
Morningstar's European Active/Passive Barometer

Mid-Year 2023

Morningstar Manager Research Services, EMEA

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Executive Summary

The Morningstar Active/Passive Barometer is a semiannual report that measures the performance of active funds against passive peers in their respective European, Asian, and African Morningstar Categories.

The Active/Passive Barometer uses unique ways to measure active managers' success:

- ▶ It evaluates active funds against a composite of actual passive funds—not versus a costless index. In this way, the benchmark reflects the actual, net-of-fee performance of the passive funds available to investors.
- ▶ It assesses active funds based on their beginning-of-period category classification to better simulate the funds an investor would have chosen at the time.
- ▶ It considers how the average unit of currency invested in various types of active funds has fared versus the average unit of currency in passive funds.

The Active/Passive Barometer is also comprehensive, spanning over 26,000 unique active and passive Europe-domiciled funds that account for approximately EUR 6.3 trillion in assets, or about half of the total European fund market.

All told, the Active/Passive Barometer is a useful tool that can help investors calibrate the odds of succeeding with active funds in different areas based on recent trends and longer-term history.

We include historical active funds' success rates in our analysis. This provides a valuable insight into how active managers have navigated market events in the past and how this affected their short- and long-term performance.

Key Takeaways

- ▶ The first half of 2023 was positive for developed equity markets. Despite persisting inflationary pressures and ongoing monetary policy tightening raising the risk of an economic slowdown, most developed equity markets closed the period with double-digit growth rates, making up for the ground lost in 2022. Meanwhile, emerging markets lagged, with China's long-awaited reopening of its economy failing to ignite its economic engine growth as vigorously as predicted.
- ▶ On average, 36.6% of European active equity managers in the 43 equity categories we analyzed surpassed the average passive fund in the one-year period to the end of June 2023. This was up from 33.6% at the close of 2022 and 30.4% a year earlier. Typically, success rates for active managers are higher in equity categories focusing on the mid-cap and smaller-cap segments of

the spectrum than in large-cap categories. Active funds also have higher odds of success in equity categories where the average passive peer's exposure is structurally biased to a specific economic sector or top-heavy in terms of individual names.

- ▶ Bond markets also regained strength in the first half of 2023, with rising yields driving the demand for developed government and investment-grade corporate issuers. Market participants also started to position for an eventual peak in interest rates. As a result, investors' focus has been shifting from the short to the longer end of the maturity spectrum.
- ▶ Against this backdrop, active bond managers in the 24 categories we analyzed offered a brighter narrative than their equity counterparts, with 62.7% on average outperforming their passive alternative in the one-year period to the end of June 2023, up from 55.5% at the close of 2022 and 46.2% the year before.
- ▶ While the overall rise in short-term success rates by active managers is encouraging, the long-term picture remains solidly in favor of passive funds. On average, only 17.1% of active equity managers and 23.1% of active bond managers managed to beat their passive alternative in the 10-year period to the end of June 2023.
- ▶ The likelihood of a fund's survival is linked closely to its success rate. The primary reason most active funds falter is their short lifespan, often attributed to subpar performance. This typically stems from a combination of poor stock selection and the compounded impact of higher fees compared with cheaper passive alternatives. Since inception, this study has consistently shown that passive funds tend to survive longer. In the 10-year span to the end of June 2023, on average 53.7% of active equity funds survived, while 63% of index-tracking funds did. The trend is similar in fixed income, where 52% of active funds survived compared with 60.8% of passives.

Equity

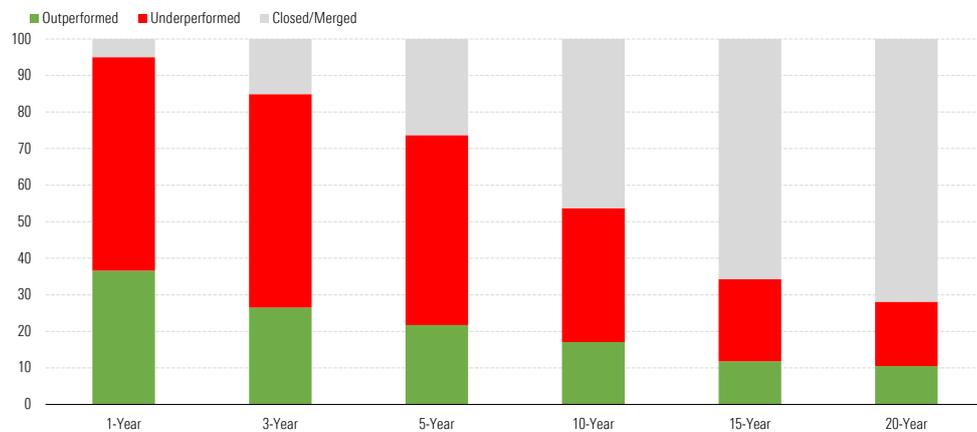
- ▶ Despite Silicon Valley Bank's hiccup in March, the U.S. equity market trajectory was positive in the first half of 2023, led by the rally in the tech sector driven by a surge in artificial intelligence. Ultra-cheap passive strategies, particularly those that were market-cap-weighted, performed strongly given their significant exposure to big tech firms. But some stock-pickers also found an open avenue to improve their performance. In the U.S. large-cap blend Morningstar Category, 33.8% of active equity funds outperformed their passive competitors in the year to the end of June 2023, up from 27.9% a year earlier. However, over a decade, the case for passives for this market exposure is overwhelming, with only 6.5% of active funds beating the passive alternative.
- ▶ The year 2023 began on a promising note for the eurozone, propelled by the tech sector's momentum. But as the European Central Bank announced mid-year rate hikes, the narrative shifted to risks of economic slowdown—in fact, outright recession in the case of the export-led German economy. Euro-centric active managers in the eurozone large-cap category found themselves in choppy waters, with only 19.4% outperforming passive peers in the year to the end of June 2023, significantly down from 44.1% a year earlier. Over 10 years, the success rate also dwindled from 19.1% to 10.5%.

- ▶ The U.K. equity market was among the worst performing in Europe with a mix of external and domestic headwinds, most notably the impact of rising interest rates on household budgets, limiting growth. Interestingly, 54.5% of stock-pickers in the UK large-cap category surpassed passive funds in the 12-month period to the end of June 2023—a significant jump from 17.3% a year before. Over 10 years the success rate of active managers declined from 27.5% to 23.3%.
- ▶ Japanese equities were on a roll in the first half of 2023, with the Nikkei hitting a 33-year high. The key trigger for foreign investors to get back to the market was the Tokyo Stock Exchange's guidance to listed companies to improve their corporate value. Despite an impressive 24.8% annual return for active funds in the one year to the end of June 2023, their success rate at 37% was broadly unchanged from a year earlier as passive funds also easily rode the wave.
- ▶ Emerging-markets stocks also charted an upward trajectory, albeit trailing the MSCI World Index. The reopening of China's economy instilled optimism in the early part of the year, but this quickly turned into disappointment as expectations for a sharp rebound failed to materialize. With China becoming a byword for underperformance, stock-pickers in the global emerging market equity category found an easy way to beat passive alternatives by taking a cautious approach to it. The one-year success rate went up to 56.2% from 24% a year earlier. Meanwhile, the 10-year success rate was marginally higher at 27.9% from 26.8%.

Fixed Income

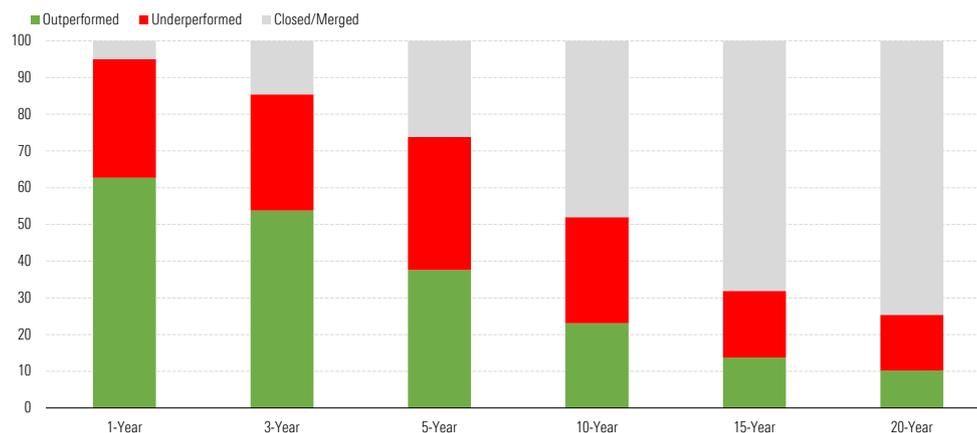
- ▶ The mood in government bond markets in the first half of 2023 was driven by rising expectations of a peak in the policy-tightening cycle while central banks continued to dole out hikes and reaffirm their resolute stance to bring inflation back to target. Duration plays have proved the key avenue for active managers to add value in this environment. The focus is shifting from outright duration shortening to positioning toward the longer end of the maturity spectrum.
- ▶ Active managers in the EUR government bond category saw the one-year success rate jump to 66.3% from 38% a year earlier. Their peers in the GBP government bond category also improved, from 20.9% to 34.9%. However, in both cases the long-term success rates remained relatively low at 22.5% and 13.4%, respectively.
- ▶ Corporate financial health remained resilient despite a slight uptick in default rates as higher interest rates start to weigh on highly leveraged issuers. In the year to the end of June 2023, active managers in the EUR corporate bond category delivered a one-year success rate of 78.7%, strongly up from 27.1% a year earlier. The one-year success rate for active managers in the GBP corporate bond category rose to 65.4% from 56.4%. Over 10 years the picture is brighter for Euro-centric active managers than their GBP peers, with success rates of 43.9% and 15.4%, respectively.

Exhibit 1 Active Equity Managers' Year-End Outcomes (%)



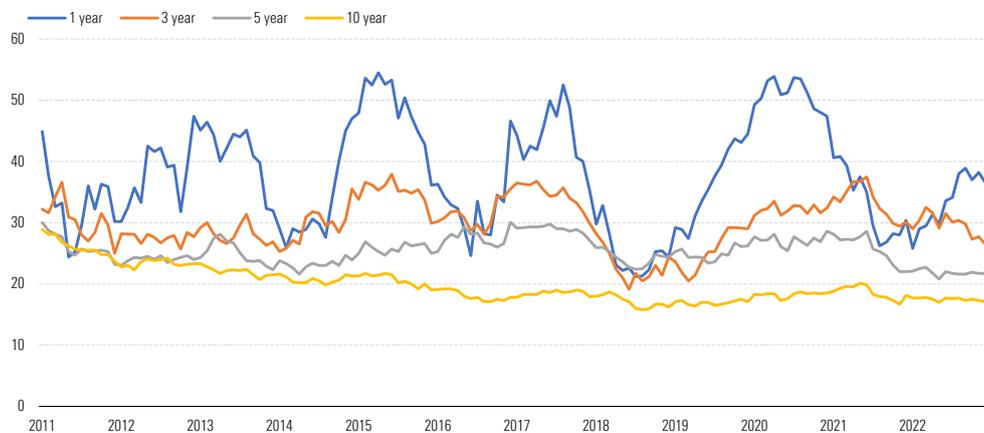
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 2 Active Fixed-Income Managers' Year-End Outcomes (%)



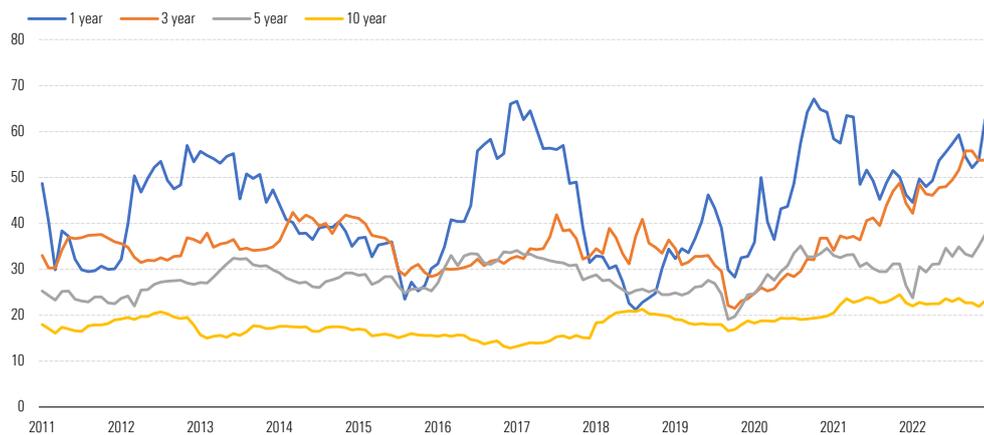
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 3 Historical Active Equity Funds' Success Rate (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 4 Historical Active Fixed-Income Funds' Success Rate (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 5 Active Equity Funds' Success Rate by Category (%)

Category	1-Year	3-Year	5-Year	10-Year	15-Year	20-Year
Asia ex-Japan Equity	48.8	44.2	42.7	29.1	20.9	-
Asia-Pacific Equity	20.5	22.6	14.4	16.1	7.7	-
Asia-Pacific ex-Japan Equity	21.3	26.0	22.6	16.8	8.7	-
Australia & New Zealand Equity	0.0	40.0	42.9	20.0	15.4	-
Brazil Equity	30.0	6.7	11.8	5.1	20.0	-
Canada Equity	66.7	25.0	20.0	10.0	0.0	-
China Equity	15.1	44.3	56.2	43.0	36.4	-
Denmark Equity	48.6	10.8	25.0	37.5	27.3	21.2
Europe Equity Income	62.5	23.5	25.0	5.6	38.3	-
Europe ex-UK Equity	31.8	32.1	15.3	19.6	19.8	19.7
Europe Large-Cap Blend Equity	33.0	17.3	13.7	9.3	6.8	8.5
Europe Large-Cap Growth Equity	54.4	26.8	16.3	10.3	13.2	-
Europe Small-Cap Equity	24.4	27.7	38.3	40.0	14.1	-
Eurozone Large-Cap Equity	19.4	20.7	15.9	10.5	14.5	8.2
Eurozone Small-Cap Equity	23.4	33.3	14.5	28.1	15.2	-
Finland Equity	42.9	53.8	46.9	12.8	10.5	14.8
France Equity	0.9	2.7	0.0	2.7	6.0	10.0
Germany Equity	22.0	24.6	9.4	16.4	15.3	22.2
Global Emerging Markets Equity	56.2	34.3	34.3	27.8	21.1	-
Global Equity Income	86.4	38.1	52.0	61.0	-	-
Global Large-Cap Blend Equity	27.1	18.6	12.1	5.9	2.8	4.2
Global Large-Cap Value Equity	32.8	20.6	14.8	6.9	-	-
India Equity	65.3	45.3	27.8	51.4	41.4	-
Italy Equity	16.3	18.2	15.8	16.3	20.5	-
Japan Large-Cap Equity	37.0	35.1	24.5	19.0	10.9	5.9
Korea Equity	0.0	20.0	11.1	8.3	5.9	-
Latin America Equity	45.5	14.3	22.4	12.1	21.7	-
Netherlands Equity	50.0	40.0	40.0	16.7	9.1	4.3
Nordic Equity	26.3	25.5	4.2	20.9	8.0	22.1
Norway Equity	62.1	66.7	45.3	47.8	51.7	-
Pacific ex-Japan Equity	37.5	12.5	10.0	10.0	11.1	12.5
Spain Equity	1.4	26.7	8.1	17.9	16.7	15.7
Sweden Equity	40.0	50.0	26.4	33.3	19.1	12.3
Switzerland Equity	52.4	30.2	17.4	36.2	13.6	12.5
Switzerland Small/Mid-Cap Equity	76.1	58.5	61.3	52.9	48.3	-
Turkey Equity	100.0	55.6	33.3	23.1	12.5	-
UK Equity Income	76.0	56.3	59.2	53.5	-	-
UK Large-Cap Equity	54.5	31.2	25.3	23.3	19.4	19.2
UK Mid-Cap Equity	31.3	8.3	15.4	30.8	40.0	-
US Large-Cap Blend Equity	33.8	25.1	18.0	6.5	4.4	4.4
US Large-Cap Growth Equity	15.4	0.9	0.0	0.0	0.0	0.0
US Large-Cap Value Equity	57.4	47.6	22.9	15.1	13.9	-
US Small-Cap Equity	72.1	30.4	56.1	26.4	13.9	-

Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 6 Active Fixed-Income Funds' Success Rate by Category (%)

Category	1-Year	3-Year	5-Year	10-Year	15-Year	20-Year
CHF Bond	43.5	49.1	36.8	24.8	19.0	8.9
EUR Bond - Long Term	44.0	46.2	19.4	9.8	9.6	-
EUR Corporate Bond	78.7	66.2	49.1	43.9	41.6	29.8
EUR Corporate Bond - Short Term	63.3	44.8	30.8	28.6	-	-
EUR Diversified Bond	67.0	58.7	34.9	11.0	6.1	5.2
EUR Government Bond	66.3	36.9	35.0	22.6	9.7	11.0
EUR Government Bond - Short Term	45.7	43.2	34.9	23.5	7.3	-
EUR High Yield Bond	54.8	36.3	31.0	40.4	-	-
EUR Inflation-Linked Bond	43.5	42.9	20.4	9.5	1.6	-
EUR Money Market	90.6	79.3	59.8	40.7	-	-
GBP Corporate Bond	65.4	74.5	56.4	15.4	-	-
GBP Government Bond	34.9	20.8	30.8	13.4	16.9	19.7
GBP Inflation-Linked Bond	26.3	13.6	11.5	10.3	13.6	-
Global Bond	64.2	48.2	28.0	26.1	17.1	20.5
Global Bond - EUR Hedged	70.2	56.4	35.4	26.2	-	-
Global Bond - GBP Hedged	69.2	59.3	42.5	30.0	-	-
Global Emerging Markets Bond	61.7	54.1	30.9	18.2	-	-
Global Emerging Markets Bond - Local Currency	46.2	63.6	44.8	11.9	-	-
Global Inflation-Linked Bond	71.4	66.7	40.0	11.1	-	-
JPY Bond	66.7	0.0	0.0	0.0	0.0	-
USD Corporate Bond	11.3	26.6	30.2	20.6	29.4	9.1
USD Diversified Bond	58.2	58.4	33.0	14.3	6.5	-
USD Government Bond	23.3	17.6	12.1	2.5	10.6	-
USD Inflation-Linked Bond	33.3	0.0	0.0	0.0	-	-

Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 7 Active Property Funds' Success Rate by Category (%)

Category	1-Year	3-Year	5-Year	10-Year	15-Year	20-Year
Property - Indirect Asia	38.5	18.2	20.0	11.8	12.0	-
Property - Indirect Europe	67.4	60.0	54.2	34.5	16.2	10.0
Property - Indirect Global	53.1	17.5	32.4	21.1	0.7	-
Property - Indirect North America	50.0	16.7	0.0	16.7	-	-
Property - Indirect Switzerland	56.3	55.6	52.9	50.0	50.0	-

Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 8 Active Allocation Funds' Success Rate by Category (%)

Category	1-Year	3-Year	5-Year	10-Year	15-Year	20-Year
EUR Cautious Allocation - Global	66.5	39.3	24.5	3.4	25.3	17.7

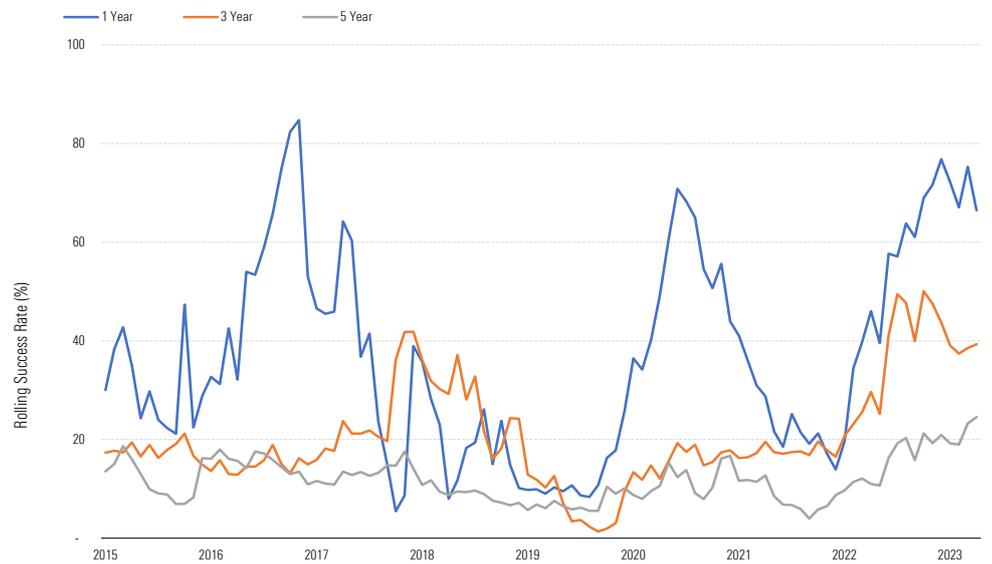
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 9 EUR Cautious Allocation — Global

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	1,104	95.6	5	80.0	0.5	-0.1	0.8	-0.2	66.5
3-year	1,081	84.9	5	80.0	-0.7	-0.6	-0.3	-0.3	39.3
5-Year	1,031	75.1	5	80.0	-0.3	-0.1	-0.1	0.4	24.5
10-Year	805	54.2	3	66.7	1.0	2.9	1.1	2.9	3.4

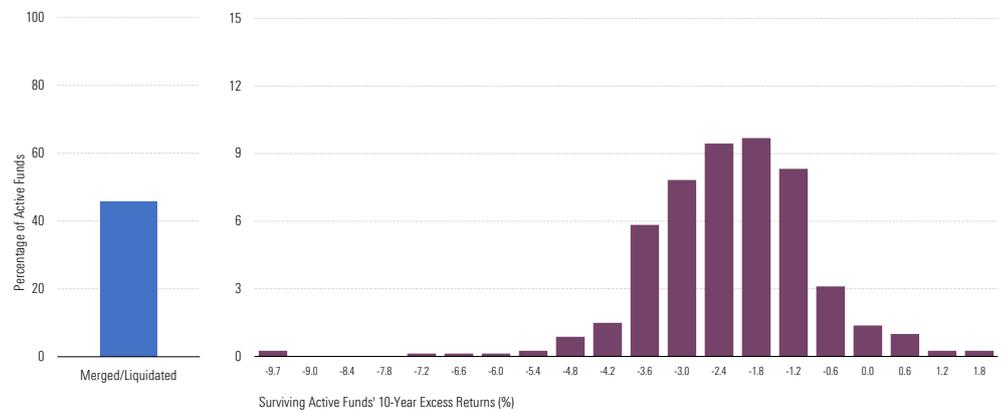
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 10 Rolling Success Rates for Surviving Active EUR Cautious Allocation — Global Funds



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 11 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active EUR Cautious Allocation — Global Funds



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 12 Asia ex-Japan Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	168	99.4	18	94.4	- 22.6	- 21.3	- 22.5	- 20.8	31.5
3-year	181	85.6	17	88.2	- 2.5	- 2.4	- 2.2	- 2.6	45.9
5-Year	180	77.2	18	66.7	- 1.4	- 1.5	- 1.7	- 1.7	42.2
10-Year	196	54.1	18	61.1	2.9	2.7	2.7	2.6	32.1
15-Year	155	51.0	4	75.0	1.3	1.5	0.6	1.4	21.3

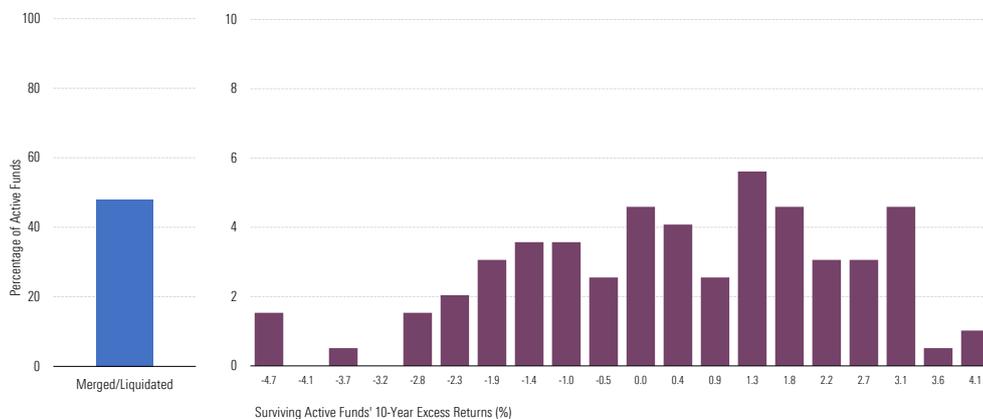
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 13 Rolling Success Rates for Surviving Active Asia ex-Japan Equity Funds



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 14 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Asia ex-Japan Equity



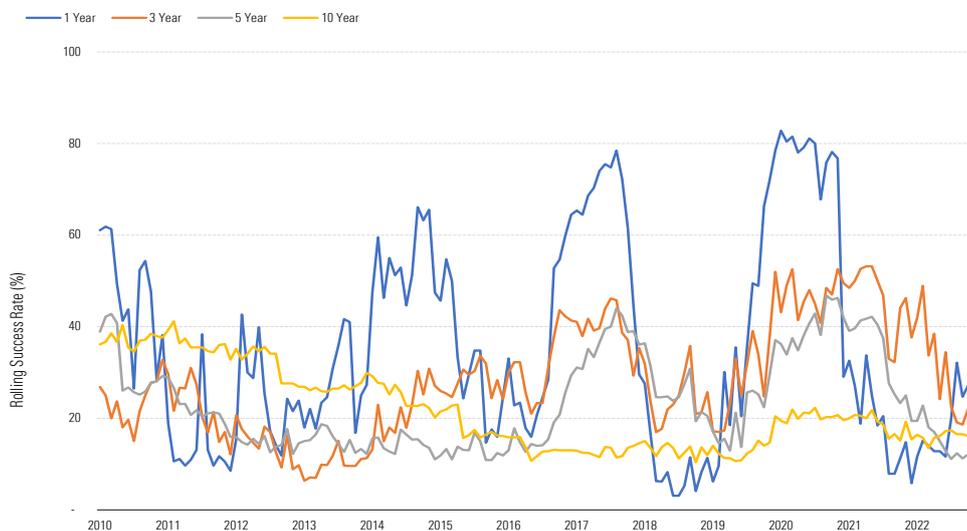
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 15 Asia-Pacific Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	78	92.3	16	87.5	5.0	11.2	5.9	11.1	20.5
3-year	84	81.0	15	86.7	2.4	4.9	2.5	5.3	22.6
5-Year	97	62.9	17	70.6	0.9	1.6	0.8	2.1	14.4
10-Year	118	43.2	16	62.5	3.9	2.9	3.2	4.0	16.1
15-Year	169	26.0	5	60.0	2.6	2.3	1.7	3.1	7.7

