is no guarantee of future results. Table is provided for illustrative purposes.

Report 10: Quartile Breakpoints of European Fixed Income Funds

Fund Category	Third Quartile (Annualized, %)	Second Quartile (Annualized, %)	First Quartile (Annualized, %)
5-Year			
Corporate Bond (EUR)	-2.26	-1.88	-1.43
Government Bond (EUR)	-2.78	-2.43	-1.95
High Yield Bond (EUR)	-1.19	-0.47	0.08
Corporate Bond (GBP)	-1.91	-1.43	-1.02
Government Bond (GBP)	-4.18	-3.66	-3.28
High Yield Bond (GBP)	-0.66	0.64	0.85
Corporate Bond (USD)	0.13	0.60	1.10
Government Bond (USD)	-1.01	-0.69	-0.13
High Yield Bond (USD)	1.36	1.72	2.28
Global Bond (USD)	-2.11	-1.49	-0.84
Global Corporate Bond (USD)	-1.18	-0.57	0.00
10-Year			
Corporate Bond (EUR)	0.11	0.59	0.90
Government Bond (EUR)	-0.10	0.38	0.82
High Yield Bond (EUR)	1.54	2.33	2.85
Corporate Bond (GBP)	1.55	1.97	2.35
Government Bond (GBP)	-0.29	0.05	0.18
High Yield Bond (GBP)	2.42	3.11	3.49
Corporate Bond (USD)	1.02	1.56	1.97
Government Bond (USD)	-0.13	0.05	0.14
High Yield Bond (USD)	2.26	2.79	3.16
Global Bond (USD)	-1.20	-0.67	-0.37
Global Corporate Bond (USD)	0.34	0.42	1.05

Source: S&P Dow Jones Indices LLC, Morningstar. Data for periods ending Dec. 31, 2022. 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 actively managed funds⁵ 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.

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 8. 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 8: Morningstar Categories and SPIVA Peer Groups for European Equity Funds

European Funds Denominated in Euros (EUR)	
Morningstar Category	SPIVA Category
EAA Fund Europe Flex-Cap Equity	Europe Equity
EAA Fund Europe Large-Cap Blend Equity	
EAA Fund Europe Large-Cap Growth Equity	
EAA Fund Europe Large-Cap Value Equity	
EAA Fund Europe Mid-Cap Equity	
EAA Fund Europe Small-Cap Equity	Eurozone Equity
EAA Fund Eurozone Flex-Cap Equity	
EAA Fund Eurozone Large-Cap Equity	
EAA Fund Eurozone Mid-Cap Equity	
EAA Fund Eurozone Small-Cap Equity	

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

⁵ Includes UCITs and non-UCITs open-end funds and ETFs.

Exhibit 8: Morningstar Categories and SPIVA Peer Groups for European Equity Funds (cont.)

European Funds Denominated in Euros (EUR)	
Morningstar Category	SPIVA Category
EAA Fund France Equity	France Equity
EAA Fund France Small/Mid-Cap Equity	
EAA Fund Germany Equity	Germany Equity
EAA Fund Germany Small/Mid-Cap Equity	
EAA Fund Italy Equity	Italy Equity
EAA Fund Nordic Equity	Nordic Equity
EAA Fund Spain Equity	Spain Equity
European Funds Denominated in British Pound Sterling (GBP)	
Morningstar Category	SPIVA Category
EAA Fund Europe Flex-Cap Equity	Europe Equity
EAA Fund Europe Large-Cap Blend Equity	
EAA Fund Europe Large-Cap Growth Equity	
EAA Fund Europe Large-Cap Value Equity	
EAA Fund Europe Mid-Cap Equity	
EAA Fund Europe Small-Cap Equity	
EAA Fund Europe Ex-UK Equity	Europe Ex-U.K. Equity
EAA Fund Europe Ex-UK Small/Mid-Cap Equity	
EAA Fund UK Large-Cap Blend Equity	U.K. Large-/Mid-Cap Equity
EAA Fund UK Large-Cap Growth Equity	
EAA Fund UK Large-Cap Value Equity	
EAA Fund UK Mid-Cap Equity	
EAA Fund UK Small-Cap Equity	U.K. Small-Cap Equity
EAA Fund UK Large-Cap Blend Equity	U.K. Equity
EAA Fund UK Large-Cap Growth Equity	
EAA Fund UK Large-Cap Value Equity	
EAA Fund UK Mid-Cap Equity	
EAA Fund UK Small-Cap Equity	
EAA Fund UK Flex-Cap Equity	
European Funds Denominated in Other European Local Currencies	
Morningstar Category	SPIVA Category
EAA Fund Denmark Equity	Denmark Equity
EAA Fund Poland Equity	Poland Equity
EAA Fund Sweden Equity	Sweden Equity
EAA Fund Sweden Small/Mid-Cap Equity	
EAA Fund Switzerland Equity	Switzerland Equity
EAA Fund Switzerland Small/Mid-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 9: Morningstar Categories and SPIVA Peer Groups for International Equity Funds

Morningstar Category	SPIVA Category
EAA Fund Global Large-Cap Blend Equity	Global Equity
EAA Fund Global Large-Cap Growth Equity	
EAA Fund Global Large-Cap Value Equity	
EAA Fund Global Small/Mid-Cap Equity	U.S. 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	
EAA Fund U.S. Flex-Cap Equity	
EAA Fund U.S. Small-Cap Equity	Emerging Markets Equity
EAA Fund Global Emerging Markets Equity	

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

Fixed Income Funds

The SPIVA Europe Scorecard reports on Corporate Bond, High Yield Bond and Government Bond categories in EUR, GBP and USD. In addition, Global Bond and Global Corporate Bond categories are reported in USD. They have been mapped to the relevant Morningstar fund categories as shown in Exhibit 10.