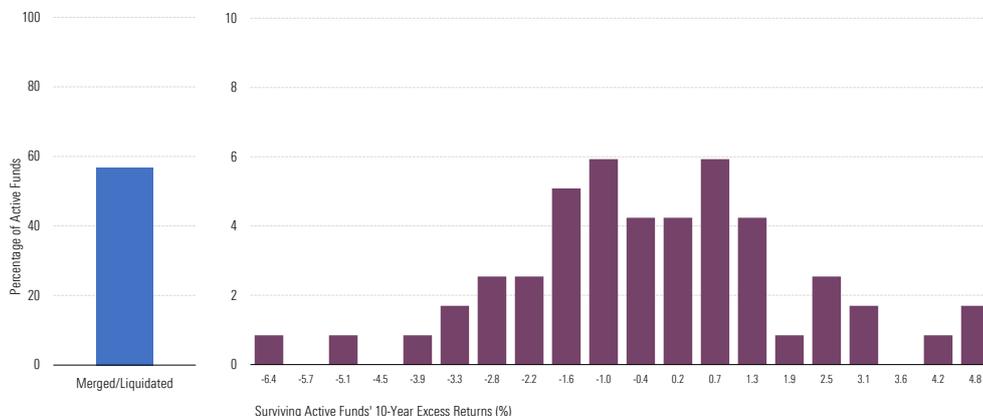
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 16 Rolling Success Rates for Surviving Active Asia-Pacific Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 17 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Asia-Pacific Equity (%)



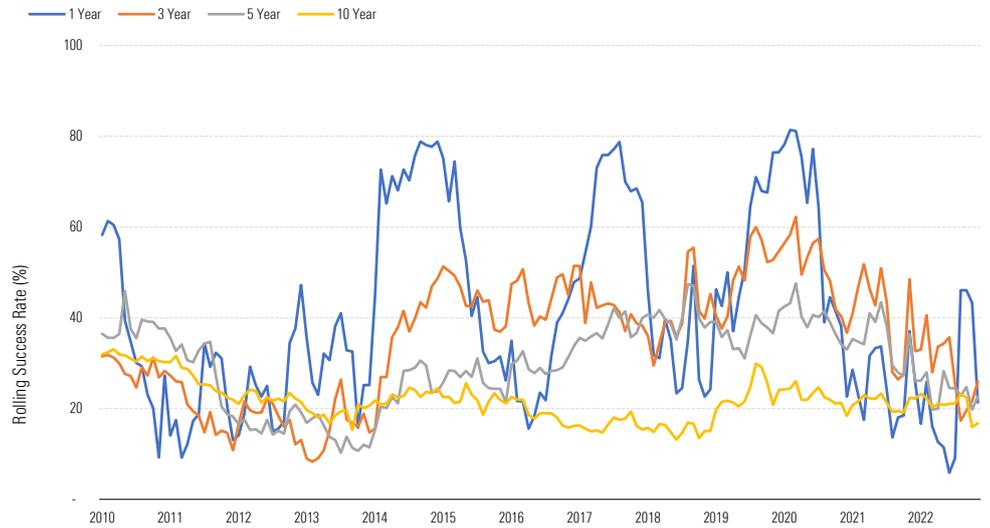
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 18 Asia-Pacific ex-Japan Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	89	92.1	18	100.0	3.5	6.5	1.5	4.8	21.3
3-year	96	79.2	12	100.0	4.9	6.1	3.7	5.7	26.0
5-Year	106	67.0	11	90.9	3.0	2.8	1.8	2.9	22.6
10-Year	137	41.6	15	46.7	4.8	4.5	4.2	4.8	16.8
15-Year	218	23.4	10	60.0	4.5	3.8	3.3	4.2	8.7

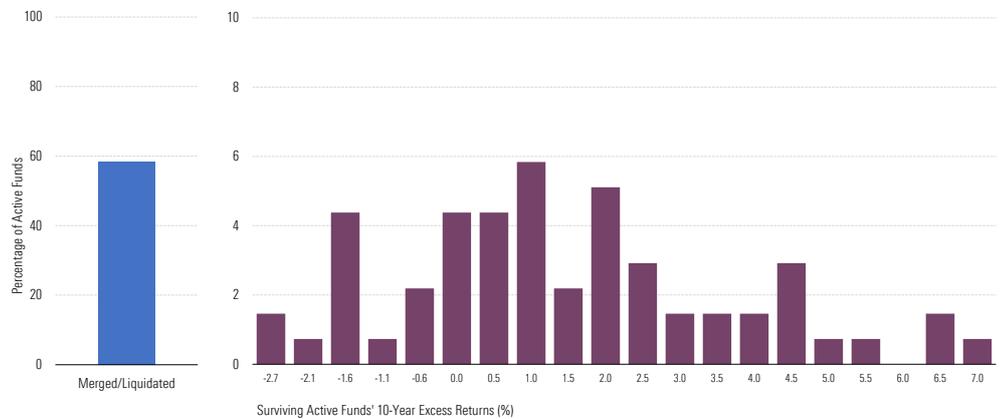
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 19 Rolling Success Rates for Surviving Active Asia-Pacific ex-Japan Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 20 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Asia-Pacific ex-Japan Equity Funds (%)



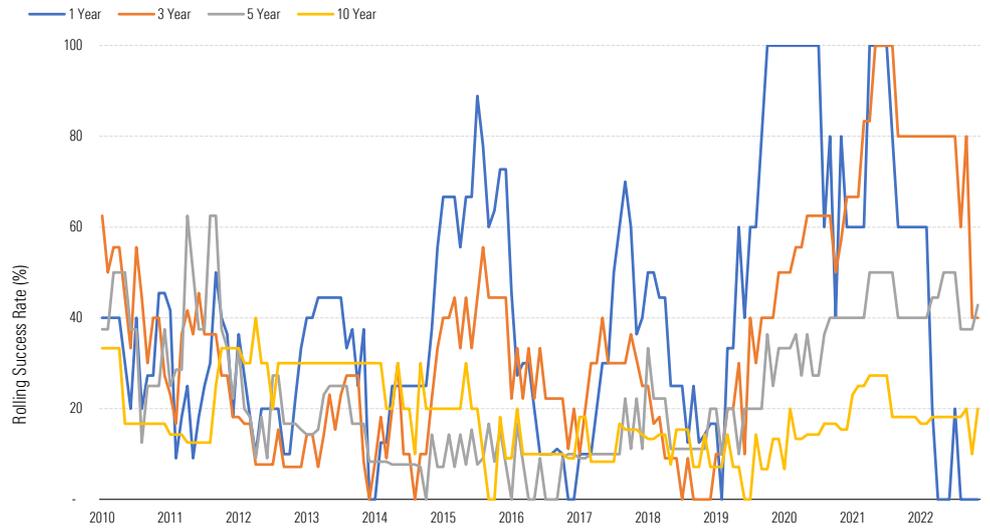
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 21 Australia and New Zealand Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	4	100.0	4	100.0	9.8	10.7	7.4	10.7	-
3-year	5	80.0	5	80.0	9.7	10.0	10.8	9.7	40.0
5-Year	7	57.1	6	66.7	4.8	4.6	5.4	4.4	42.9
10-Year	10	40.0	6	50.0	4.5	4.6	4.6	4.5	20.0
15-Year	13	30.8	3	33.3	3.2	3.5	2.7	3.4	15.4

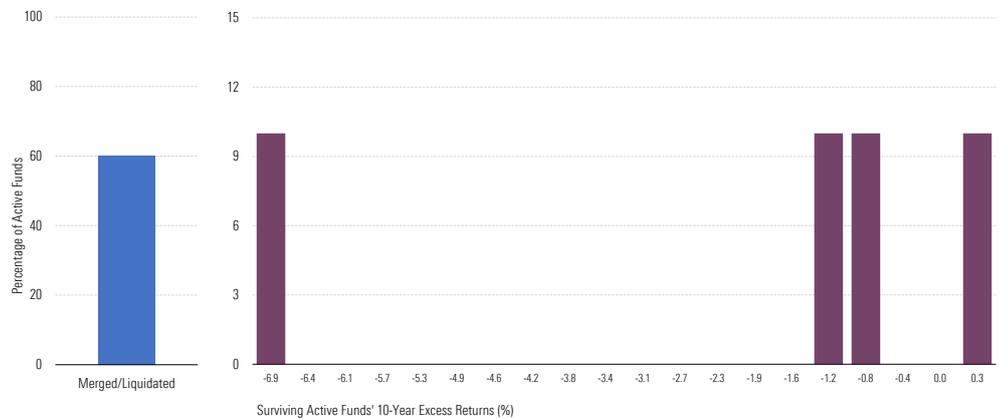
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 22 Rolling Success Rates for Surviving Active Australia and New Zealand Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 23 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Australia and New Zealand Equity Funds (%)



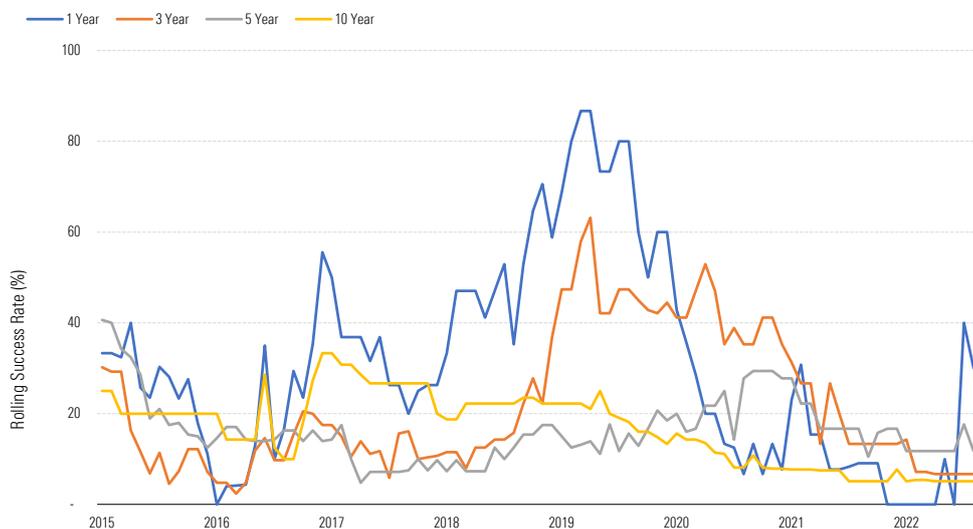
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 24 Brazil Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	10	100.0	7	100.0	26.8	29.1	24.3	28.9	30.0
3-year	15	60.0	8	87.5	6.2	12.7	5.1	12.5	6.7
5-Year	17	47.1	8	62.5	2.7	5.2	2.7	5.3	11.8
10-Year	39	20.5	14	28.6	- 1.8	0.8	- 1.6	0.9	5.1
15-Year	15	33.3	6	50.0	- 4.8	- 3.4	- 3.4	- 3.5	20.0

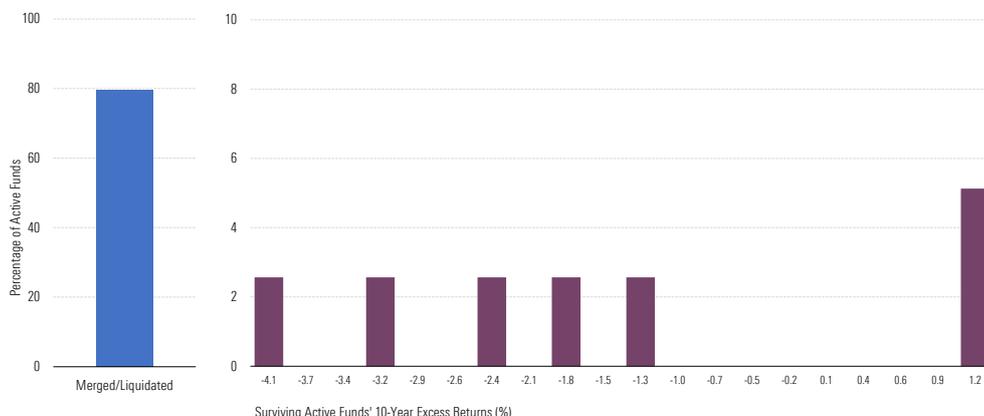
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 25 Rolling Success Rates for Surviving Active Brazil Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 26 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Brazil Equity Funds (%)



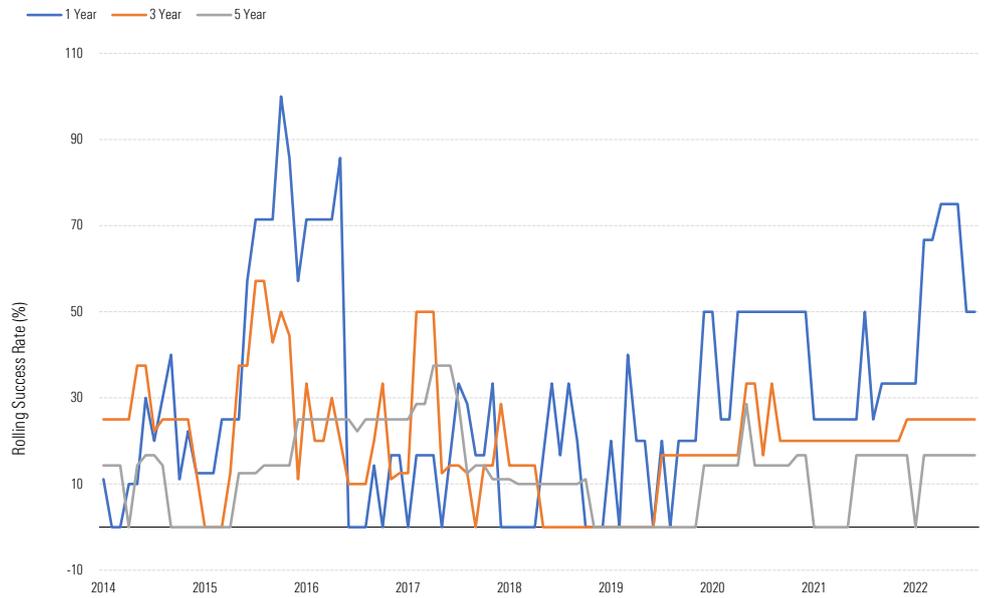
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 27 Canada Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	3	66.7	15	80.0	9.0	6.9	8.4	6.9	66.7
3-year	4	50.0	15	73.3	14.3	12.7	13.0	12.4	25.0
5-Year	5	40.0	14	64.3	6.1	6.4	5.7	6.4	20.0
10-Year	10	20.0	15	53.3	4.4	5.3	3.8	5.3	10.0
15-Year	8	12.5	4	25.0	0.4	2.8	0.8	2.6	-

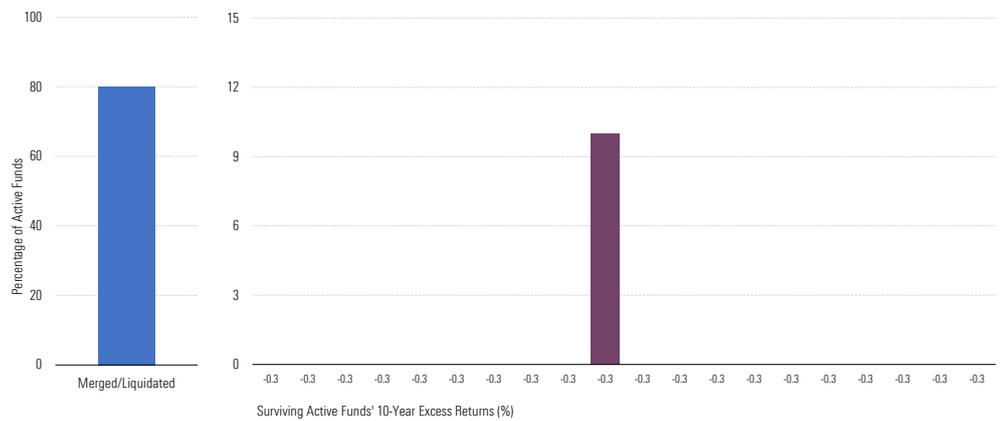
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 28 Rolling Success Rates for Surviving Active Canada Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 29 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Canada Equity Funds (%)



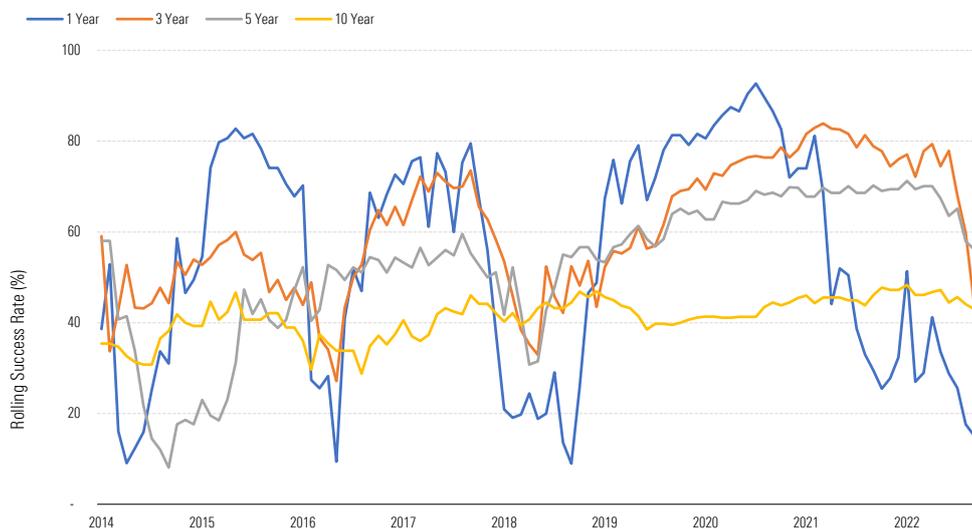
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 30 China Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	119	96.6	24	100.0	19.2	17.2	20.6	17.0	15.1
3-year	97	92.8	21	90.5	10.2	10.8	8.8	9.6	44.3
5-Year	89	78.7	17	76.5	4.0	6.3	4.0	6.0	56.2
10-Year	93	52.7	16	56.3	3.7	0.7	2.6	1.0	43.0
15-Year	77	39.0	5	80.0	2.6	1.3	1.1	0.9	36.4

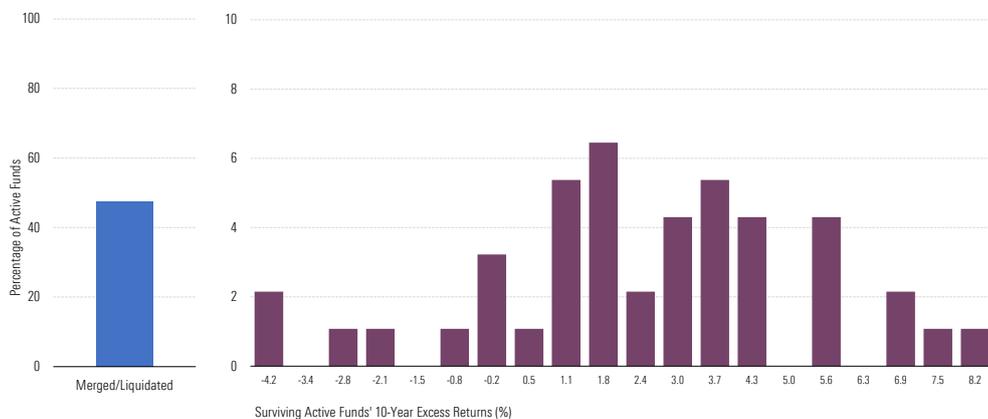
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 31 Rolling Success Rates for Surviving Active China Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 32 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active China Equity Funds (%)



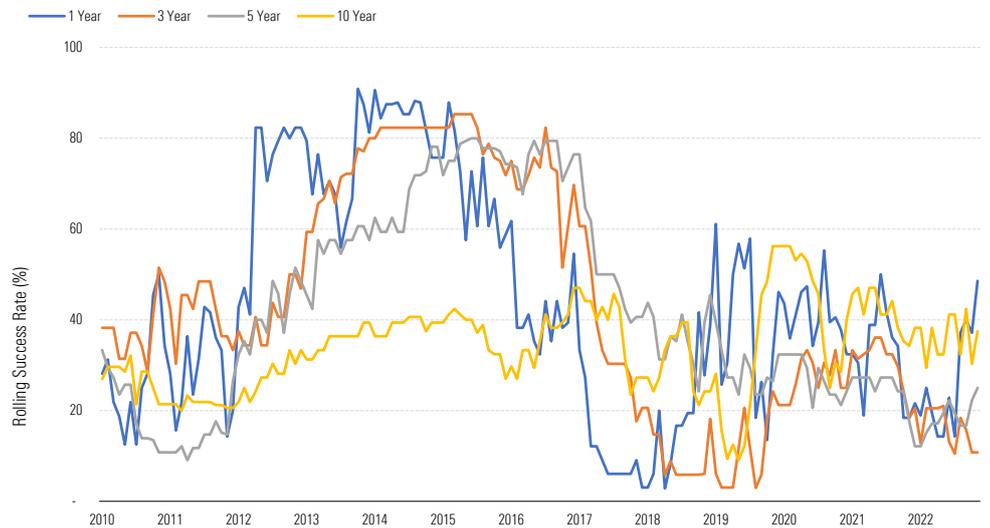
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 33 Denmark Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	35	97.1	6	100.0	14.5	15.5	13.7	14.8	48.6
3-year	37	86.5	5	100.0	11.2	11.7	10.9	12.3	10.8
5-Year	36	75.0	4	100.0	9.9	11.1	9.1	10.7	25.0
10-Year	32	68.8	5	60.0	14.1	13.9	13.7	14.3	37.5
15-Year	33	54.5	4	50.0	10.6	10.1	9.9	10.4	27.3
20-Year	33	30.3	5	40.0	13.1	12.7	12.4	12.6	21.2

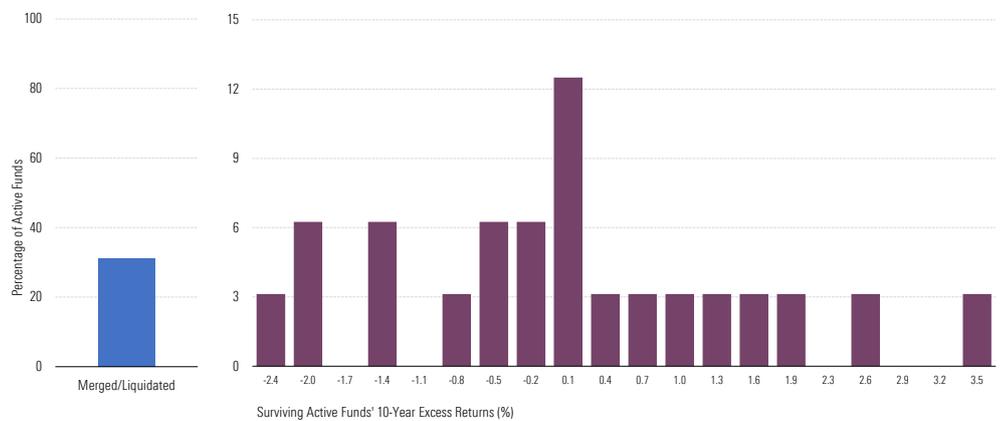
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 34 Rolling Success Rates for Surviving Active Denmark Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 35 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Denmark Equity Funds (%)



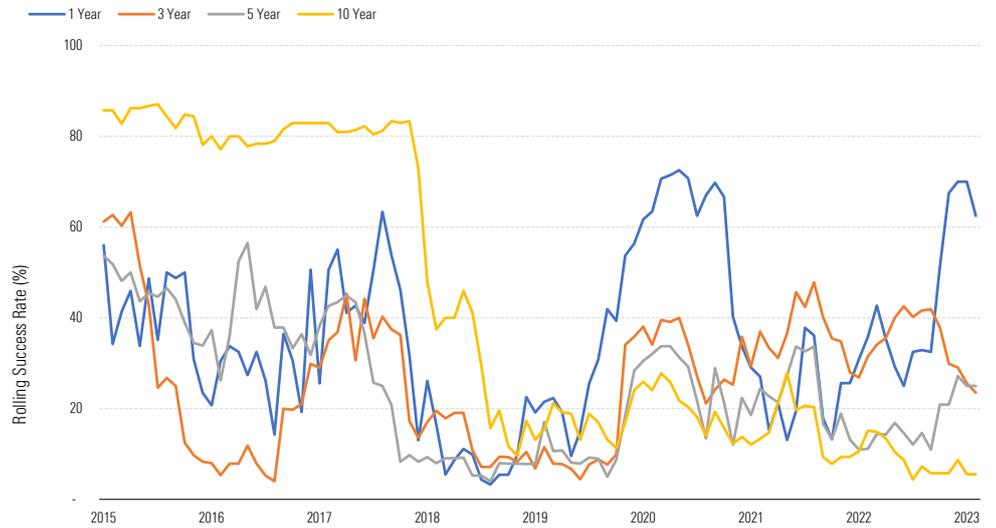
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 36 Europe Equity Income

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	80	92.5	9	100.0	14.2	12.3	13.4	11.0	62.5
3-year	85	84.7	9	100.0	9.5	12.3	9.4	10.9	23.5
5-Year	92	71.7	10	90.0	3.7	5.5	4.2	5.0	25.0
10-Year	72	66.7	5	60.0	5.0	7.2	5.6	7.1	5.6
15-Year	47	70.2	3	66.7	3.9	4.3	4.4	4.3	38.3

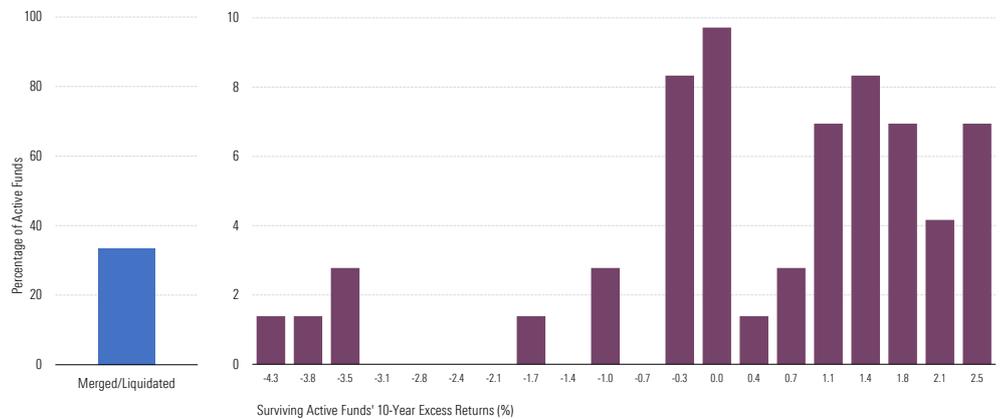
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 37 Rolling Success Rates for Surviving Active Europe Equity Income Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 38 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Europe Equity Income Funds (%)



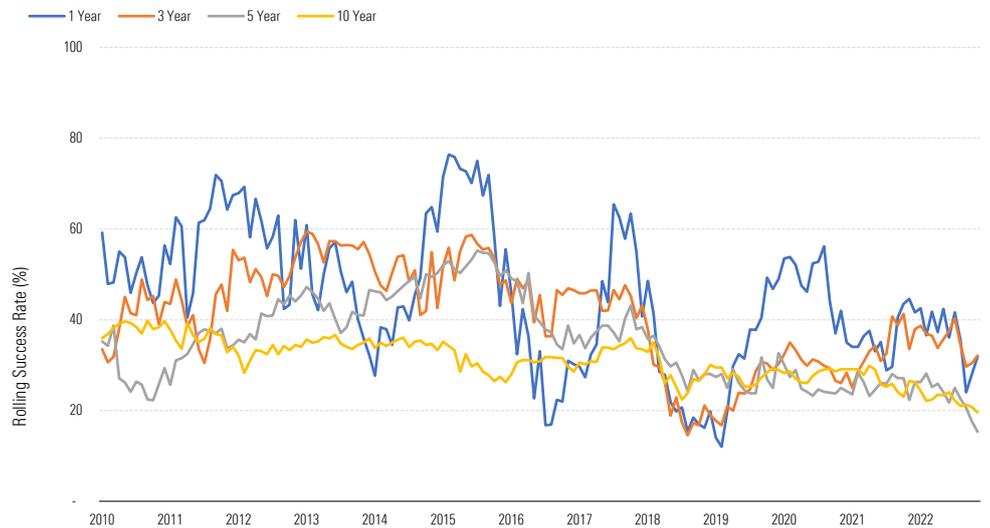
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 39 Europe ex-UK Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	132	93.2	28	92.9	20.3	20.0	17.8	20.1	31.8
3-year	137	77.4	23	82.6	9.5	11.3	10.5	11.4	32.1
5-Year	137	68.6	22	72.7	6.5	7.7	6.1	7.7	15.3
10-Year	148	50.0	16	56.3	8.5	8.5	7.9	8.6	19.6
15-Year	177	33.9	13	53.8	6.5	6.3	6.2	6.3	19.8
20-Year	142	30.3	4	75.0	7.3	5.6	7.3	7.2	19.7

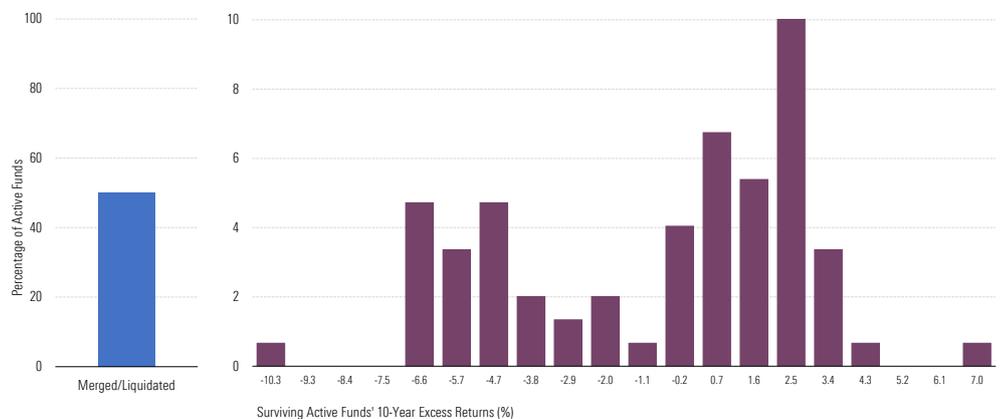
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 40 Rolling Success Rates for Surviving Active Europe ex-UK Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 41 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Europe ex-UK Equity Funds (%)



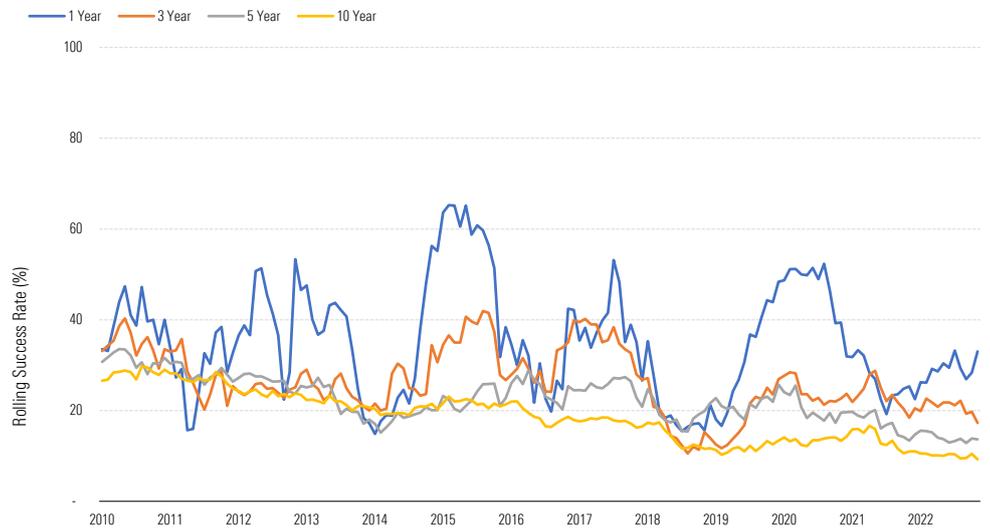
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 42 Europe Large-Cap Blend Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	566	93.3	142	96.5	14.9	16.8	14.1	16.3	33.0
3-year	595	82.9	138	90.6	9.6	11.5	8.9	11.3	17.3
5-Year	600	69.8	120	80.8	5.0	6.7	4.5	6.6	13.7
10-Year	571	51.1	107	63.6	6.3	7.6	6.1	7.6	9.3
15-Year	823	27.8	71	52.1	4.4	5.8	4.3	5.6	6.8
20-Year	668	26.2	51	49.0	5.4	6.4	5.2	6.2	8.5

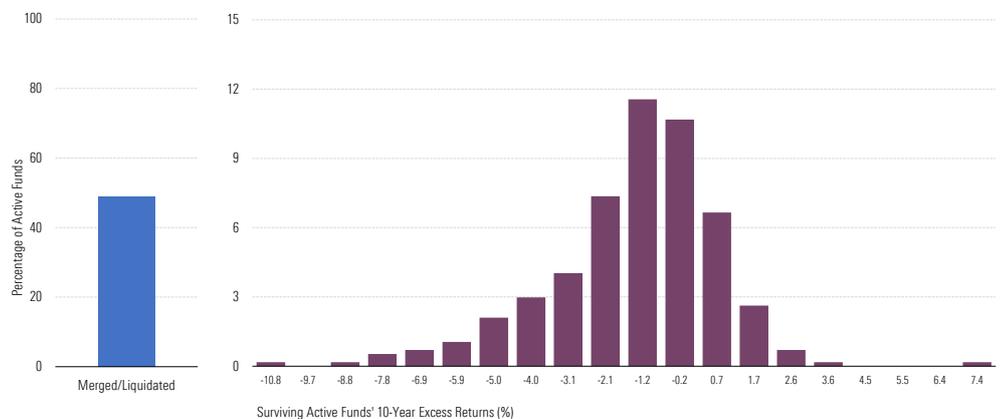
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 43 Rolling Success Rates for Surviving Active Europe Large-Cap Blend Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 44 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Europe Large-Cap Blend Equity Funds (%)



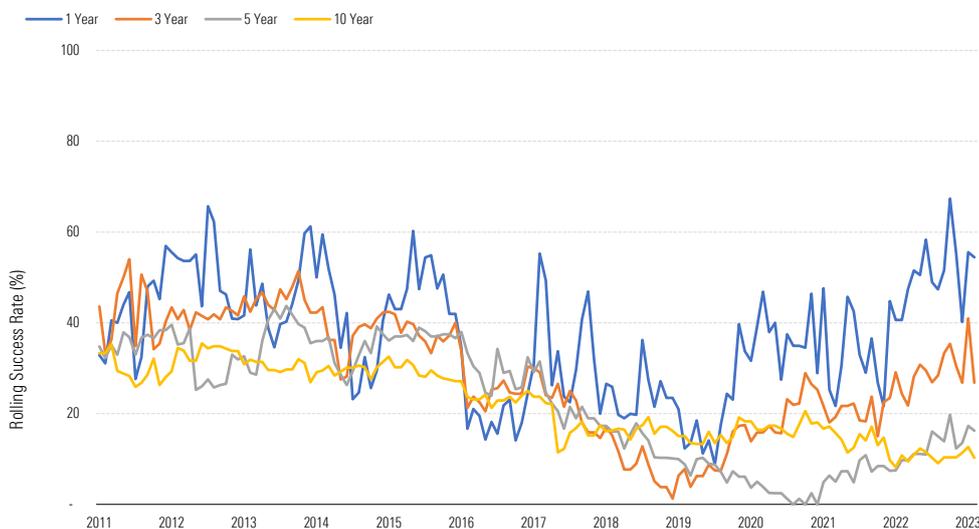
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 45 Europe Large-Cap Growth Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	90	93.3	6	100.0	18.7	13.9	17.0	15.7	54.4
3-year	82	86.6	4	100.0	7.7	7.2	8.0	8.5	26.8
5-Year	80	78.8	5	80.0	6.8	7.6	6.1	8.1	16.3
10-Year	78	57.7	4	75.0	8.1	7.9	7.4	9.2	10.3
15-Year	91	38.5	3	66.7	6.7	4.8	5.7	7.0	13.2

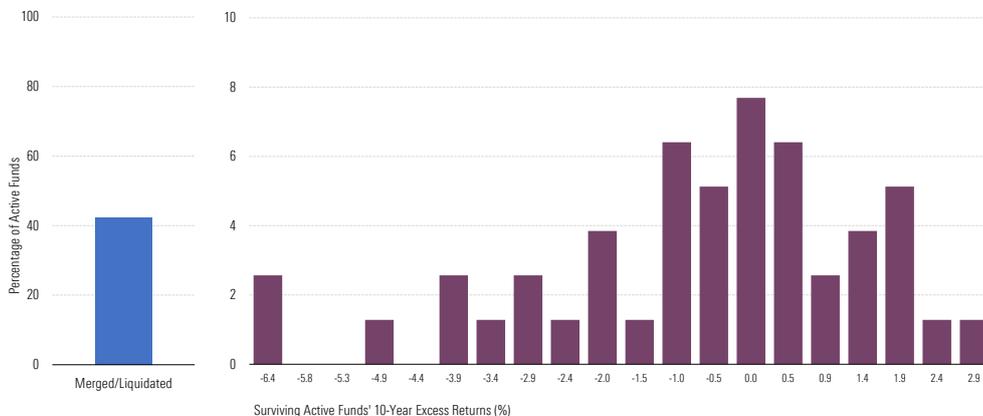
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 46 Rolling Success Rates for Surviving Active Europe Large-Cap Growth Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 47 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Europe Large-Cap Growth Equity Funds (%)



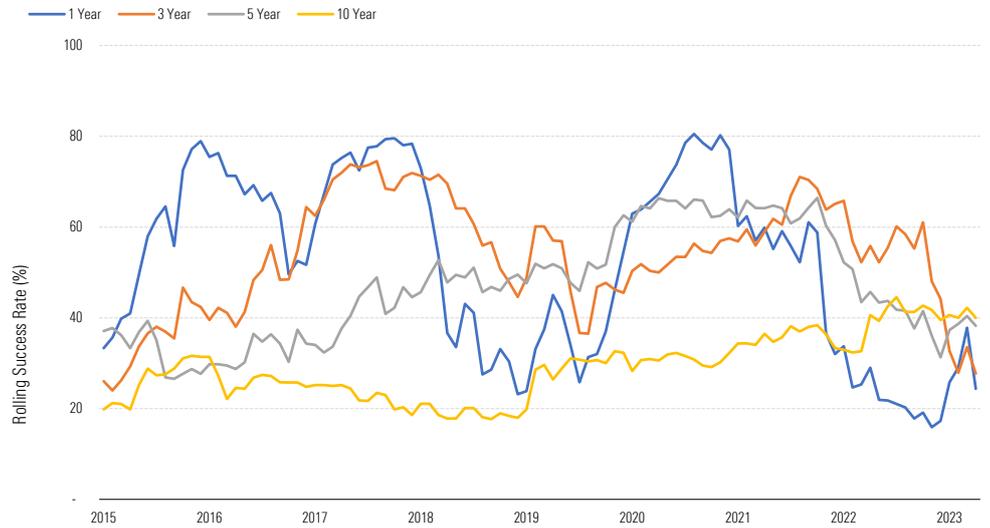
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 48 Europe Small-Cap Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	156	94.9	7	85.7	3.7	6.5	3.0	6.6	24.4
3-year	155	90.3	7	85.7	5.8	8.3	7.2	8.9	27.7
5-Year	149	83.9	7	85.7	2.2	2.9	2.5	2.8	38.3
10-Year	90	68.9	9	55.6	7.8	8.1	8.4	8.1	40.0
15-Year	128	39.1	5	80.0	6.7	7.2	6.5	7.5	14.1

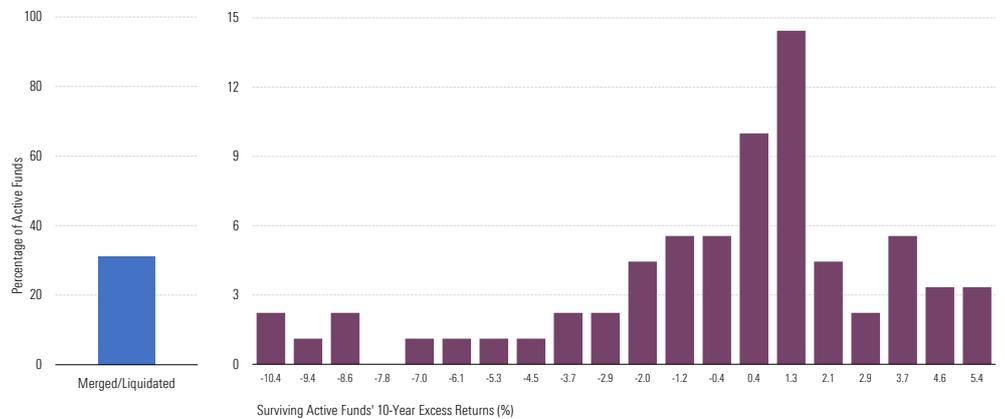
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 49 Rolling Success Rates for Surviving Active Europe Small-Cap Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 50 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Europe Small-Cap Equity Funds (%)



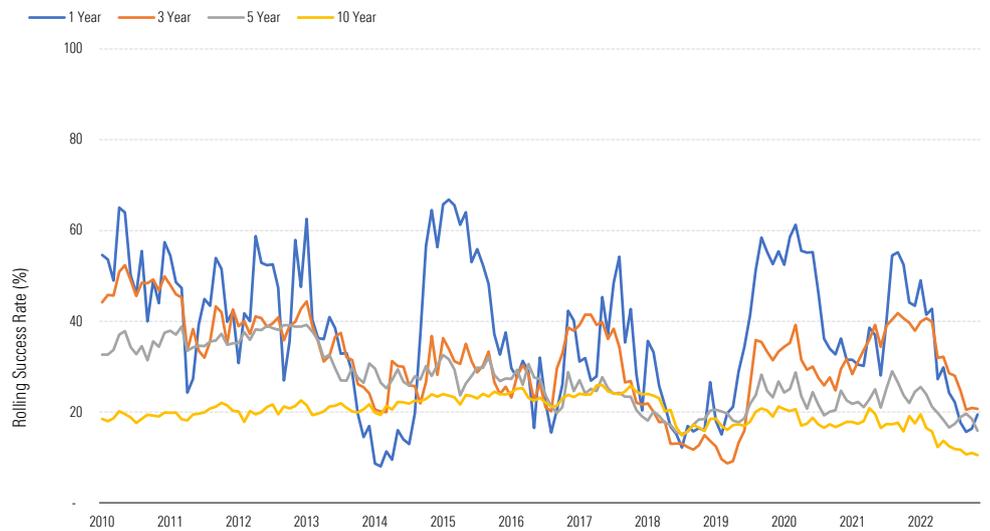
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 51 Eurozone Large-Cap Equity

	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	Active Success Rate (%)
Trailing Total Return									
1-Year	391	96.4	101	97.0	20.9	26.2	19.5	24.3	19.4
3-year	425	85.6	105	85.7	10.4	12.4	9.8	11.8	20.7
5-Year	403	80.4	97	79.4	5.1	7.0	4.6	6.3	15.9
10-Year	456	57.7	98	60.2	7.1	8.2	6.5	7.9	10.5
15-Year	683	34.6	110	37.3	4.4	5.0	4.1	4.5	14.5
20-Year	769	21.7	91	25.3	5.4	6.2	5.2	5.8	8.2

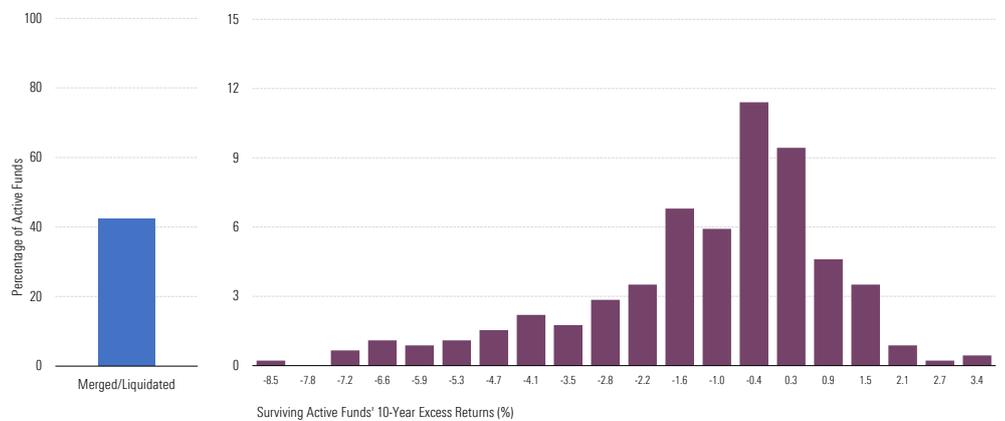
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 52 Rolling Success Rates for Surviving Active Eurozone Large-Cap Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 53 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Eurozone Large-Cap Equity Funds (%)



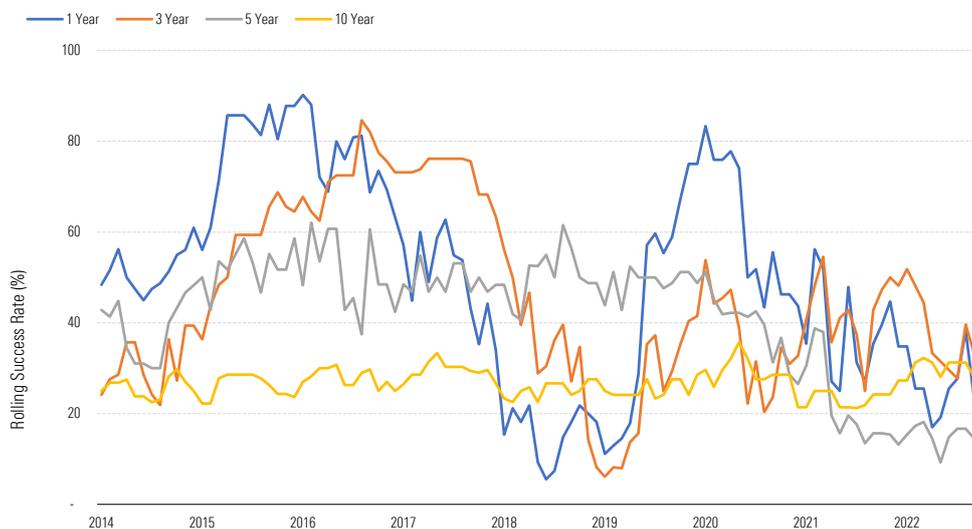
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 54 Eurozone Small-Cap Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	47	95.7	4	100.0	5.5	11.3	5.1	11.2	23.4
3-year	54	96.3	4	100.0	7.1	10.8	8.7	10.8	33.3
5-Year	55	89.1	4	100.0	1.2	4.7	2.2	4.7	14.5
10-Year	32	68.8	6	66.7	8.0	9.3	8.5	9.6	28.1
15-Year	33	36.4	3	66.7	5.9	6.5	6.4	6.9	15.2

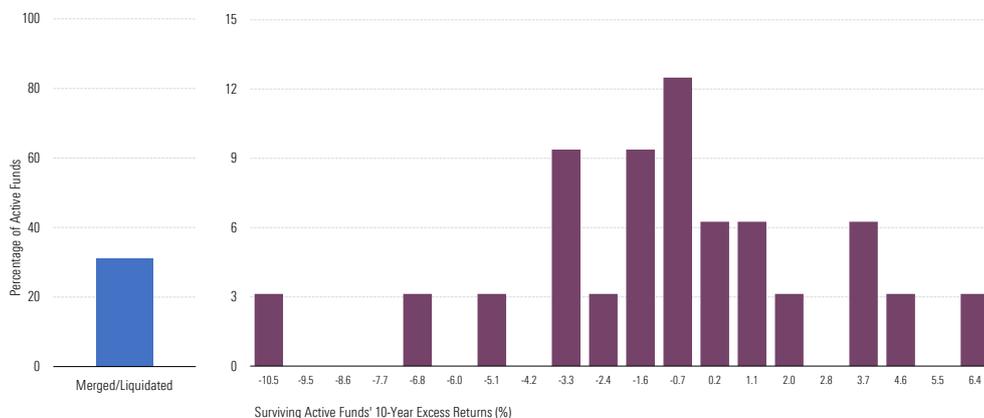
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 55 Rolling Success Rates for Surviving Active Eurozone Small-Cap Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 56 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Eurozone Small-Cap Equity Funds (%)



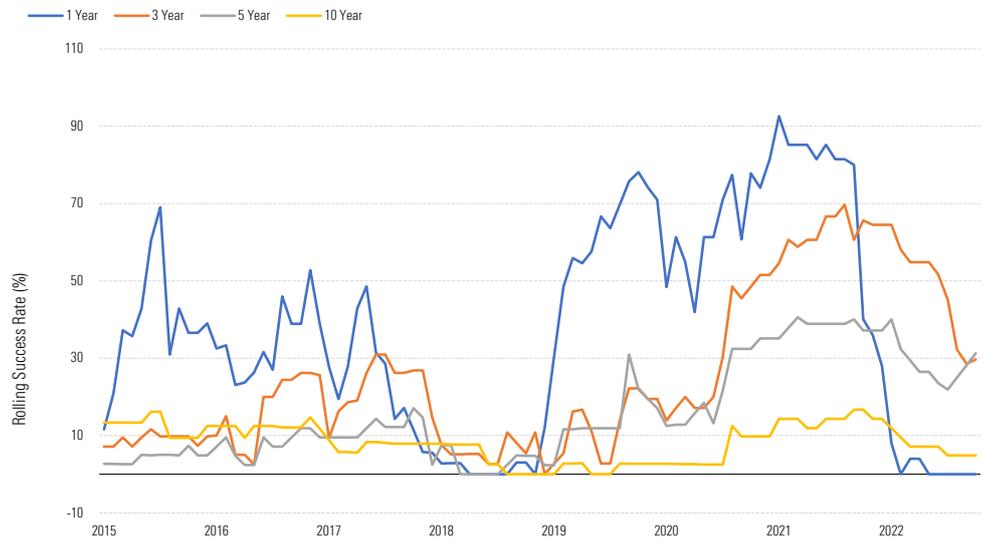
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 57 Finland Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	21	90.5	6	100.0	1.2	1.7	0.6	2.1	42.9
3-year	26	69.2	6	100.0	7.9	7.3	8.1	7.1	53.8
5-Year	32	56.3	6	100.0	5.1	4.5	5.9	4.3	46.9
10-Year	39	43.6	4	100.0	9.1	10.8	9.8	10.2	12.8
15-Year	38	42.1	3	100.0	6.6	7.9	6.9	7.2	10.5
20-Year	27	48.1	4	75.0	9.8	10.4	9.8	9.8	14.8

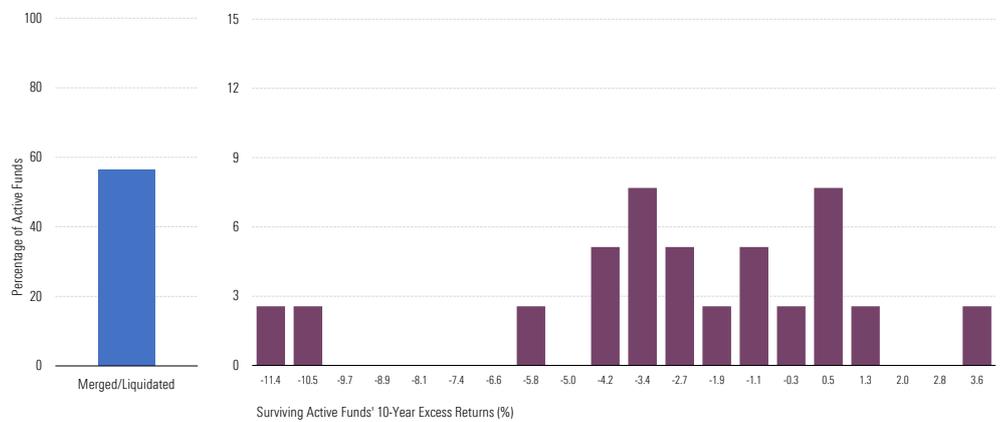
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 58 Rolling Success Rates for Surviving Active Finland Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 59 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Finland Equity Funds (%)