Exhibit 10: Morningstar Categories and SPIVA Peer Groups European Fixed Income Funds

Morningstar Category	SPIVA Category
EAA Fund EUR Corporate Bond	Corporate Bond (EUR)
EAA Fund EUR Government Bond	Government Bond (EUR)
EAA Fund EUR High Yield Bond	High Yield Bond (EUR)
EAA Fund GBP Corporate Bond	Corporate Bond (GBP)
EAA Fund GBP Government Bond	Government Bond (GBP)
EAA Fund GBP High Yield Bond	High Yield Bond (GBP)
EAA Fund USD Corporate Bond	Corporate Bond (USD)
EAA Fund USD Government Bond	Government Bond (USD)
EAA Fund USD High Yield Bond	High Yield Bond (USD)
EAA Fund Global Bond	Global Bond (USD)
EAA Fund Global Corporate Bond	Global Corporate Bond (USD)

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

Appendix B: Glossary

Percentage of Funds Underperforming 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 (%)

This measure represents the percentage of products in existence at the beginning of the time period that is 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 managers 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 more accurately reflect the returns of the total money invested in that particular style category.

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, 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.

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. These reports remove this bias by (a) using 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, (b) explicitly showing the survivorship rate in each category,

and (c) constructing 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.

Indices⁶

A benchmark index provides an investment vehicle against which fund performance can be measured.

Equity

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 500 leading companies in the foremost industries of the U.S. economy and provides over 80% coverage of U.S. equities.

S&P/IFCI Composite

The [S&P/IFCI Composite](#) is widely recognized as a comprehensive and reliable measure of the world's emerging markets. It measures the returns of stocks that are legally and practically available to foreign investors.

S&P Denmark BMI

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

S&P Europe 350

Covering approximately 70% of the region's market capitalization, the S&P Europe 350 is an equity index drawn from 17 major European markets.

S&P Europe Ex-UK BMI

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

⁶ For more information on S&P Dow Jones Indices, please visit www.spglobal.com/spdji.

S&P Eurozone BMI

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

S&P France BMI

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

S&P Germany BMI

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

S&P Global 1200

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

S&P Italy BMI

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

S&P 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.

Fixed Income

iBoxx Euro Corporates

The iBoxx Euro Corporates is a fixed income index that is designed to represent the market for EUR-denominated investment grade corporate bonds. The index comprises of bonds with fixed coupons and a minimum notional of EUR 500 million.

iBoxx Euro Sovereigns

The iBoxx Euro Sovereigns is a fixed income index that is designed to represent the market for EUR-denominated investment grade sovereign bonds. The index comprises fixed coupon bonds issued by governments of the Eurozone that have a minimum notional of EUR 1 billion.

iBoxx Euro Liquid High Yield

The iBoxx Euro Liquid High Yield is a fixed income index that is designed to reflect the performance of EUR-denominated sub-investment grade corporate debt, comprising fixed coupon and floating rates bonds with a minimum notional of EUR 250 million.

iBoxx Sterling Non-Gilts

The iBoxx Sterling Non-Gilts is a fixed income index that is designed to represent the market for GBP-denominated investment grade bonds, including corporate, non-U.K. sovereigns and sub-sovereigns and collateralized bonds. Eligible bonds have a fixed coupon and a minimum notional of GBP 250 million.

iBoxx Sterling Gilts

The iBoxx Sterling Gilts is a fixed income index that is designed to represent the market for GBP-denominated gilts. The index comprises bonds issued by the U.K. government that have a fixed coupon and a minimum notional of GBP 2 billion.

iBoxx Sterling High Yield

The iBoxx Sterling High Yield is a fixed income index that is designed to represent the market for GBP-denominated sub-investment grade corporate debt. Eligible bonds have fixed or floating coupons and a minimum notional of GBP 250 million.

iBoxx USD Corporates

The iBoxx USD Corporates is a fixed income index that is designed to represent the market for USD-denominated investment grade corporate bonds. Eligible bonds have fixed coupons and a minimum notional of USD 500 million.

iBoxx Global Government United States

The iBoxx Global Government United States is a fixed income index that is designed to represent the market for Treasury notes and bonds issued by the U.S. government. Eligible bonds have fixed coupons and a minimum notional of USD 2 billion.

iBoxx USD Liquid High Yield

The iBoxx USD Liquid High Yield is a fixed income index that is designed to represent the market for USD-denominated high yield corporate debt from developed markets with fixed coupons. Eligible bonds need to have a time to maturity at issuance of 15 years or less and a minimum notional of USD 400 million.

Bloomberg Global Aggregate

The Bloomberg Global Aggregate is a measure of global investment grade debt from a multitude of local currency markets. This multi-currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from developed and emerging markets issuers.

Bloomberg Global Aggregate Corporate

The Bloomberg Global Aggregate Corporate is a measure of global investment grade, fixed-rate corporate debt. This multi-currency benchmark includes bonds from developed and emerging markets issuers within the industrial, utility and financial sectors.

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