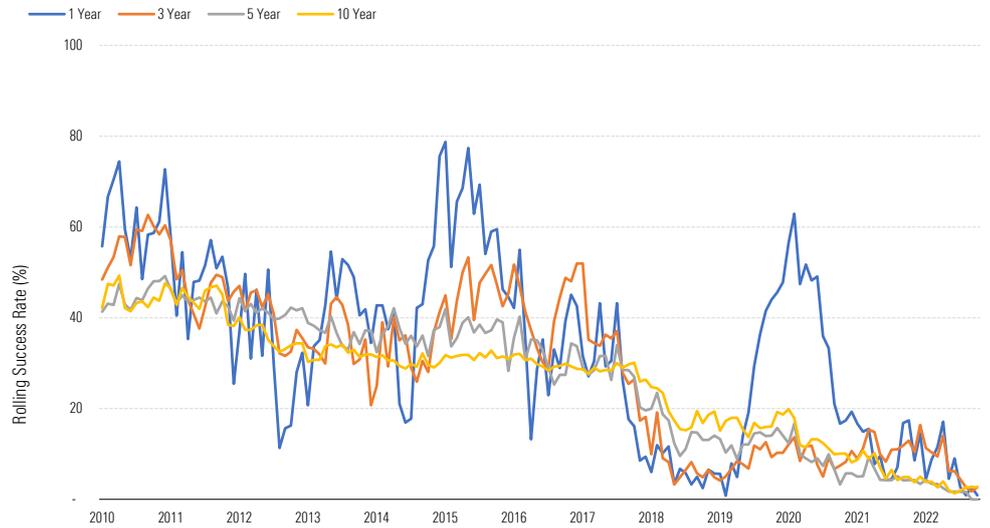
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 60 France Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	111	94.6	18	94.4	20.7	28.9	20.1	28.2	0.9
3-year	113	85.0	17	94.1	12.5	17.5	12.3	16.9	2.7
5-Year	120	75.8	19	84.2	5.3	9.5	4.9	9.0	-
10-Year	147	54.4	27	55.6	7.5	9.9	7.1	9.4	2.7
15-Year	183	34.4	31	22.6	5.1	6.7	5.0	6.1	6.0
20-Year	160	29.4	23	17.4	5.9	7.4	5.9	6.7	10.0

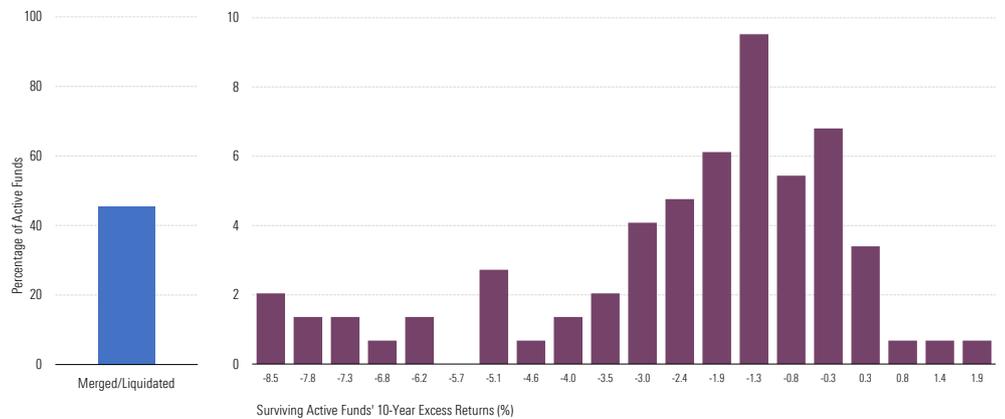
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 61 Rolling Success Rates for Surviving Active France Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 62 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active France Equity Funds (%)



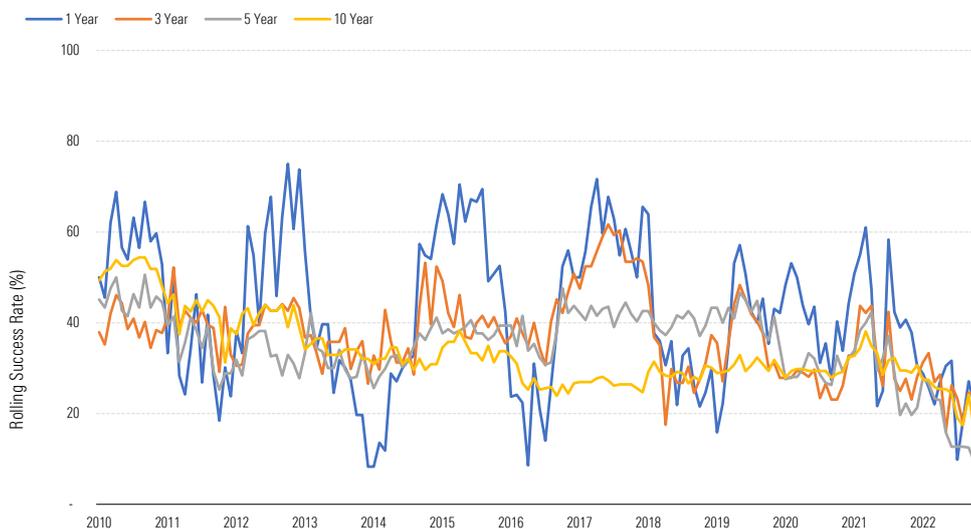
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 63 Germany Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	59	98.3	24	95.8	19.7	25.0	16.1	23.0	22.0
3-year	61	88.5	25	84.0	5.2	8.8	5.5	7.9	24.6
5-Year	64	78.1	23	78.3	1.9	4.8	1.7	4.0	9.4
10-Year	61	67.2	17	76.5	5.9	6.6	5.3	6.4	16.4
15-Year	85	40.0	14	50.0	5.4	5.8	4.8	5.7	15.3
20-Year	81	42.0	9	33.3	7.2	7.5	6.9	7.3	22.2

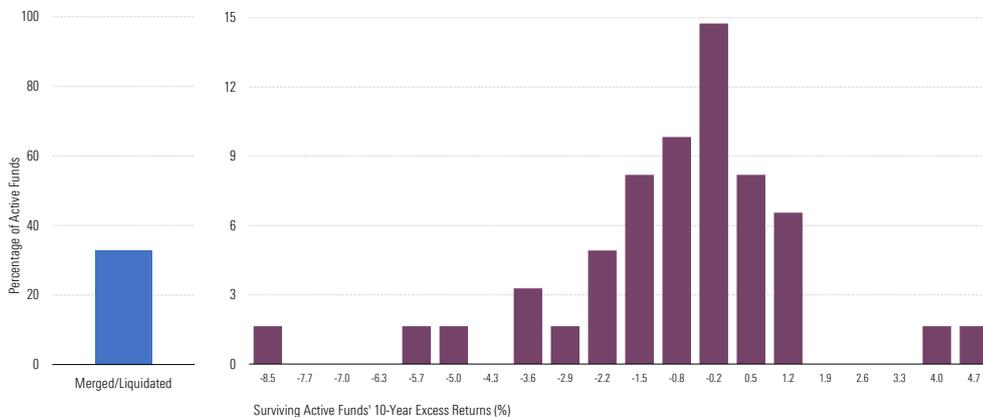
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 64 Rolling Success Rates for Surviving Active Germany Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 65 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Germany Equity Funds (%)



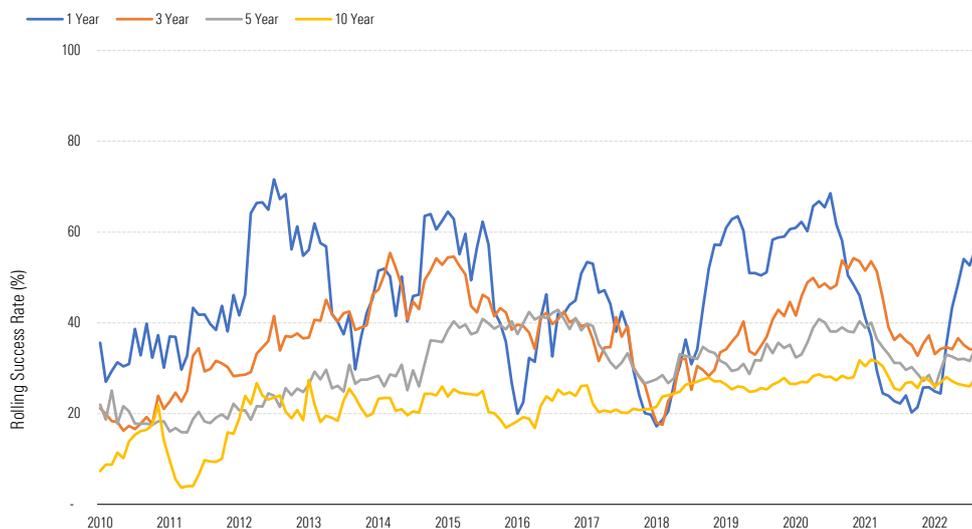
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 66 Global Emerging Markets Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	564	94.1	128	95.3	3.6	1.3	3.7	2.0	56.2
3-year	543	86.2	106	86.8	1.4	2.1	1.9	2.4	34.3
5-Year	551	73.7	93	78.5	0.3	0.8	0.2	0.6	34.3
10-Year	525	55.6	59	71.2	2.3	2.6	1.9	2.3	27.8
15-Year	384	44.0	15	73.3	1.4	1.4	0.5	1.1	21.1

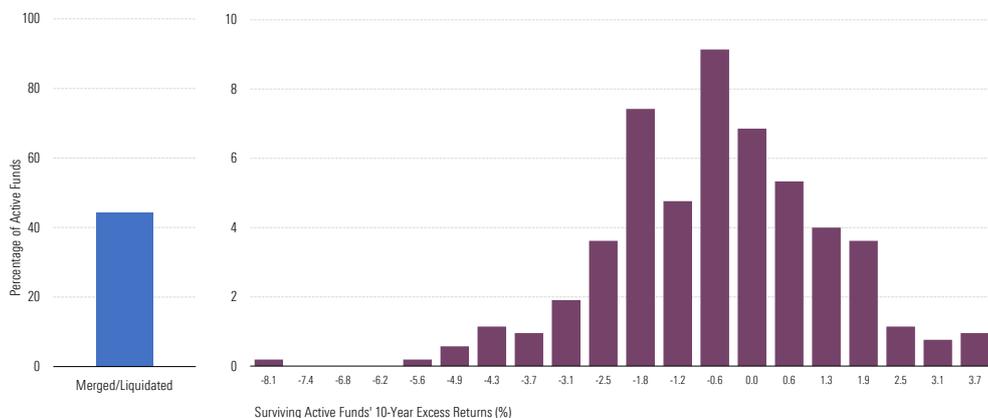
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 67 Rolling Success Rates for Surviving Active Global Emerging Markets Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 68 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Global Emerging Markets Equity Funds (%)



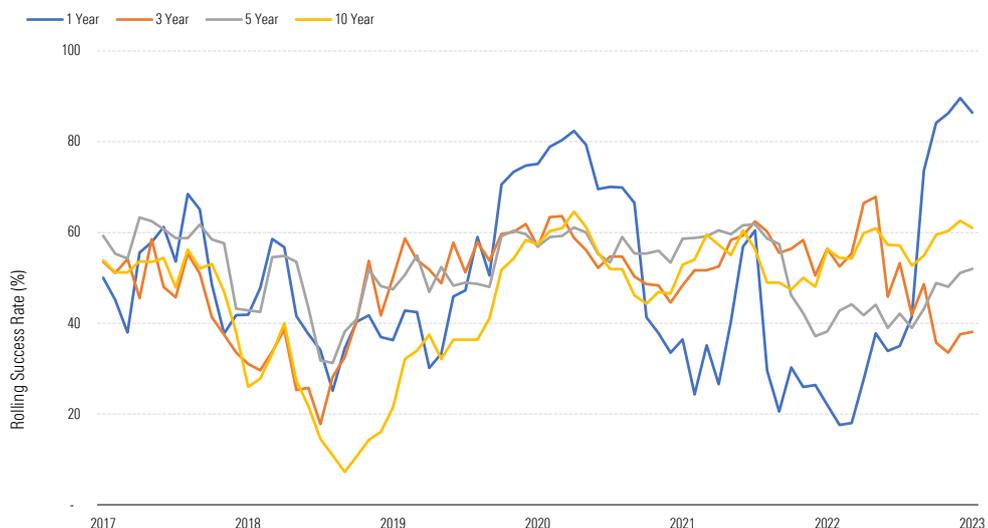
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 69 Global Equity Income

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	184	95.1	17	100.0	11.2	6.4	12.1	6.0	86.4
3-year	181	84.5	14	100.0	9.4	10.7	9.9	10.3	38.1
5-Year	179	70.9	12	91.7	5.2	4.0	5.5	4.5	52.0
10-Year	118	66.1	5	80.0	5.6	4.5	6.1	4.5	61.0

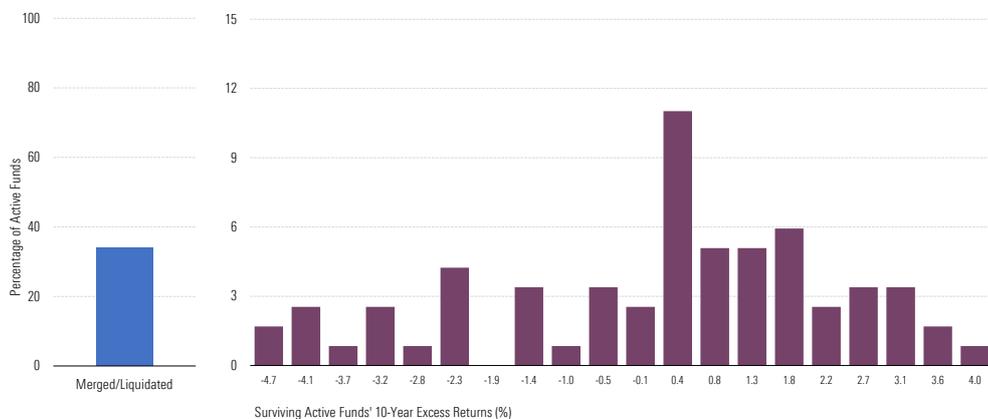
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 70 Rolling Success Rates for Surviving Active Global Equity Income Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 71 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Global Equity Income Funds (%)



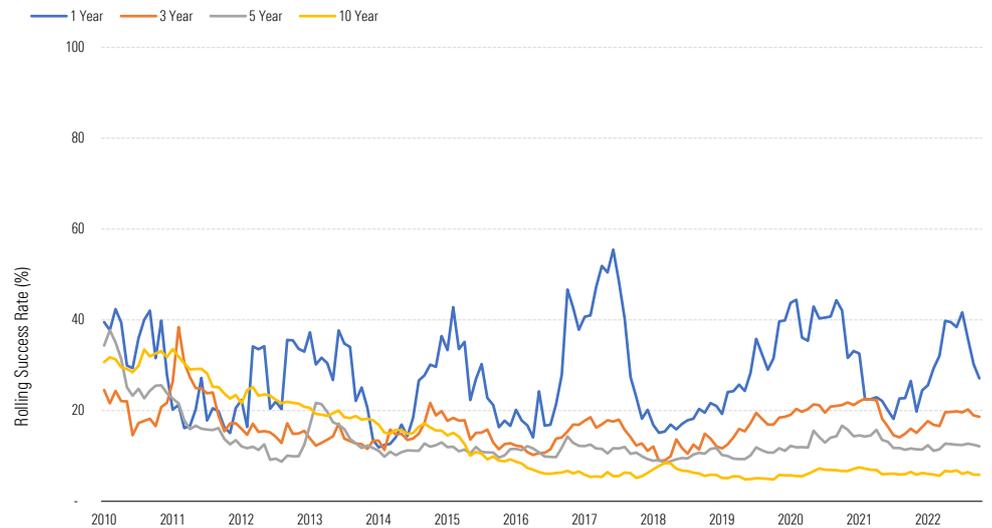
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 72 Global Large-Cap Blend Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	1,638	96.0	271	97.8	15.7	18.9	15.2	17.6	27.1
3-year	1,405	87.4	220	93.2	10.4	11.8	8.9	11.4	18.6
5-Year	1,552	76.4	179	86.0	7.0	8.6	5.6	8.5	12.1
10-Year	1,384	54.3	115	68.7	8.1	9.3	6.3	9.1	5.9
15-Year	1,697	33.5	57	56.1	4.9	7.0	3.7	6.9	2.8
20-Year	1,343	30.1	32	53.1	6.9	8.0	5.8	7.7	4.2

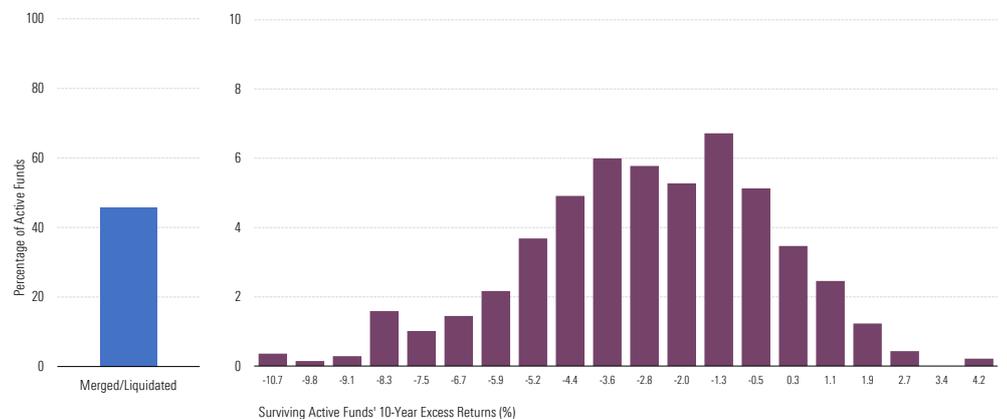
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 73 Rolling Success Rates for Surviving Active Global Large-Cap Blend Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 74 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Global Large-Cap Blend Equity Funds (%)



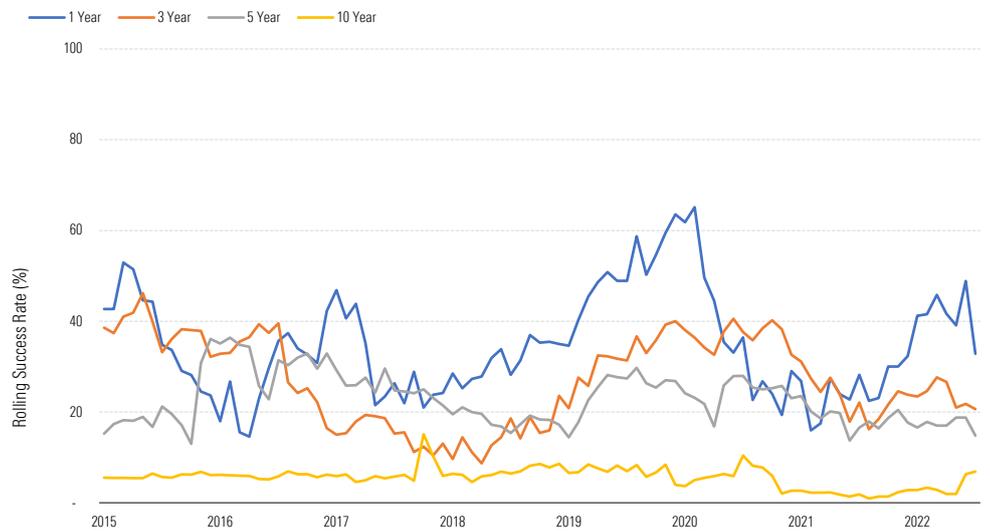
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 75 Global Large-Cap Value Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	134	95.5	9	100.0	14.2	15.0	14.1	15.3	32.8
3-year	126	81.7	9	77.8	10.4	12.8	11.4	13.6	20.6
5-Year	182	72.0	8	87.5	4.7	7.8	4.8	7.0	14.8
10-Year	203	55.2	8	50.0	6.1	9.4	6.3	8.6	6.9

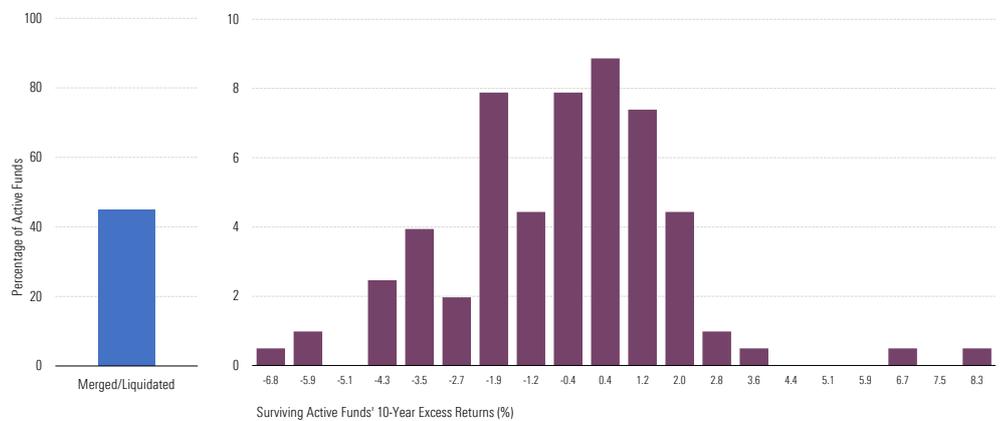
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 76 Rolling Success Rates for Surviving Active Global Large-Cap Value Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 77 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Global Large-Cap Value Equity Funds (%)



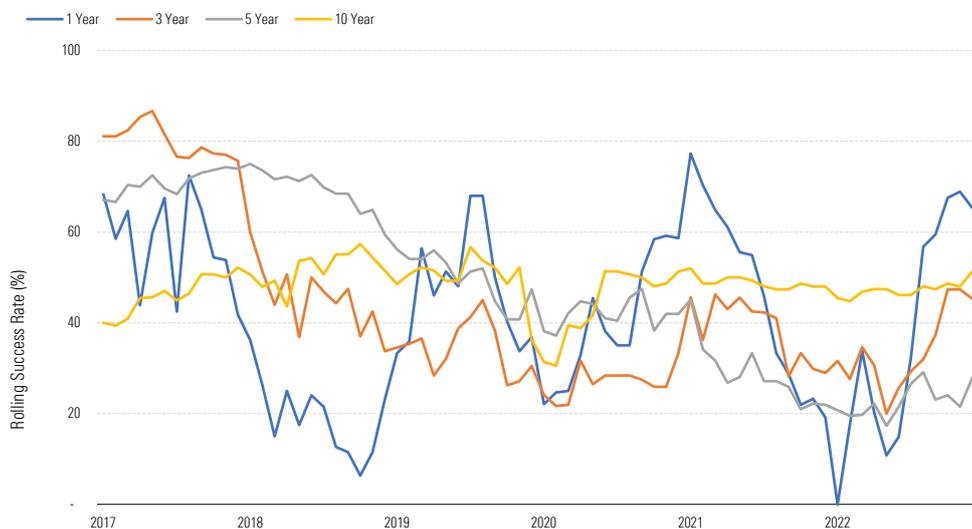
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 78 India Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	75	92.0	7	100.0	16.4	13.3	15.8	13.4	65.3
3-year	75	84.0	9	77.8	18.4	18.0	18.5	17.8	45.3
5-Year	79	70.9	9	66.7	6.9	7.4	6.6	7.4	27.8
10-Year	74	62.2	10	40.0	9.3	7.4	9.2	7.6	51.4
15-Year	70	52.9	4	50.0	6.2	4.8	6.2	5.4	41.4

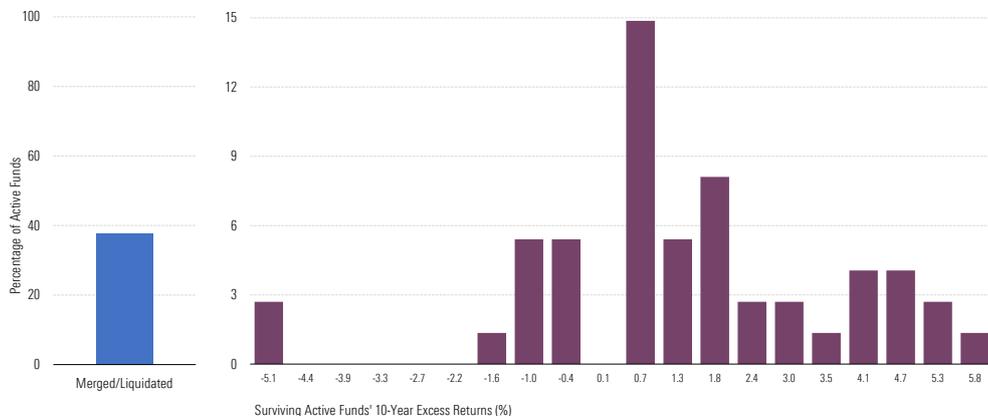
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 79 Rolling Success Rates for Surviving Active India Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 80 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active India Equity Funds (%)



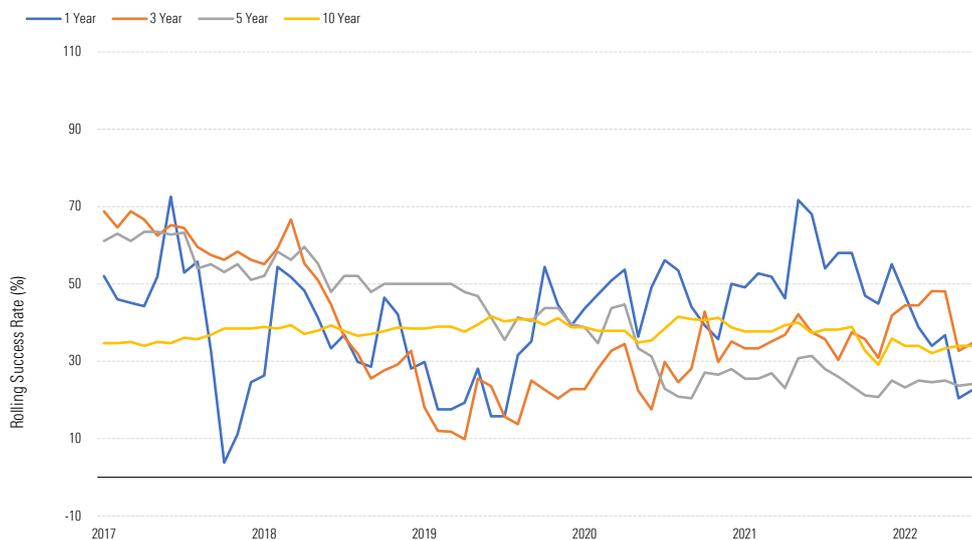
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 81 Italy Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	49	100.0	10	100.0	23.5	32.9	21.6	31.8	16.3
3-year	55	81.8	11	81.8	13.8	16.2	13.8	16.1	18.2
5-Year	57	75.4	12	75.0	5.4	7.4	5.8	7.4	15.8
10-Year	49	55.1	10	60.0	7.6	9.4	8.1	9.2	16.3
15-Year	88	30.7	6	50.0	2.8	2.9	3.2	2.7	20.5

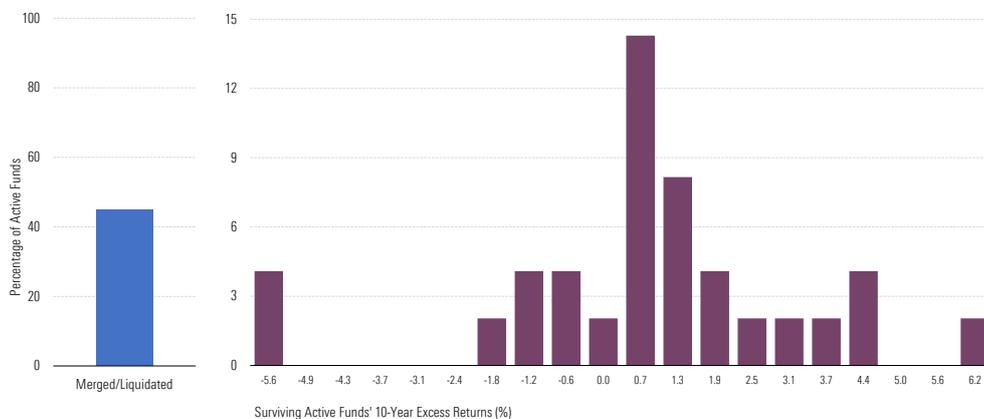
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 82 Rolling Success Rates for Surviving Active Italy Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 83 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Italy Equity Funds (%)



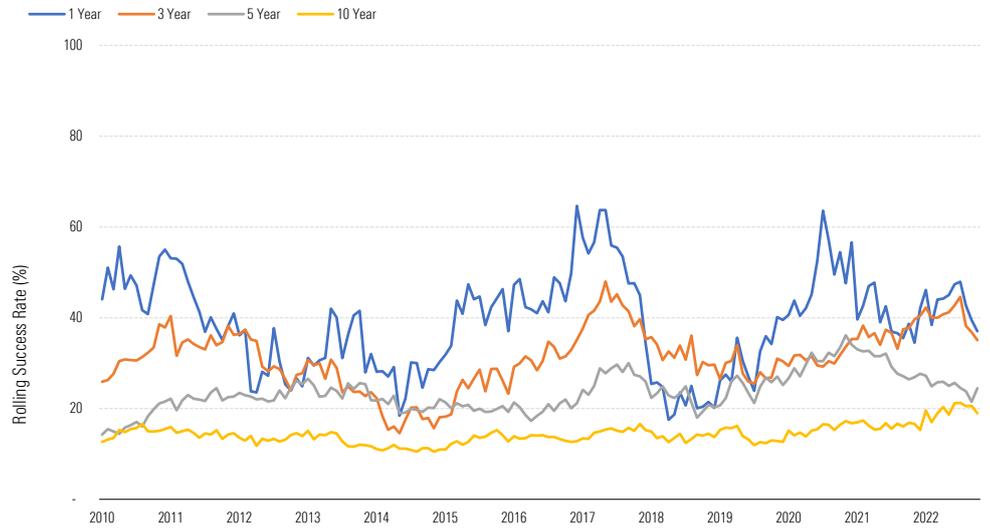
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 84 Japan Large-Cap Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	189	94.7	96	94.8	24.7	25.0	24.8	25.2	37.0
3-year	208	82.2	89	91.0	15.3	16.0	15.6	16.1	35.1
5-Year	229	69.4	82	82.9	7.9	8.4	7.5	8.5	24.5
10-Year	258	48.8	63	66.7	9.0	9.1	8.5	9.2	19.0
15-Year	448	24.8	60	48.3	5.0	5.3	4.6	5.2	10.9
20-Year	387	20.7	41	39.0	5.3	6.6	5.1	6.0	5.9

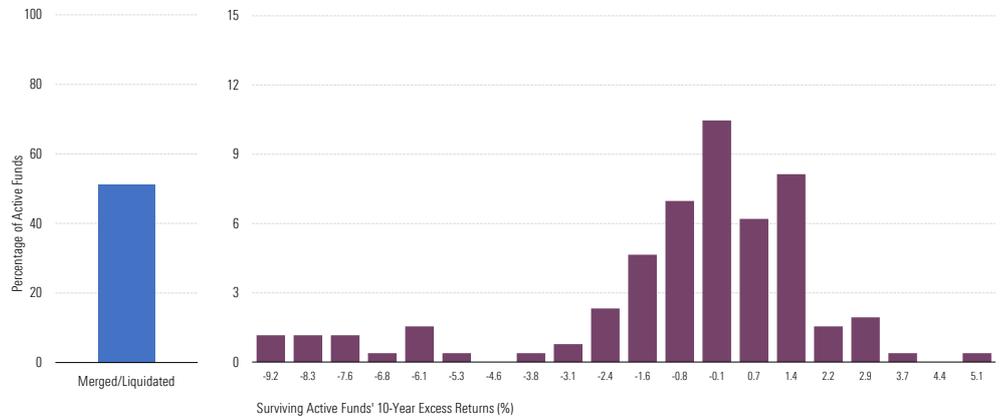
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 85 Rolling Success Rates for Surviving Active Japan Large-Cap Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 86 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Japan Large-Cap Equity Funds (%)



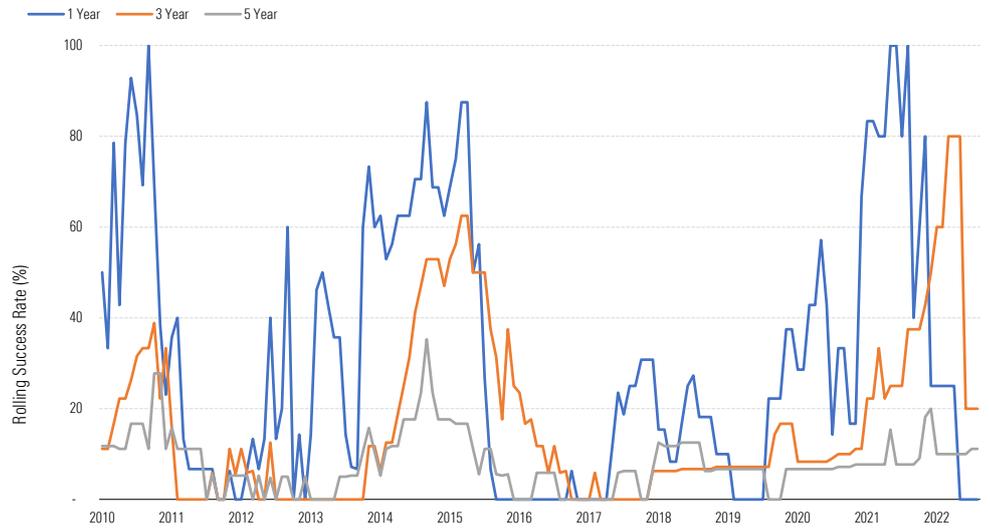
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 87 Korea Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	4	75.0	7	100.0	4.0	11.9	4.0	12.0	-
3-year	5	60.0	7	100.0	7.0	4.7	3.2	4.6	20.0
5-Year	9	33.3	8	75.0	0.6	0.6	-	0.7	11.1
10-Year	12	25.0	7	71.4	2.1	3.6	0.2	3.5	8.3
15-Year	17	17.6	5	60.0	0.6	2.9	-	0.1	2.8

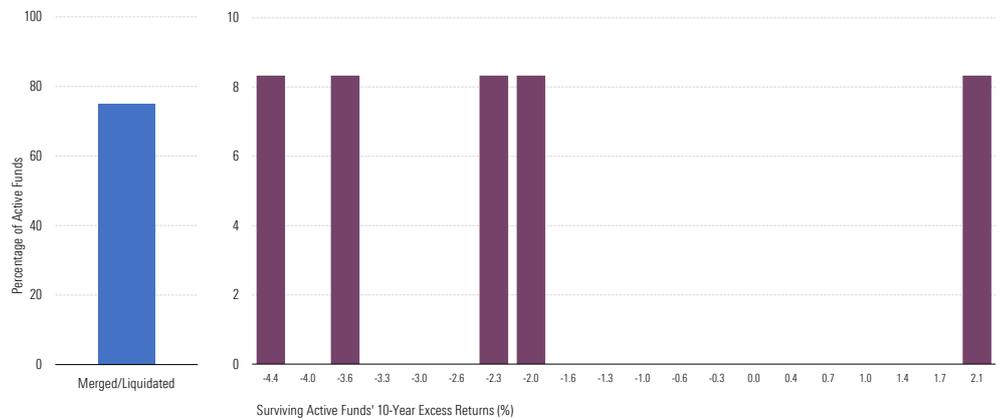
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 88 Rolling Success Rates for Surviving Active Korea Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 89 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Korea Equity Funds (%)



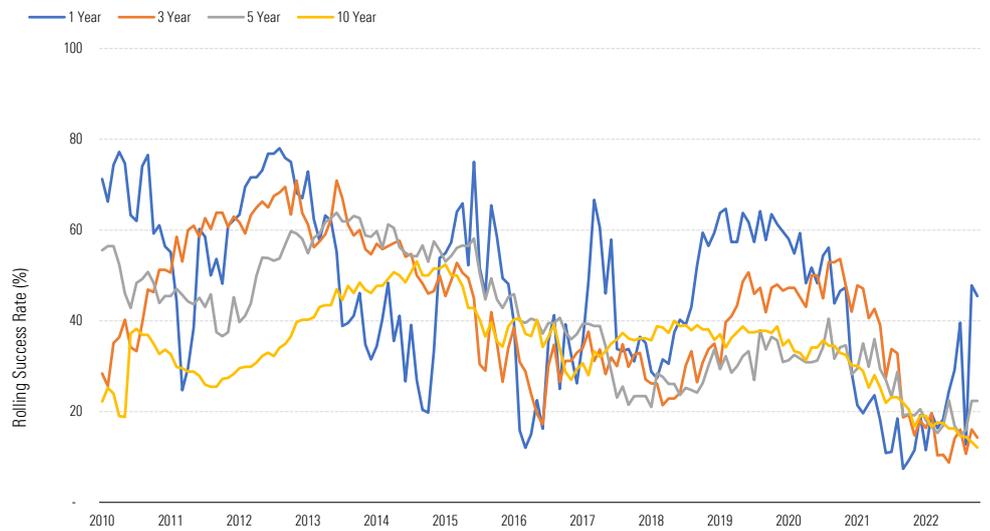
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 90 Latin America Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	44	93.2	7	85.7	30.2	29.6	29.5	29.4	45.5
3-year	56	73.2	7	85.7	10.7	15.1	11.2	14.9	14.3
5-Year	67	55.2	8	62.5	3.2	3.7	2.9	3.5	22.4
10-Year	91	33.0	14	35.7	- 0.6	0.2	- 0.5	0.1	12.1
15-Year	83	25.3	8	37.5	- 2.1	- 2.2	- 2.0	- 2.5	21.7

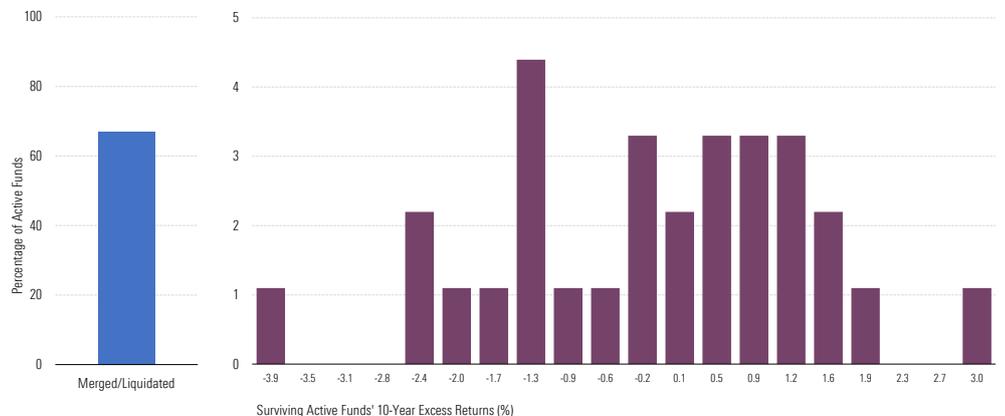
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 91 Rolling Success Rates for Surviving Active Latin America Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 92 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Latin America Equity Funds (%)



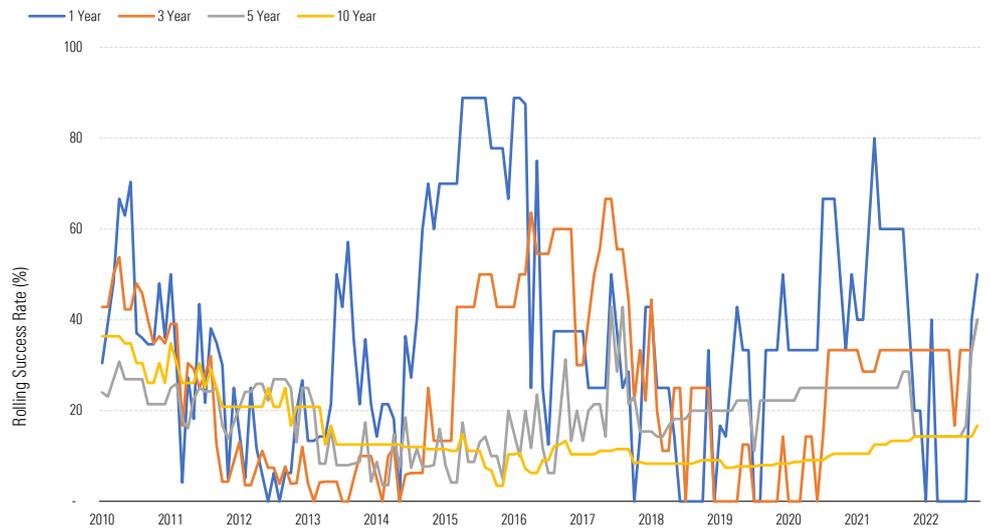
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 93 Netherlands Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	4	75.0	6	83.3	14.8	18.7	14.7	14.5	50.0
3-year	5	60.0	7	71.4	11.5	13.7	14.3	12.8	40.0
5-Year	5	40.0	8	62.5	5.6	9.7	9.3	9.2	40.0
10-Year	12	16.7	11	36.4	8.7	11.2	11.0	10.8	16.7
15-Year	22	9.1	8	25.0	4.9	7.2	6.7	7.1	9.1
20-Year	23	4.3	6	16.7	8.2	8.3	7.1	8.1	4.3

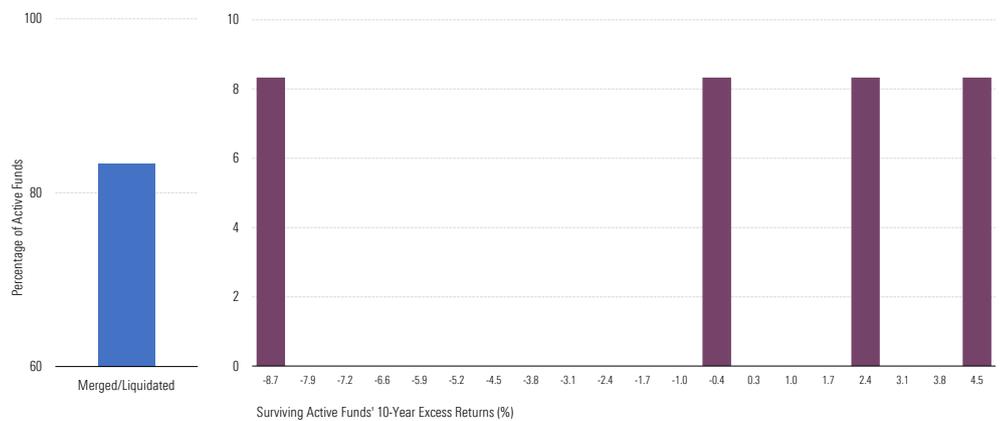
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 94 Rolling Success Rates for Surviving Active Netherlands Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 95 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Netherlands Equity Funds (%)



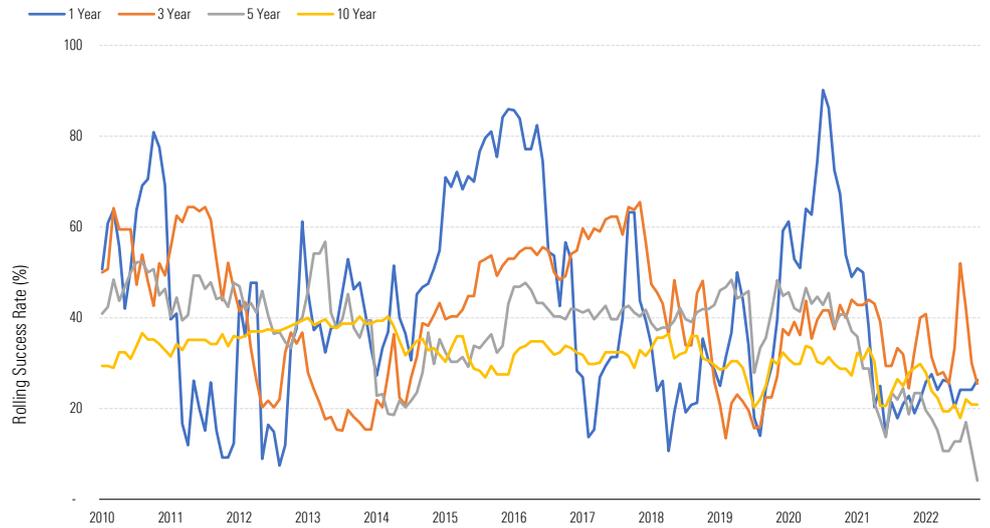
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 96 Nordic Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	57	96.5	12	100.0	19.3	20.6	16.3	21.6	26.3
3-year	51	90.2	11	100.0	13.3	14.3	13.2	15.1	25.5
5-Year	48	77.1	9	100.0	9.1	10.9	9.2	11.5	4.2
10-Year	67	47.8	10	50.0	11.9	13.2	11.8	12.8	20.9
15-Year	75	40.0	6	33.3	8.1	9.8	8.7	9.4	8.0
20-Year	68	27.9	6	16.7	11.2	10.6	10.6	10.6	22.1

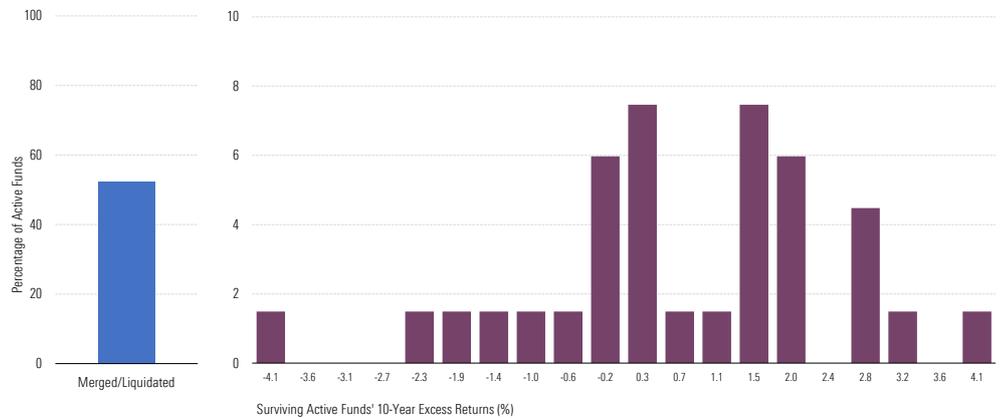
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 97 Rolling Success Rates for Surviving Active Nordic Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 98 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Nordic Equity Funds (%)



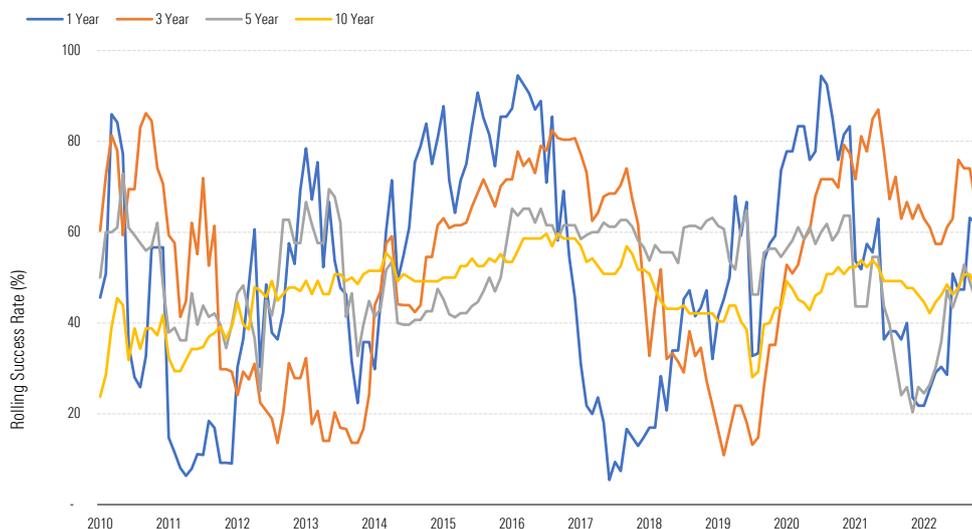
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 99 Norway Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	58	98.3	8	100.0	5.4	3.5	5.0	2.9	62.1
3-year	54	98.1	10	80.0	14.8	14.8	14.9	13.5	66.7
5-Year	53	90.6	9	77.8	6.2	6.5	6.6	6.1	45.3
10-Year	67	65.7	9	44.4	10.0	9.7	10.5	9.4	47.8
15-Year	58	62.1	8	37.5	6.8	6.5	7.3	6.2	51.7

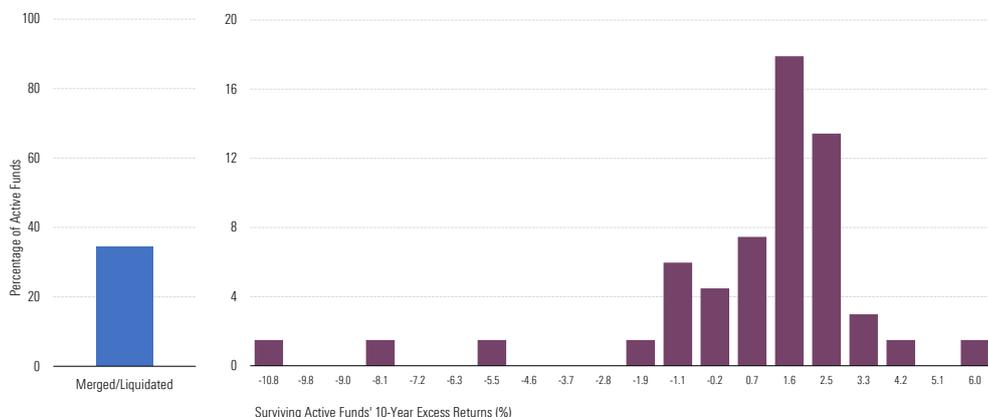
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 100 Rolling Success Rates for Surviving Active Norway Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 101 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Norway Equity Funds (%)



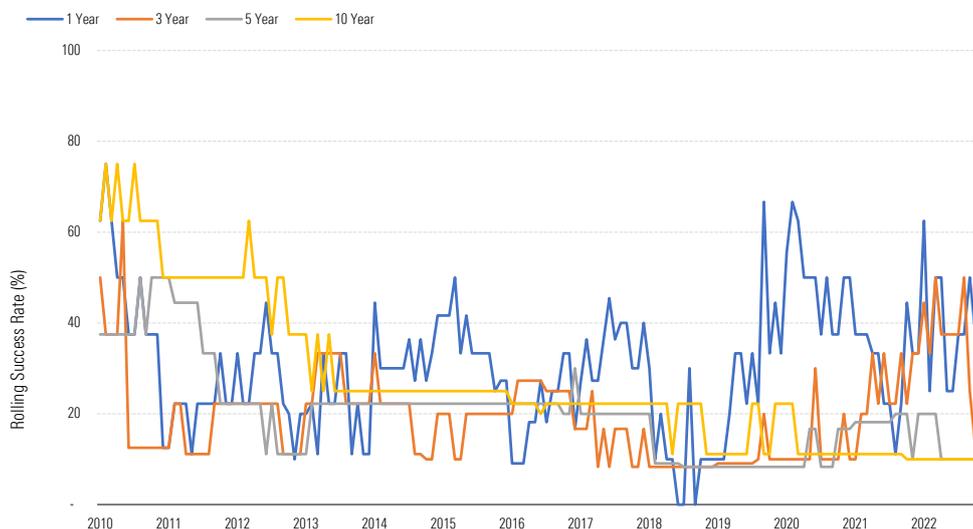
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 102 Pacific ex-Japan Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	8	100.0	27	100.0	4.5	5.7	3.1	5.6	37.5
3-year	8	87.5	25	96.0	6.9	6.3	4.9	6.3	12.5
5-Year	10	80.0	24	91.7	2.3	2.5	0.8	2.5	10.0
10-Year	10	80.0	18	88.9	4.1	4.2	2.8	4.1	10.0
15-Year	9	77.8	7	100.0	3.6	3.9	2.4	3.9	11.1
20-Year	8	75.0	4	100.0	8.6	8.5	7.5	8.3	12.5

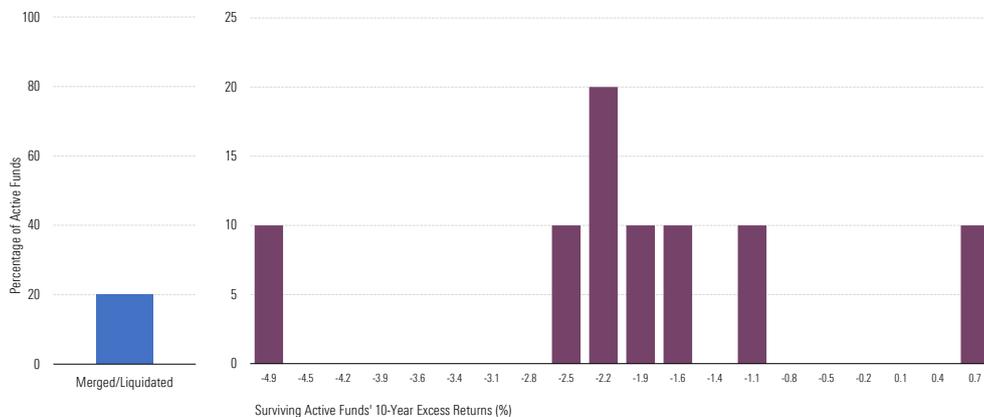
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 103 Rolling Success Rates for Surviving Active Pacific ex-Japan Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 104 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Pacific ex-Japan Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 105 Spain Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	71	88.7	11	100.0	14.8	22.7	13.6	21.8	1.4
3-year	86	73.3	12	91.7	12.6	13.0	12.1	12.5	26.7
5-Year	86	67.4	13	84.6	0.7	3.0	0.3	2.9	8.1
10-Year	78	53.8	15	60.0	4.7	5.6	4.2	5.3	17.9
15-Year	120	30.8	24	29.2	2.0	2.2	1.5	1.8	16.7
20-Year	89	29.2	11	36.4	4.4	4.9	4.2	4.6	15.7

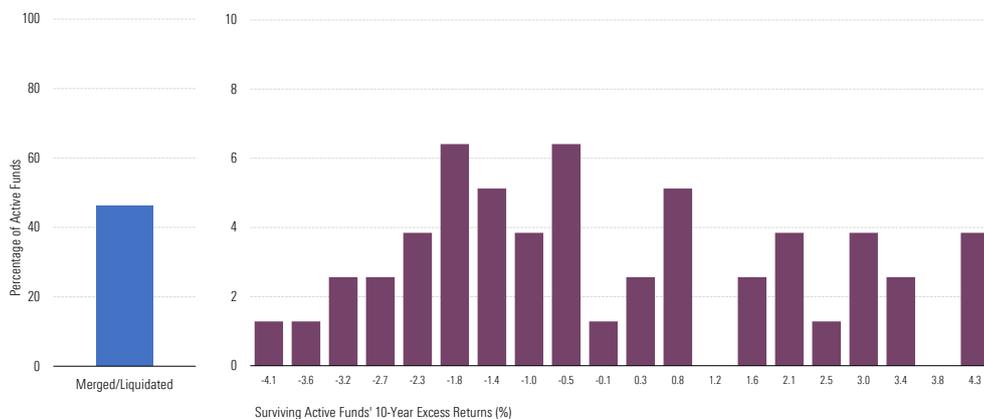
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 106 Rolling Success Rates for Surviving Active Spain Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 107 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Spain Equity Funds (%)



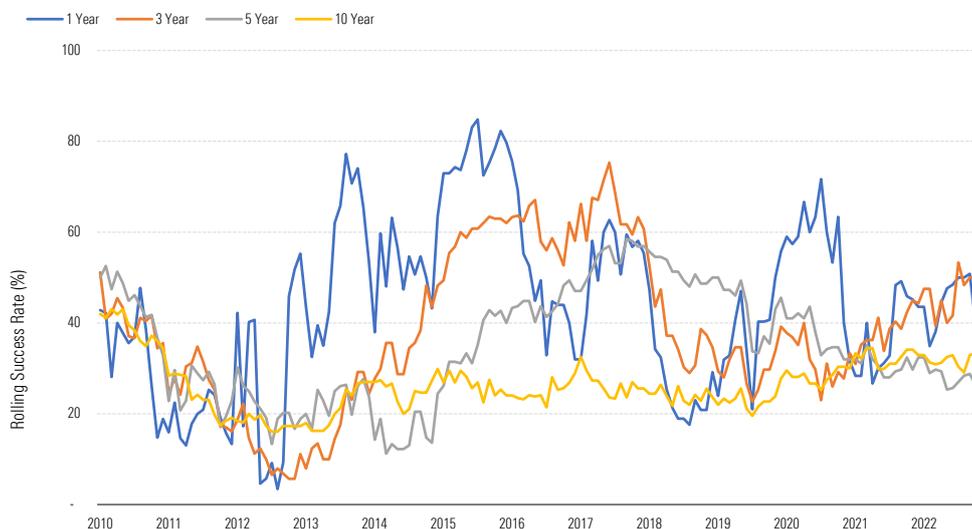
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 108 Sweden Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	60	98.3	27	100.0	19.5	20.7	18.6	19.9	40.0
3-year	60	90.0	25	100.0	11.5	11.7	11.9	11.8	50.0
5-Year	72	69.4	26	92.3	8.5	9.8	9.1	9.9	26.4
10-Year	81	51.9	28	67.9	10.7	10.7	11.1	10.7	33.3
15-Year	89	30.3	22	54.5	10.1	10.1	10.2	10.1	19.1
20-Year	81	22.2	13	46.2	10.9	9.1	10.5	10.9	12.3

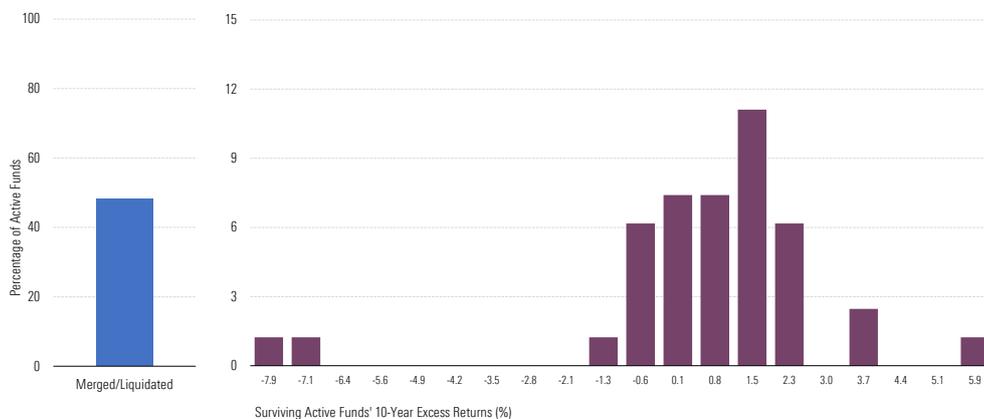
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 109 Rolling Success Rates for Surviving Active Sweden Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 110 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Sweden Equity Funds (%)



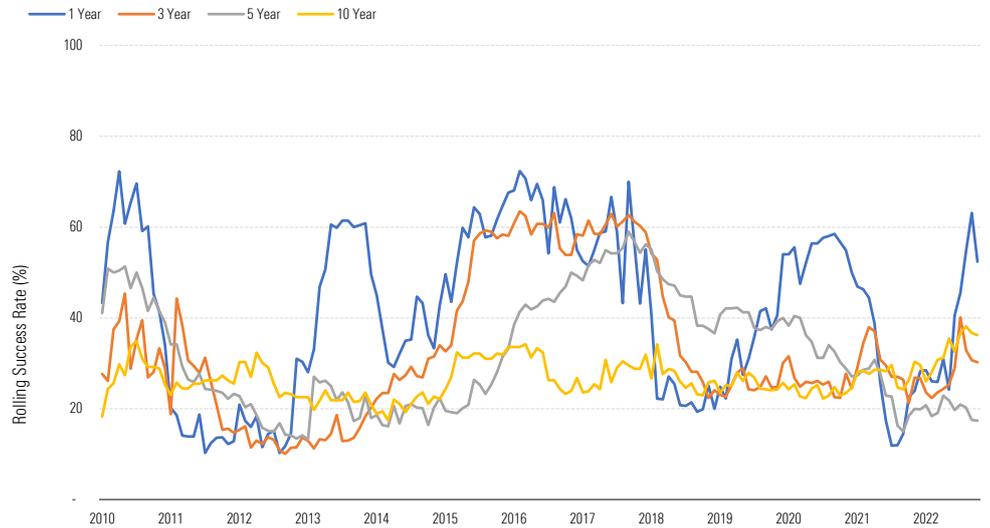
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 111 Switzerland Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	168	97.6	55	98.2	7.9	7.6	8.0	7.6	52.4
3-year	162	91.4	49	98.0	5.8	6.3	5.7	6.3	30.2
5-Year	155	81.3	49	93.9	6.5	7.7	5.7	7.5	17.4
10-Year	138	60.9	35	82.9	7.0	7.2	6.6	6.9	36.2
15-Year	118	46.6	29	75.9	5.6	6.3	5.1	6.0	13.6
20-Year	96	34.4	17	58.8	6.4	7.2	6.1	6.7	12.5

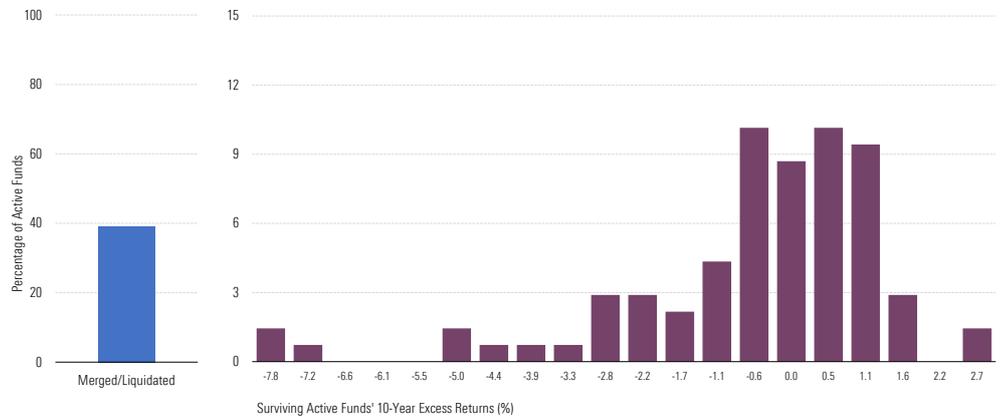
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 112 Rolling Success Rates for Surviving Active Switzerland Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 113 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Switzerland Equity Funds (%)



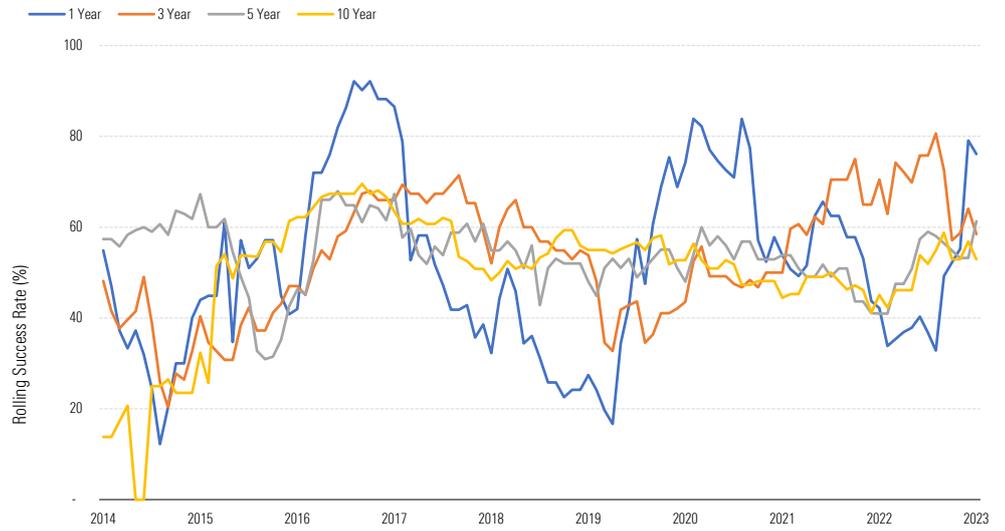
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 114 Switzerland Small/Mid-Cap Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	67	97.0	6	100.0	10.8	8.0	11.2	8.2	76.1
3-year	65	93.8	7	85.7	6.0	5.4	6.0	5.4	58.5
5-Year	62	87.1	8	75.0	3.6	3.0	2.7	2.7	61.3
10-Year	51	76.5	7	71.4	9.7	9.1	8.9	8.5	52.9
15-Year	60	60.0	3	33.3	6.4	6.4	5.9	5.1	48.3

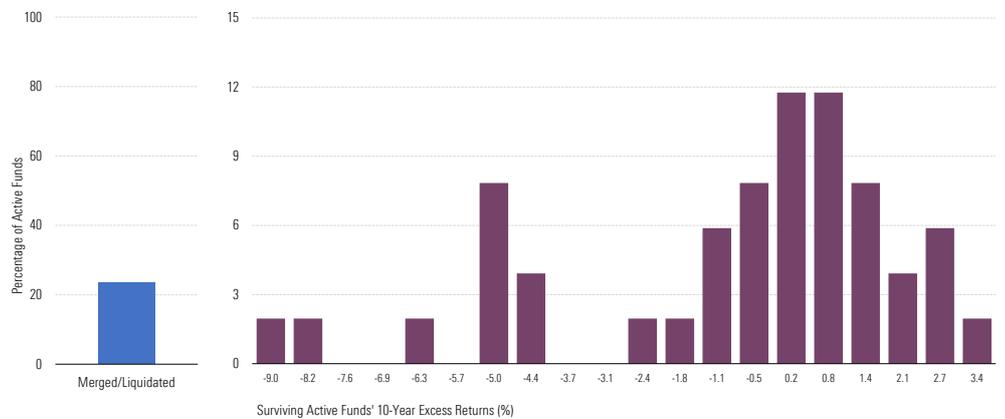
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 115 Rolling Success Rates for Surviving Active Switzerland Small/Mid-Cap Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 116 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Switzerland Small/Mid-Cap Equity Funds (%)



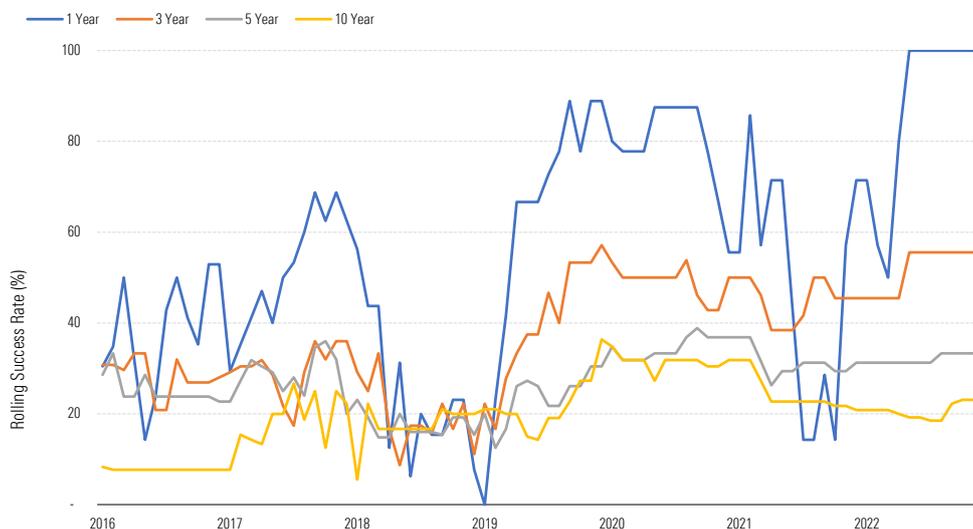
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 117 Turkey Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	5	100.0	3	100.0	67.2	46.9	63.5	46.7	100.0
3-year	9	55.6	4	75.0	17.9	7.5	16.7	7.5	55.6
5-Year	15	33.3	5	60.0	7.5	0.6	6.6	0.5	33.3
10-Year	26	26.9	7	42.9	0.1	-4.9	1.9	-4.9	23.1
15-Year	16	18.8	4	50.0	2.4	1.5	2.4	0.7	12.5

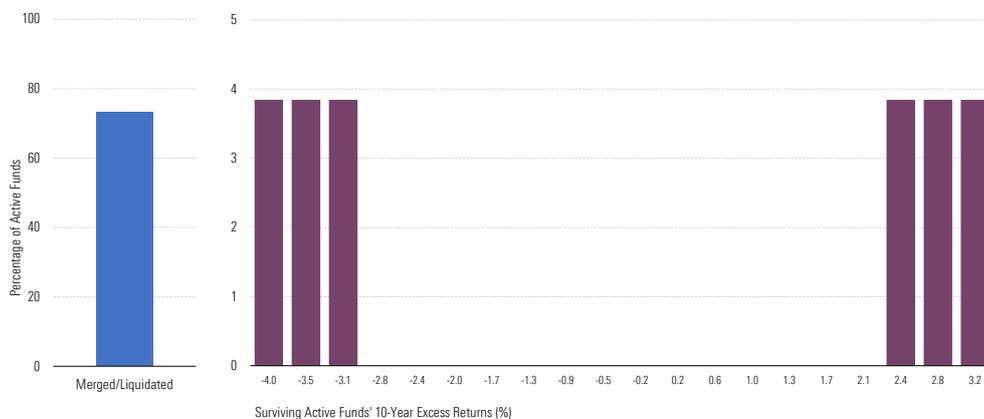
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 118 Rolling Success Rates for Surviving Active Turkey Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 119 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Turkey Equity Funds (%)



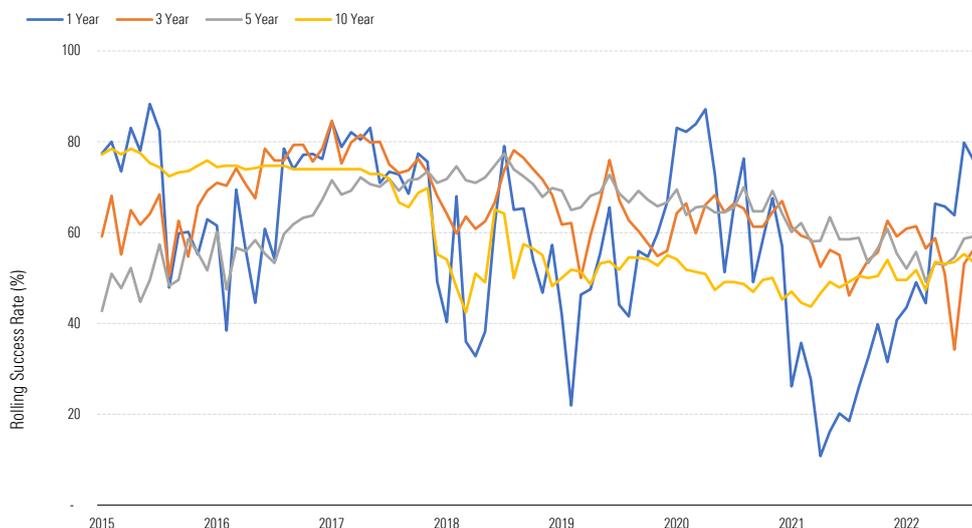
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 120 UK Equity Income

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	104	94.2	4	100.0	5.6	0.9	4.5	0.8	76.0
3-year	112	80.4	4	100.0	8.4	9.5	8.5	6.9	56.3
5-Year	120	73.3	6	66.7	1.3	1.0	1.4	0.0	59.2
10-Year	114	60.5	4	75.0	5.1	3.8	5.1	3.6	53.5

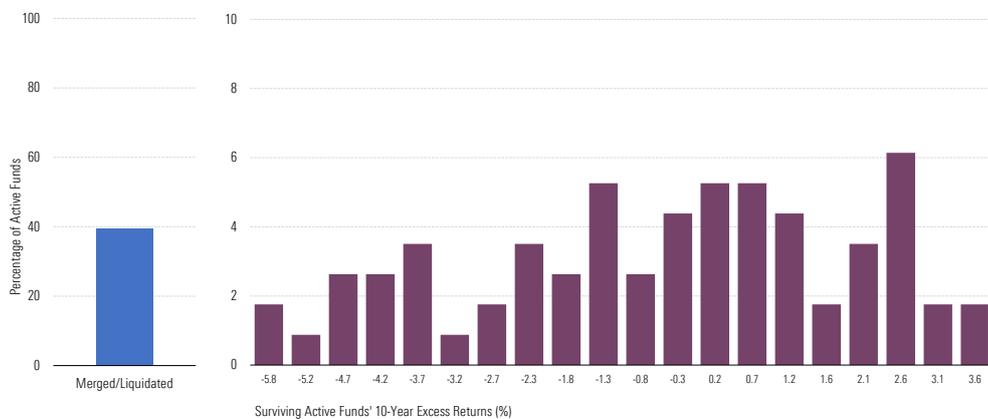
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 121 Rolling Success Rates for Surviving Active UK Equity Income Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 122 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving UK Equity Income Funds (%)



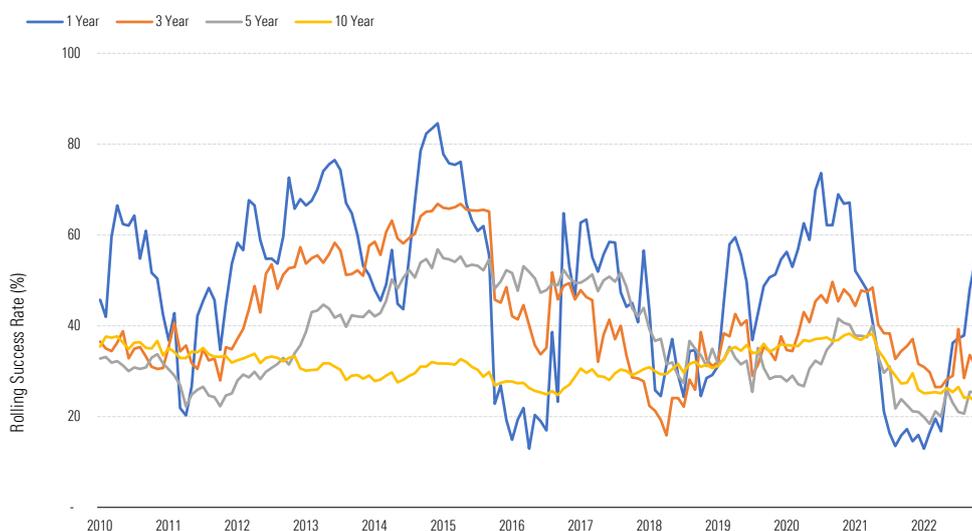
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 123 UK Large-Cap Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	132	91.7	71	95.8	9.1	8.1	8.2	7.4	54.5
3-year	141	78.7	69	91.3	9.0	10.0	9.1	9.6	31.2
5-Year	150	65.3	77	75.3	2.0	3.0	3.3	2.8	25.3
10-Year	176	47.2	81	60.5	5.2	5.7	5.2	5.4	23.3
15-Year	263	34.2	62	56.5	5.7	5.8	5.8	5.7	19.4
20-Year	260	28.5	52	50.0	6.4	6.7	6.7	6.5	19.2

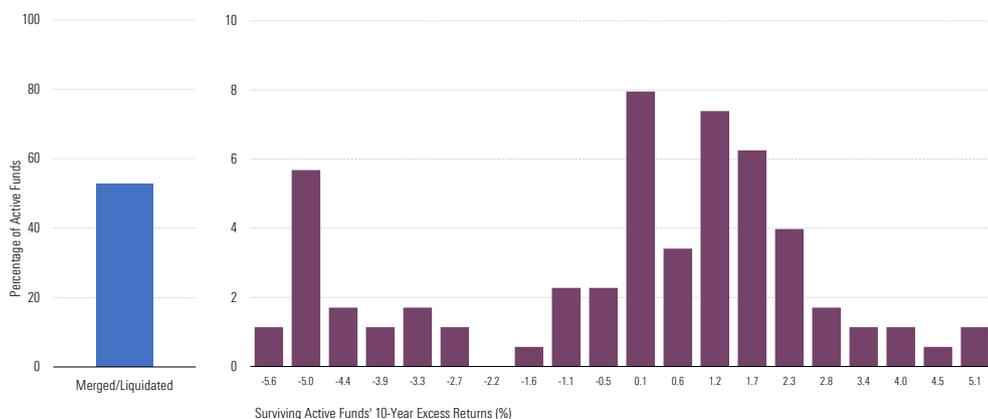
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 124 Rolling Success Rates for Surviving Active UK Large-Cap Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 125 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving UK Large-Cap Equity Funds (%)



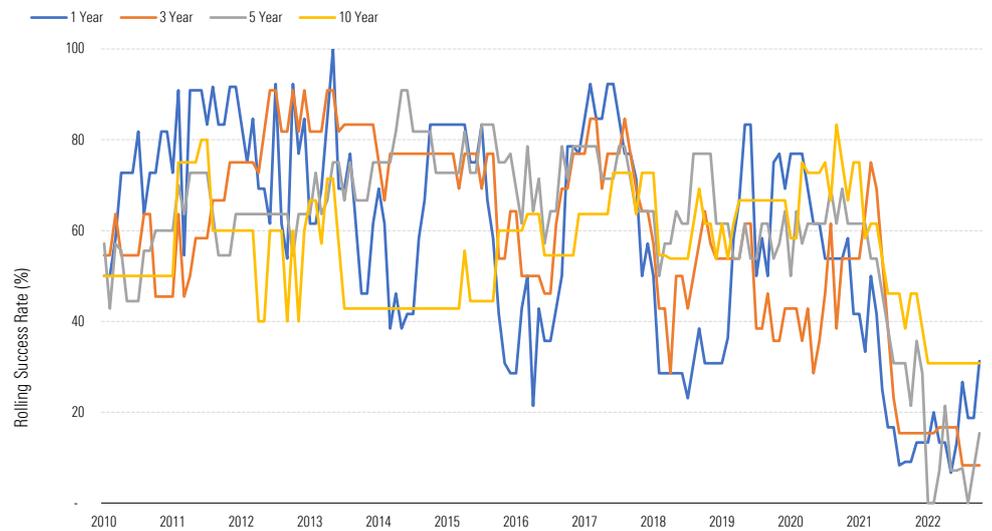
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 126 UK Mid-Cap Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	14	100.0	9	100.0	-26.3	-16.2	-23.2	-16.9	21.4
3-year	10	90.0	8	100.0	-7.0	-2.4	-4.1	-2.6	20.0
5-Year	12	66.7	9	88.9	-3.4	0.7	-1.1	0.6	16.7
10-Year	11	72.7	9	66.7	6.3	6.9	6.8	6.8	36.4
15-Year	8	87.5	4	75.0	6.1	6.5	7.0	6.5	37.5

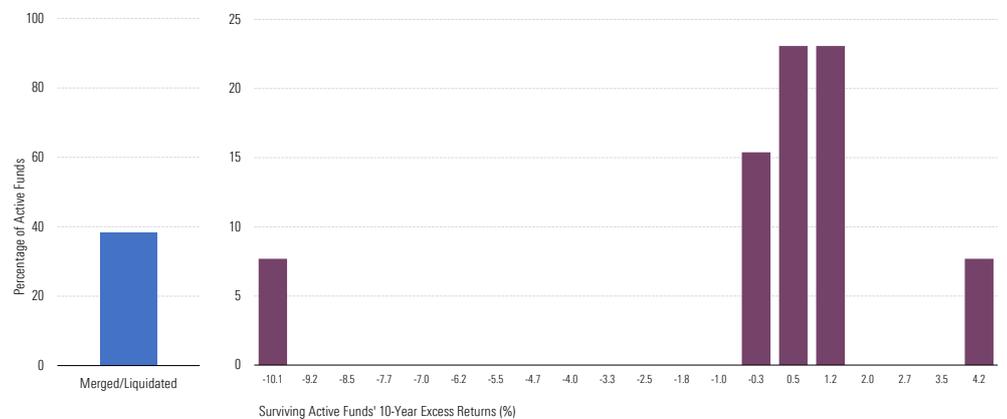
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 127 Rolling Success Rates for Surviving Active UK Mid-Cap Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 128 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving UK Mid-Cap Equity Funds (%)



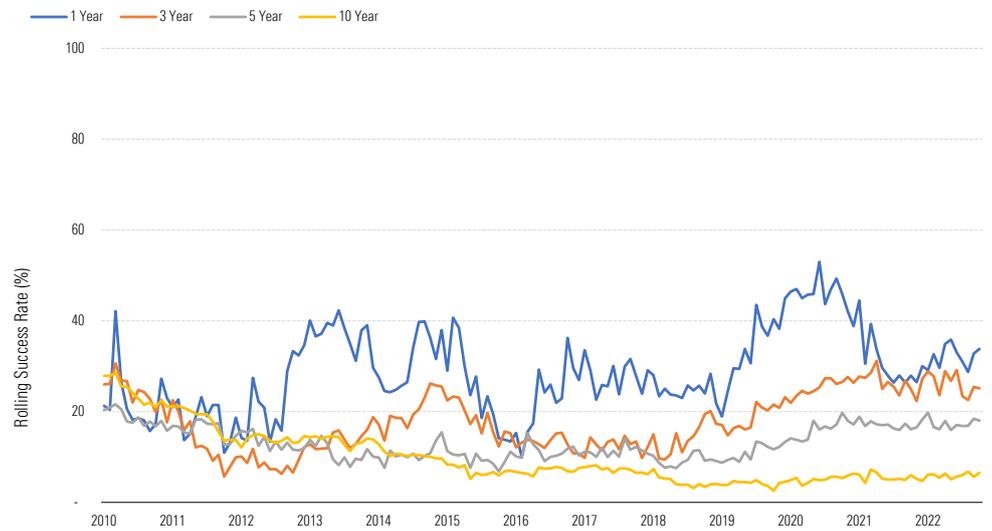
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 129 US Large-Cap Blend Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	358	95.3	198	96.5	17.2	19.0	16.8	18.0	33.8
3-year	350	84.3	186	87.6	12.1	14.0	11.6	13.3	25.1
5-Year	350	68.6	163	81.0	9.8	11.7	9.2	10.9	18.0
10-Year	352	49.4	135	63.7	10.3	12.2	9.8	11.6	6.5
15-Year	521	29.0	94	44.7	8.2	10.0	7.3	9.3	4.4
20-Year	472	26.3	60	43.3	7.5	9.4	7.0	8.6	4.4

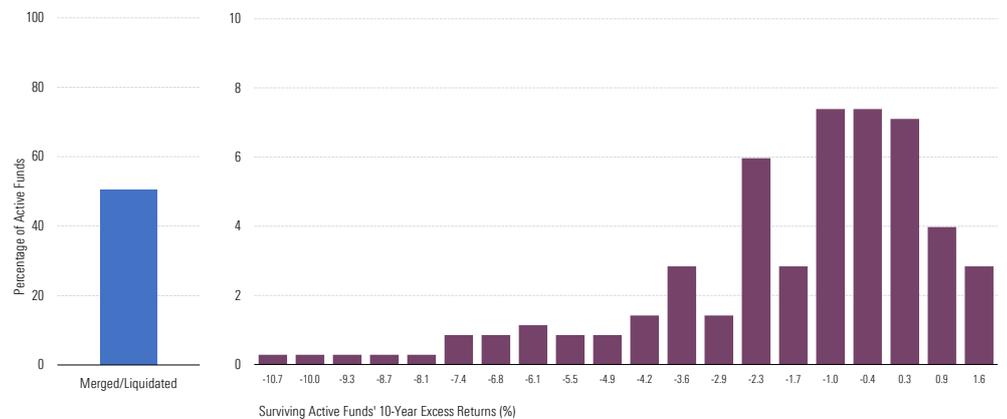
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 130 Rolling Success Rates for Surviving Active US Large-Cap Blend Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 131 Mortality and Distribution of 10-Year Annualized Excess Returns for US Large-Cap Blend Equity Funds (%)



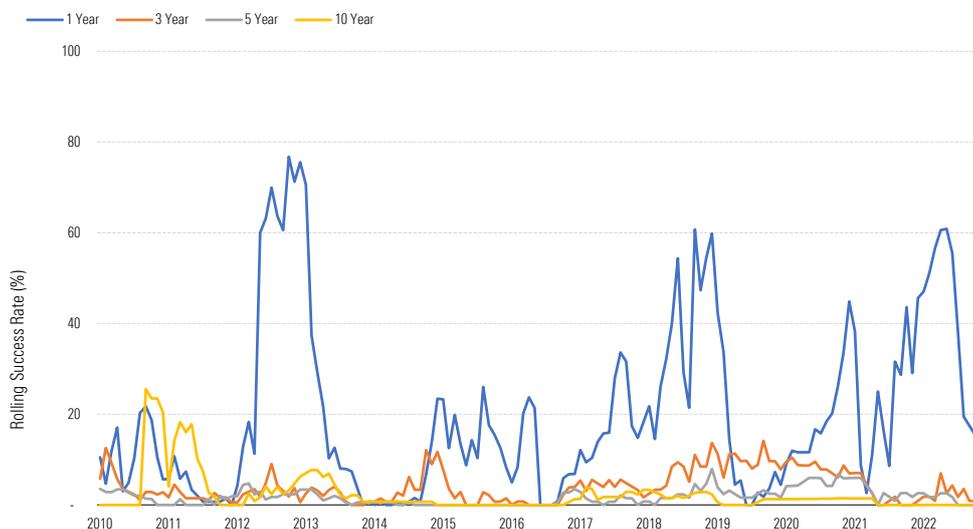
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 132 US Large-Cap Growth Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	149	97.3	15	100.0	22.7	32.0	21.7	27.7	15.4
3-year	115	91.3	10	90.0	5.5	14.7	8.4	14.5	0.9
5-Year	115	84.3	10	80.0	9.0	17.1	10.0	16.6	-
10-Year	133	57.9	11	54.5	11.2	18.5	11.2	18.0	-
15-Year	170	34.1	12	58.3	8.6	14.4	8.4	12.8	-
20-Year	125	30.4	3	66.7	7.8	11.1	8.0	12.2	-

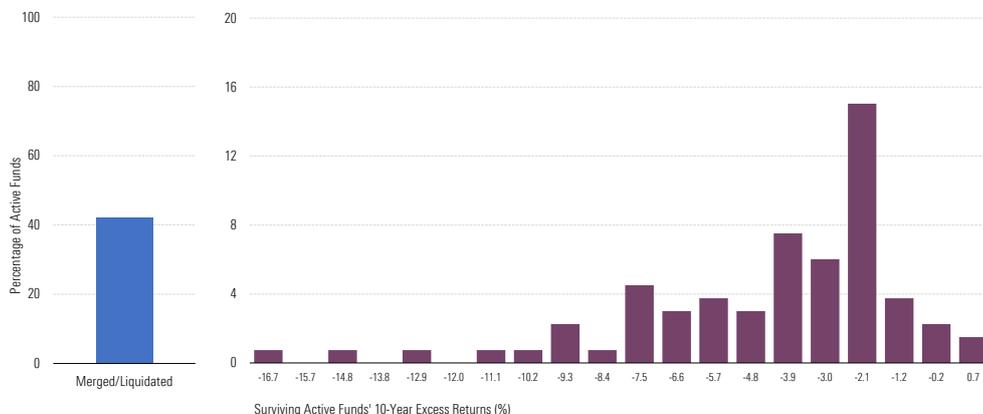
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 133 Rolling Success Rates for Surviving Active US Large-Cap Growth Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 134 Mortality and Distribution of 10-Year Annualized Excess Returns for US Large-Cap Growth Equity Funds (%)



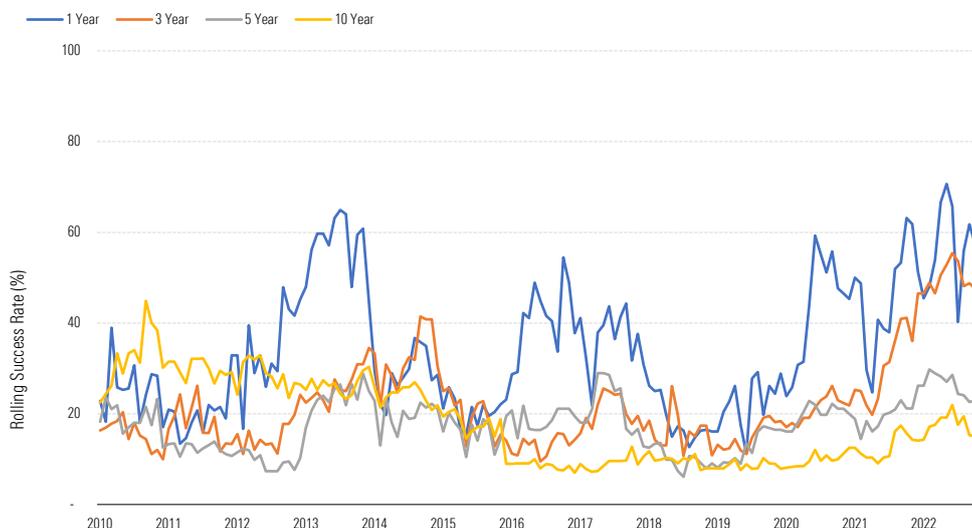
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 135 US Large-Cap Value Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	68	97.1	9	100.0	10.5	8.6	11.1	9.4	57.4
3-year	82	75.6	11	90.9	14.4	11.6	13.7	12.9	47.6
5-Year	83	66.3	14	71.4	7.0	6.4	7.0	8.1	22.9
10-Year	73	50.7	10	70.0	8.3	9.0	8.3	9.5	15.1
15-Year	101	32.7	4	50.0	7.3	8.6	7.3	8.4	13.9

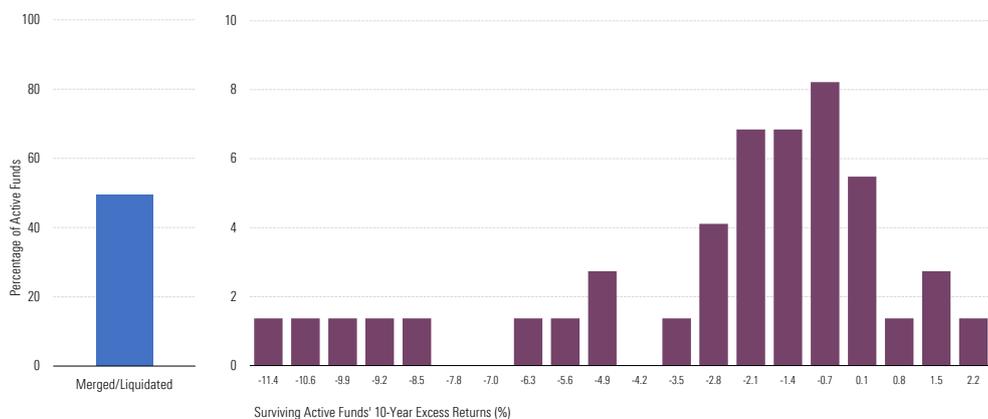
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 136 Rolling Success Rates for Surviving Active US Large-Cap Value Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 137 Mortality and Distribution of 10-Year Annualized Excess Returns for US Large-Cap Value Equity Funds (%)



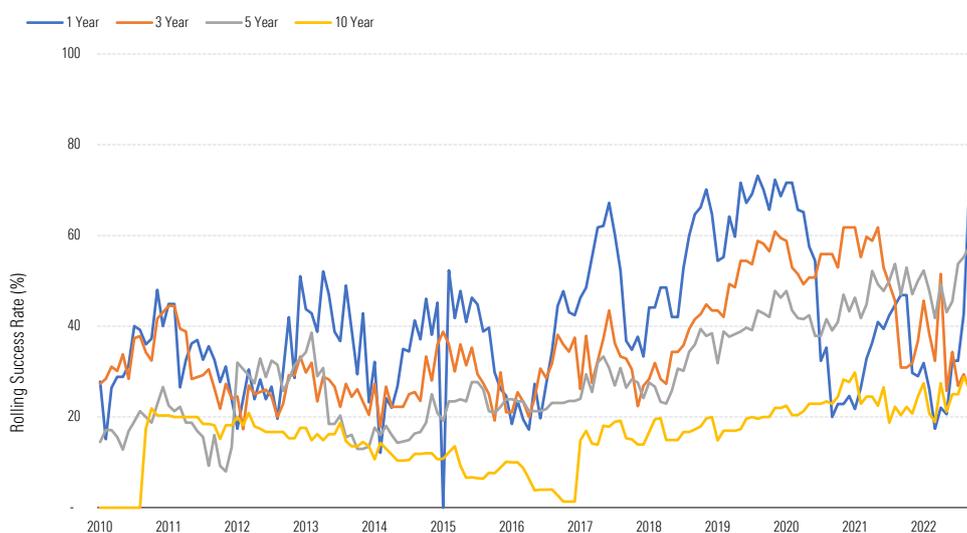
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 138 US Small-Cap Equity

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	68	92.6	12	91.7	15.3	12.2	15.9	12.6	72.1
3-year	69	85.5	13	84.6	9.1	12.3	10.6	13.5	30.4
5-Year	66	77.3	12	75.0	5.4	4.4	6.2	4.8	56.1
10-Year	53	56.6	8	62.5	8.6	8.9	8.5	8.9	26.4
15-Year	72	31.9	3	66.7	7.8	9.0	7.5	8.6	13.9

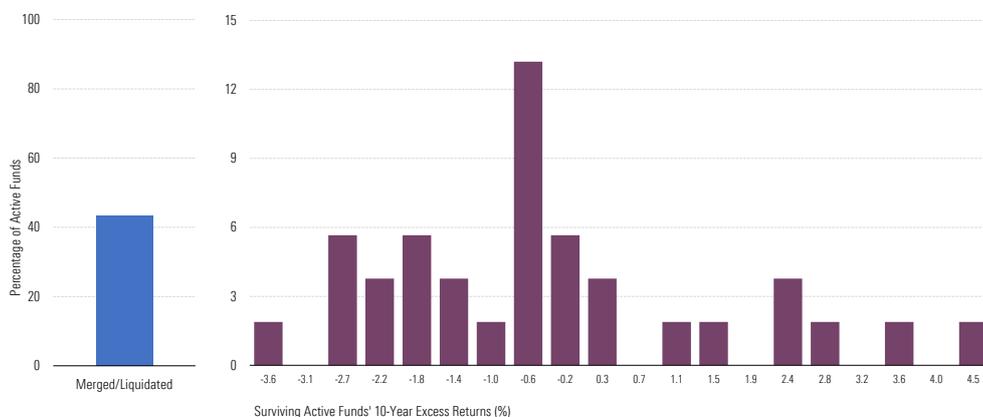
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 139 Rolling Success Rates for Surviving Active US Small-Cap Equity Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 140 Mortality and Distribution of 10-Year Annualized Excess Returns for US Small-Cap Equity Funds (%)



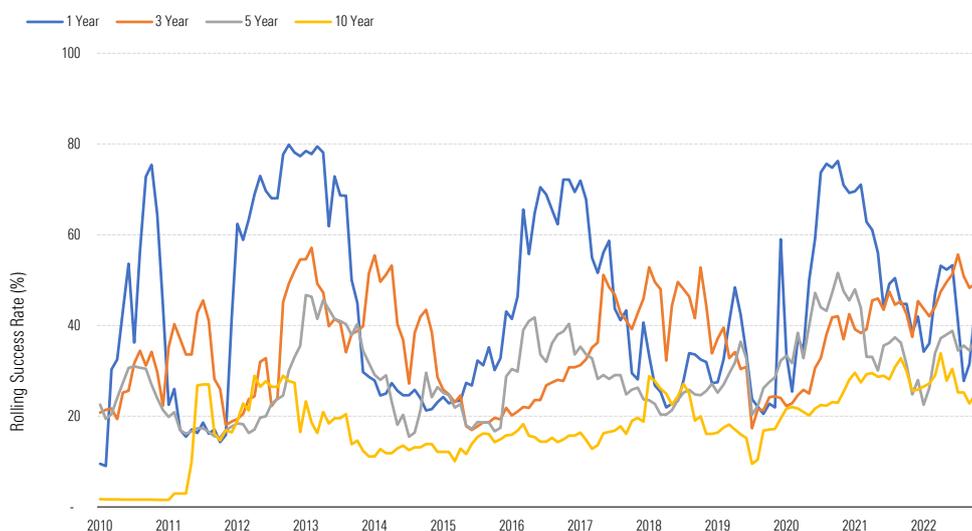
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 141 CHF Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	108	98.1	42	100.0	0.5	1.1	0.1	1.1	43.5
3-year	116	87.9	36	100.0	- 3.5	- 3.0	- 3.6	- 2.9	49.1
5-Year	117	79.5	39	92.3	- 1.7	- 1.2	- 2.0	- 1.3	36.8
10-Year	113	59.3	34	79.4	- 0.2	0.3	- 0.4	0.2	24.8
15-Year	116	40.5	17	70.6	1.4	1.5	0.9	1.4	19.0
20-Year	79	27.8	6	66.7	1.0	0.9	0.8	1.1	8.9

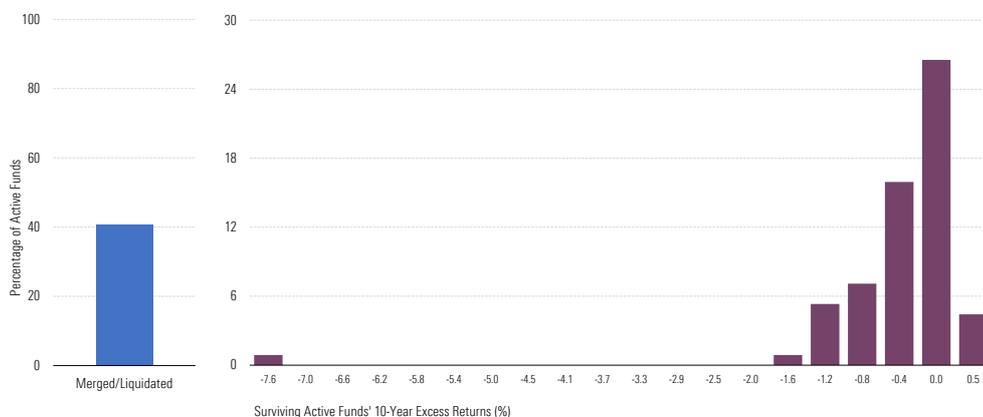
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 142 Rolling Success Rates for Surviving Active CHF Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 143 Mortality and Distribution of 10-Year Annualized Excess Returns for CHF Bond Funds (%)



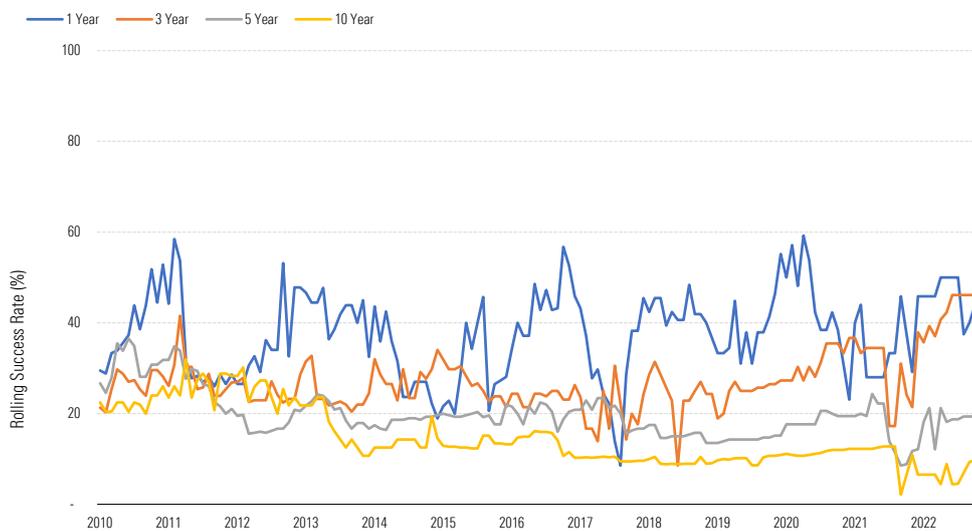
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 144 EUR Bond—Long Term

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	25	100.0	20	100.0	- 8.3	- 9.2	- 10.5	- 8.5	44.0
3-year	26	92.3	23	78.3	- 12.3	- 13.3	- 16.8	- 12.4	46.2
5-Year	31	71.0	25	68.0	- 3.5	- 4.3	- 5.8	- 3.8	19.4
10-Year	41	36.6	26	53.8	2.1	2.1	1.0	1.7	9.8
15-Year	73	26.0	15	60.0	4.4	3.7	3.8	3.5	9.6

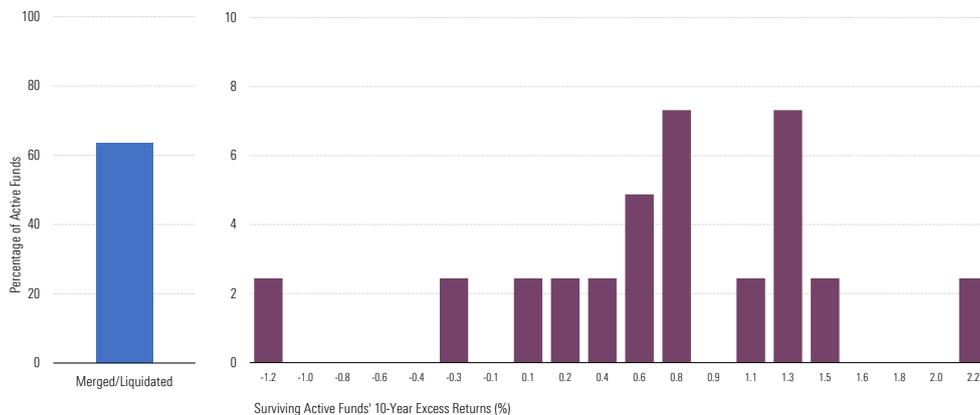
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 145 Rolling Success Rates for Surviving Active EUR Bond—Long Term Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 146 Mortality and Distribution of 10-Year Annualized Excess Returns for EUR Bond—Long Term Funds (%)



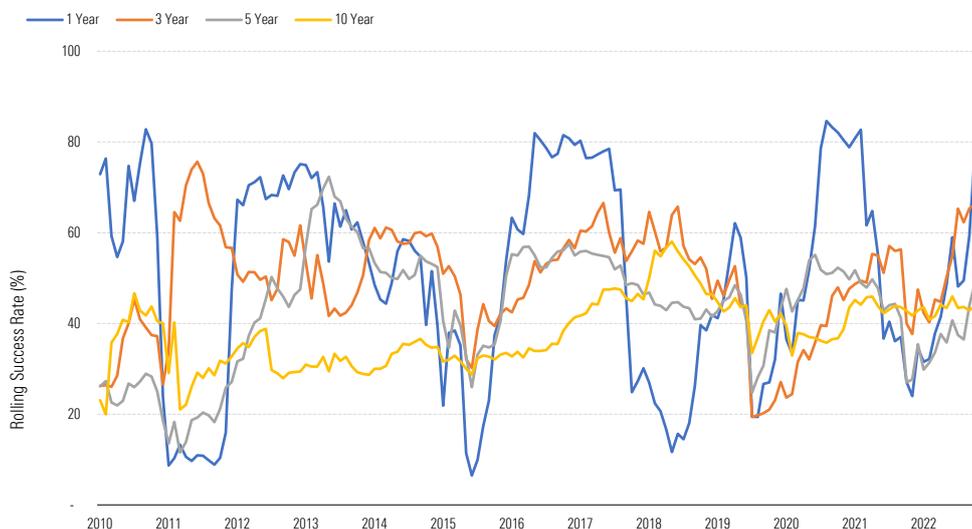
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 147 EUR Corporate Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	366	96.7	59	86.4	0.5	-0.5	0.4	-0.8	78.7
3-year	361	88.4	56	78.6	-3.1	-3.5	-3.0	-3.7	66.2
5-Year	338	78.1	58	67.2	-1.1	-1.3	-1.3	-1.5	49.1
10-Year	351	57.8	50	60.0	1.0	0.7	0.6	0.5	43.9
15-Year	197	48.2	7	71.4	2.3	2.2	2.1	1.9	41.6
20-Year	131	50.4	4	75.0	2.1	1.9	2.0	2.1	29.8

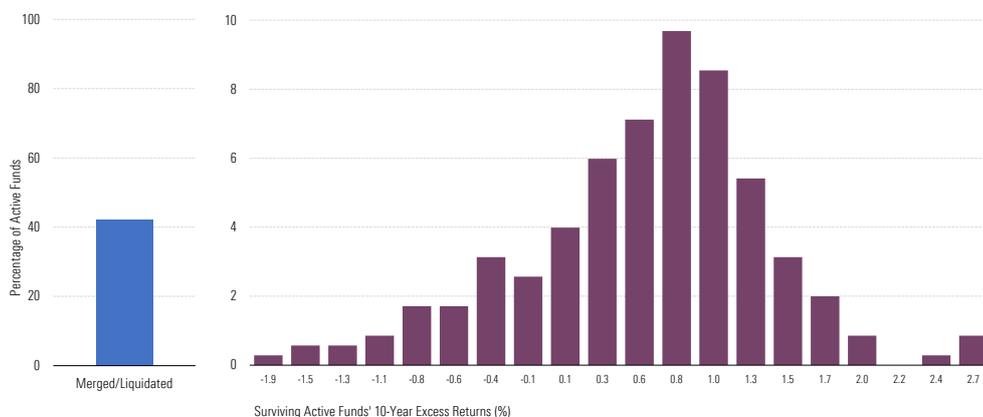
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 148 Rolling Success Rates for Surviving Active EUR Corporate Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 149 Mortality and Distribution of 10-Year Annualized Excess Returns for EUR Corporate Bond Funds (%)



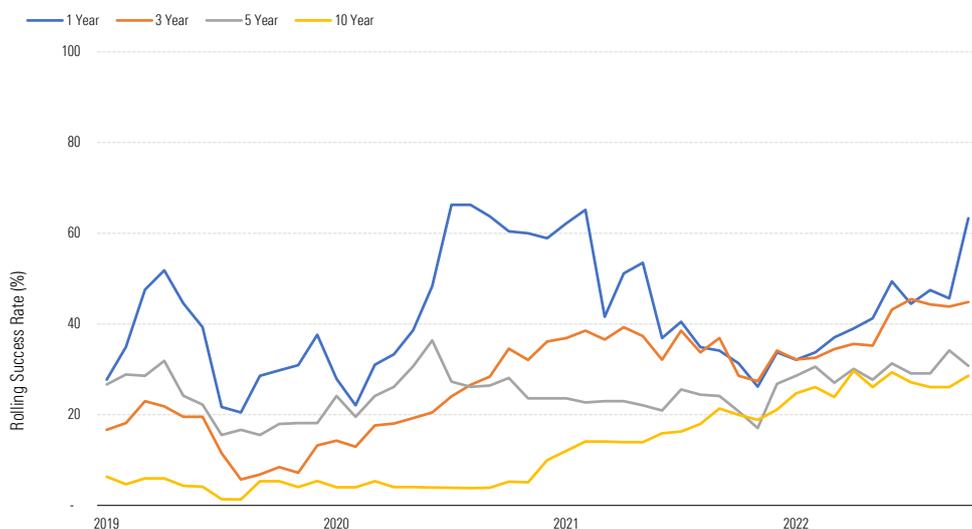
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 150 EUR Corporate Bond—Short Term

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	79	91.1	12	100.0	1.2	0.2	1.3	0.4	63.3
3-year	87	77.0	10	100.0	- 0.4	- 1.0	- 0.5	- 0.8	44.8
5-Year	78	71.8	7	100.0	- 0.3	- 0.6	- 0.5	- 0.5	30.8
10-Year	91	57.1	3	66.7	0.4	0.4	0.2	0.2	28.6

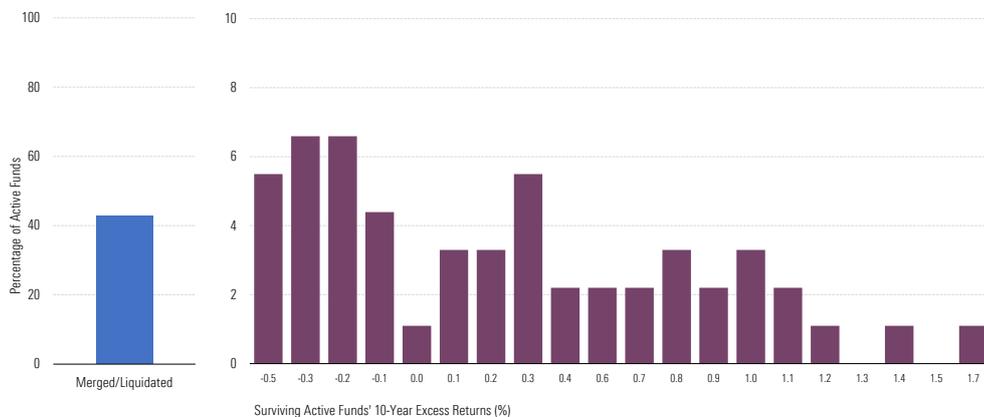
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 151 Rolling Success Rates for Surviving Active EUR Corporate Bond—Short-Term Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 152 Mortality and Distribution of 10-Year Annualized Excess Returns for EUR Corporate Bond—Short-Term Funds (%)



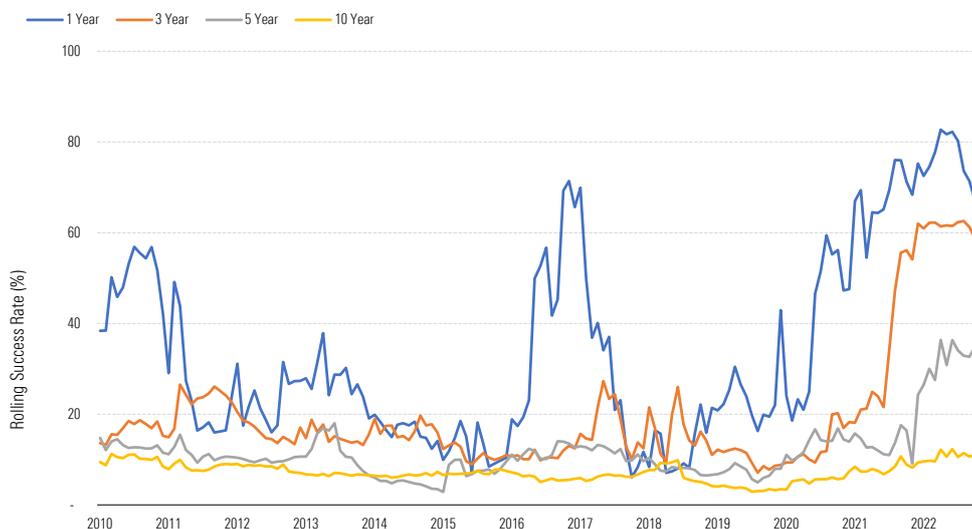
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 153 EUR Diversified Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	525	95.2	12	91.7	- 2.2	- 3.4	- 1.5	- 3.3	67.0
3-year	555	83.4	10	80.0	- 4.3	- 5.3	- 3.7	- 5.2	58.7
5-Year	584	74.3	8	87.5	- 1.8	- 1.9	- 1.6	- 1.7	34.9
10-Year	764	50.4	5	80.0	0.3	0.7	0.2	0.7	11.0
15-Year	923	31.6	10	40.0	1.7	2.5	1.6	2.5	6.1
20-Year	932	26.5	12	8.3	1.8	2.4	1.7	2.4	5.2

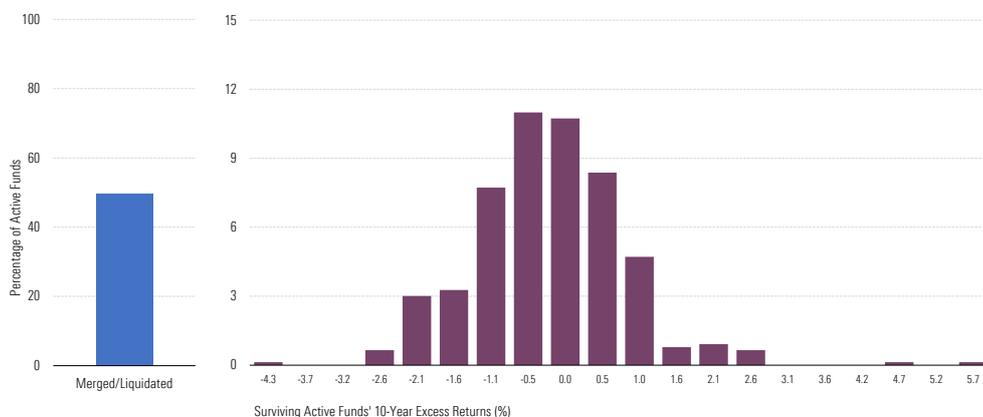
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 154 Rolling Success Rates for Surviving Active EUR Diversified Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 155 Mortality and Distribution of 10-Year Annualized Excess Returns for EUR Diversified Bond Funds (%)



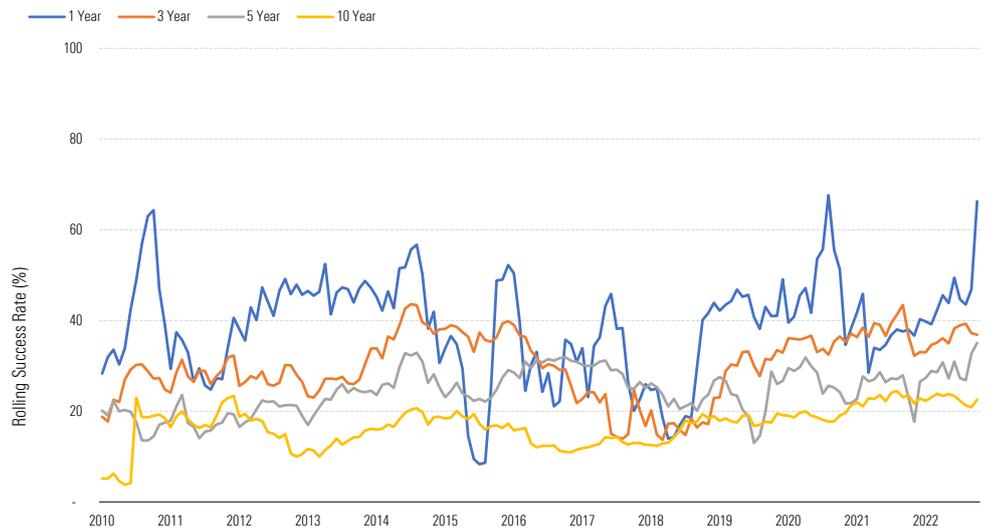
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 156 EUR Government Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	175	94.3	100	98.0	-3.8	4.5	-3.9	4.8	66.3
3-year	198	79.8	103	89.3	-4.8	5.6	-5.1	5.6	36.9
5-Year	214	66.4	104	77.9	-1.8	2.0	-2.1	2.1	35.0
10-Year	266	44.7	110	52.7	0.7	0.6	0.3	0.6	22.6
15-Year	329	31.0	40	50.0	2.2	2.3	1.7	2.4	9.7
20-Year	299	24.7	8	62.5	2.0	2.3	1.7	2.0	11.0

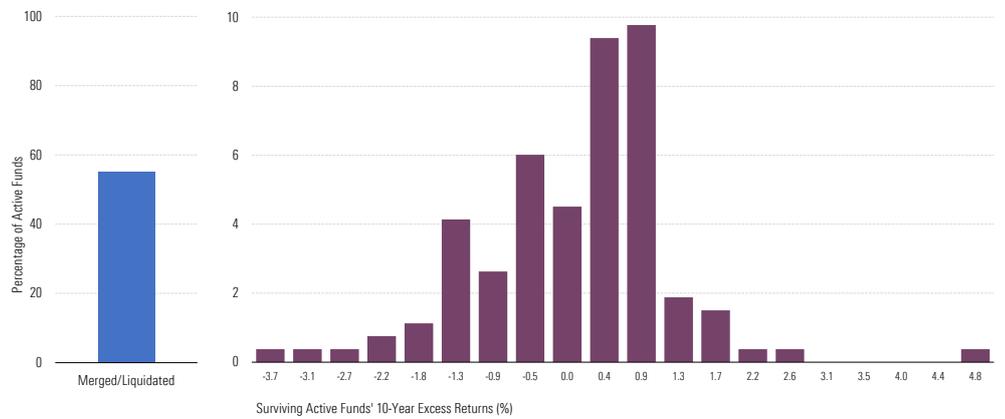
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 157 Rolling Success Rates for Surviving Active EUR Government Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 158 Mortality and Distribution of 10-Year Annualized Excess Returns for EUR Government Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 159 EUR Government Bond— Short Term

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	35	97.1	20	100.0	- 3.0	- 2.0	- 2.0	- 1.6	45.7
3-year	44	75.0	23	73.9	- 5.9	- 1.7	- 2.8	- 1.8	43.2
5-Year	43	69.8	22	72.7	- 1.3	- 1.0	- 1.3	- 1.2	34.9
10-Year	68	41.2	25	52.0	- 0.3	- 0.3	- 0.3	- 0.4	23.5
15-Year	41	29.3	8	62.5	0.6	0.8	0.7	0.8	7.3

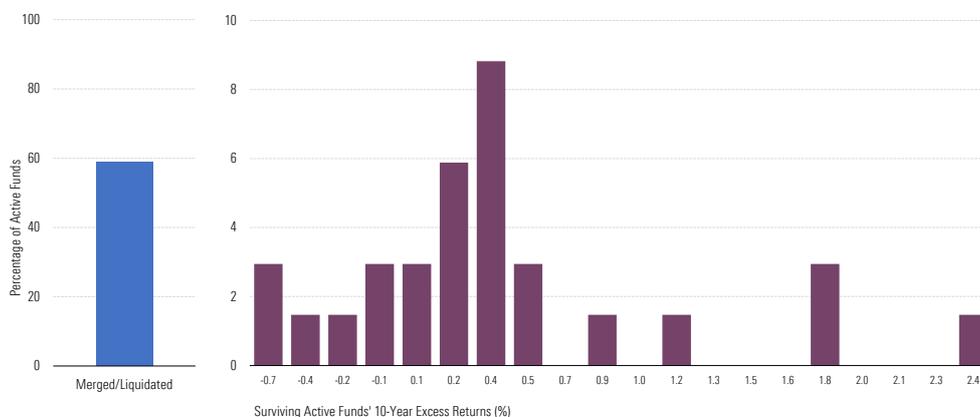
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 160 Rolling Success Rates for Surviving Active EUR Government Bond— Short-Term Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 161 Mortality and Distribution of 10-Year Annualized Excess Returns for EUR Government Bond— Short-Term Funds (%)



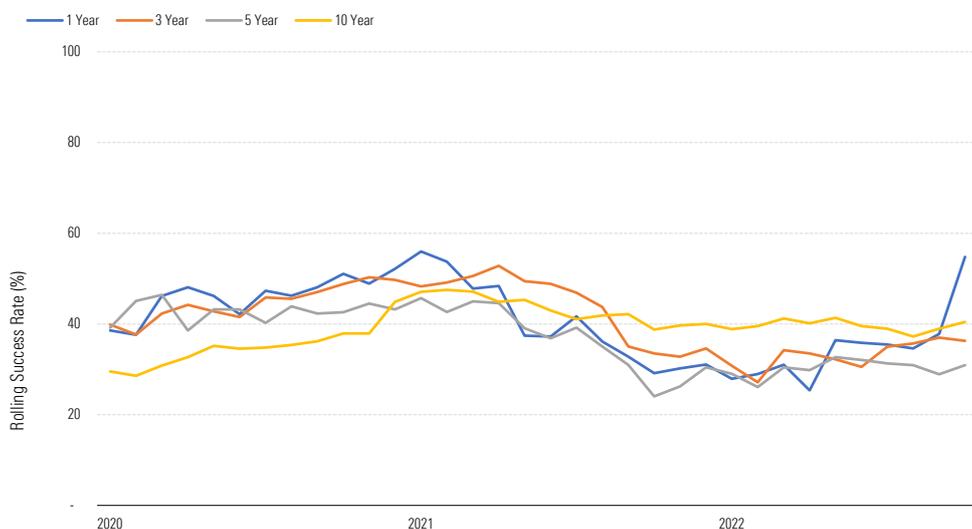
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 162 EUR High Yield Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	188	94.1	14	100.0	8.0	8.2	7.4	7.3	54.8
3-year	182	85.7	12	83.3	0.9	1.1	0.7	1.0	36.3
5-Year	168	78.6	11	81.8	0.8	1.0	0.4	0.8	31.0
10-Year	136	69.1	4	75.0	2.5	2.5	2.2	2.4	40.4

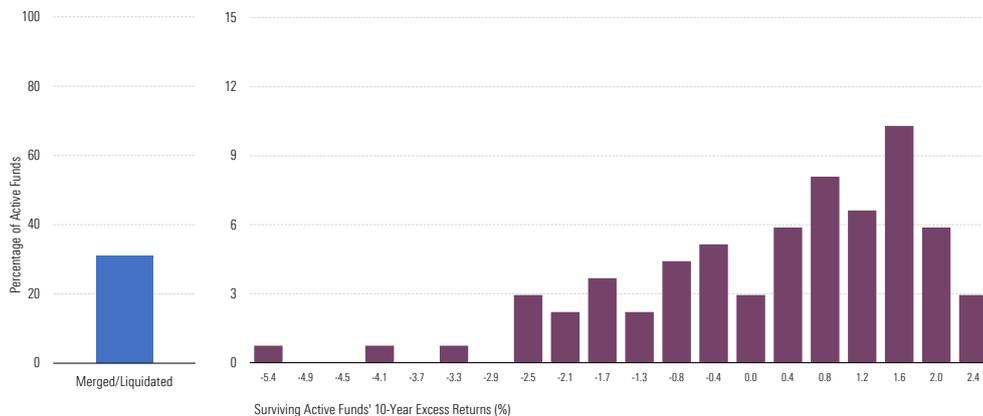
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 163 Rolling Success Rates for Surviving Active EUR High Yield Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 164 Mortality and Distribution of 10-Year Annualized Excess Returns for EUR High Yield Bond Funds (%)



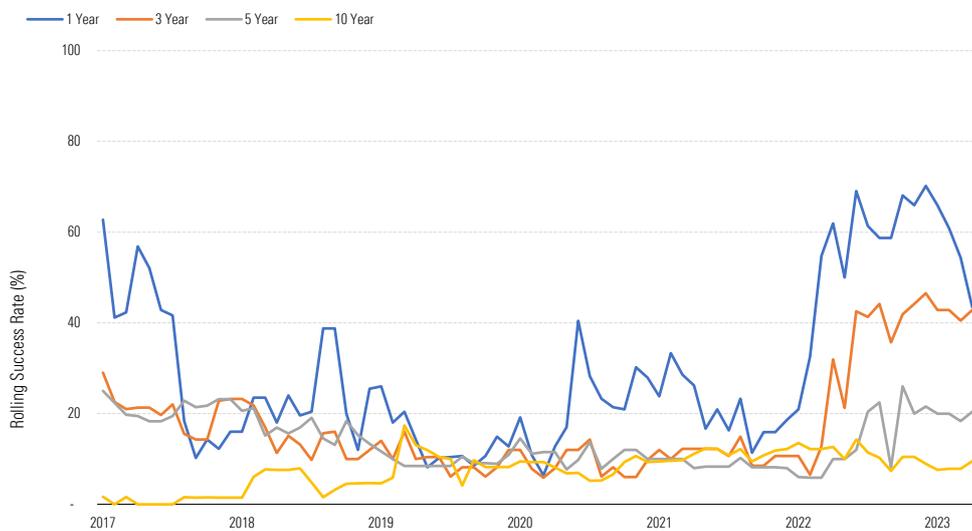
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 165 EUR Inflation-Linked Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	46	95.7	13	100.0	- 4.5	- 5.0	- 2.5	- 4.9	67.4
3-year	43	88.4	14	92.9	1.0	1.3	1.1	1.2	34.9
5-Year	50	70.0	15	80.0	1.0	1.7	1.0	1.6	8.0
10-Year	66	48.5	18	55.6	1.2	1.8	1.3	1.8	7.6
15-Year	62	30.6	4	50.0	2.0	3.1	2.3	3.1	1.6

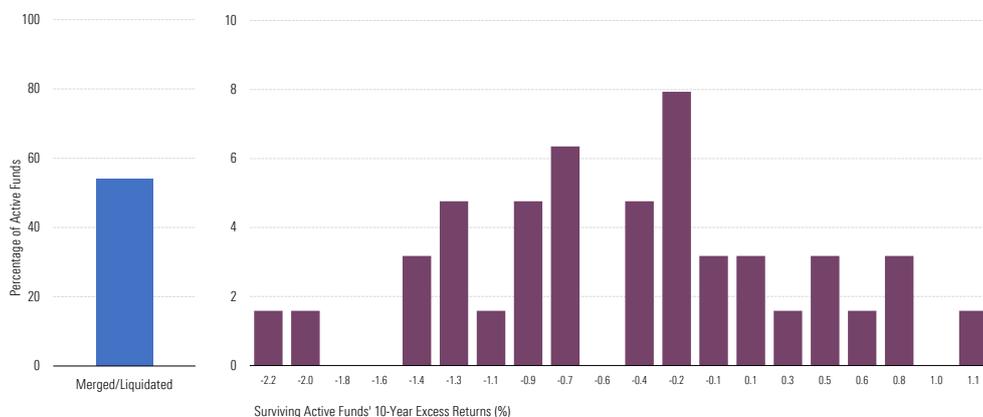
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 166 Rolling Success Rates for Surviving Active EUR Inflation-Linked Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 167 Mortality and Distribution of 10-Year Annualized Excess Returns for EUR Inflation-Linked Bond Funds (%)



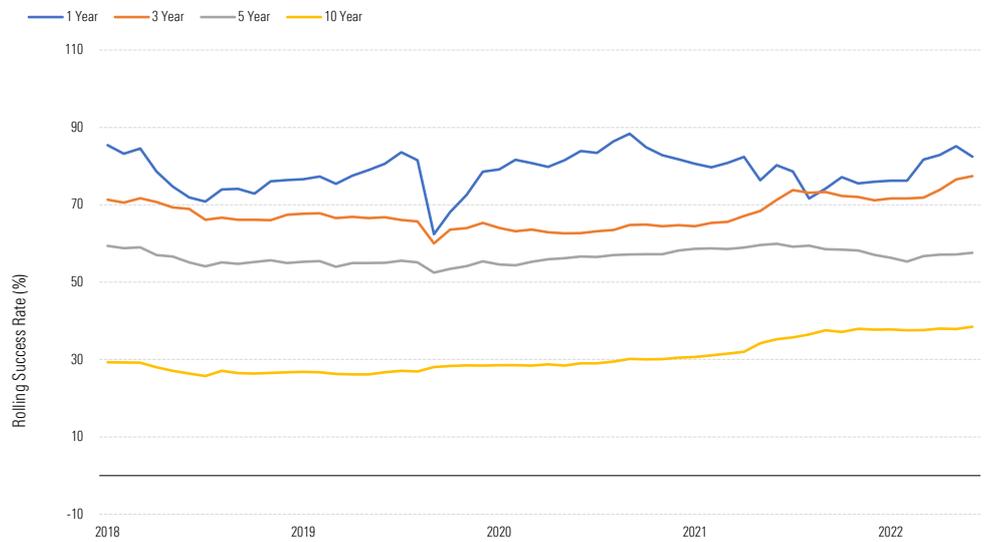
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 168 EUR Money Market

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	182	98.4	3	100.0	- 0.2	- 1.1	- 0.6	- 0.9	82.4
3-year	195	90.8	3	100.0	- 0.4	- 0.9	- 0.5	- 0.8	77.4
5-Year	264	65.2	3	100.0	- 0.3	- 0.9	- 0.5	- 0.8	57.6
10-Year	390	41.0	4	75.0	- 0.2	- 0.6	- 0.2	- 0.6	38.5

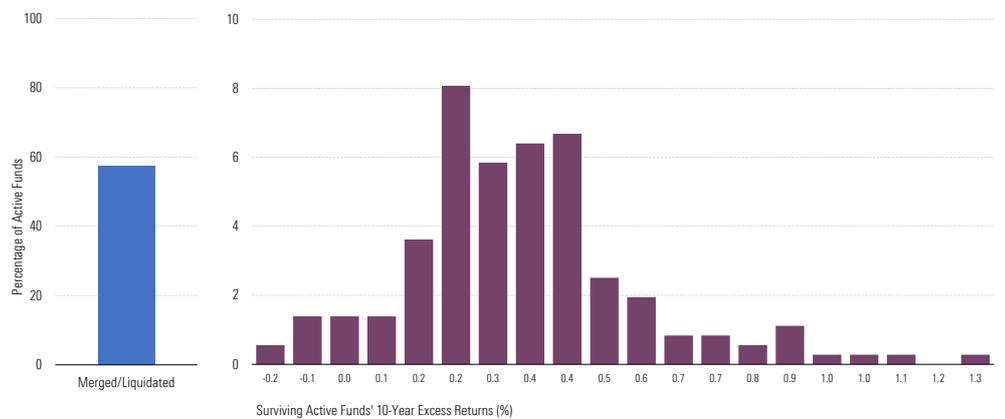
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 169 Rolling Success Rates for Surviving Active EUR Money Market Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 170 Mortality and Distribution of 10-Year Annualized Excess Returns for EUR Money Market Funds (%)



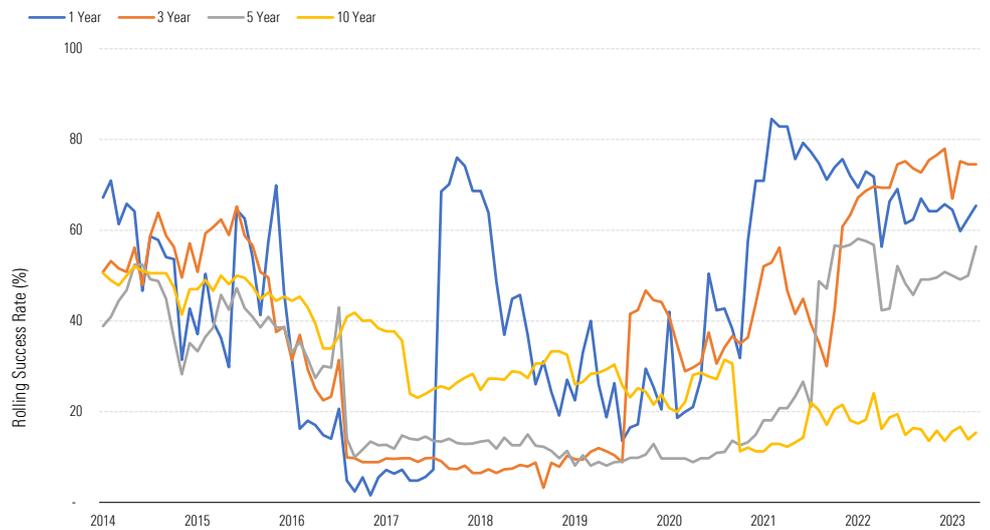
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 171 GBP Corporate Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	107	97.2	23	100.0	- 5.7	- 6.9	- 6.4	- 6.9	65.4
3-year	110	92.7	20	100.0	- 5.6	- 6.5	- 6.3	- 6.9	74.5
5-Year	117	81.2	15	100.0	- 1.2	- 1.6	- 1.5	- 1.8	56.4
10-Year	117	64.1	13	84.6	2.2	2.1	2.0	2.4	15.4

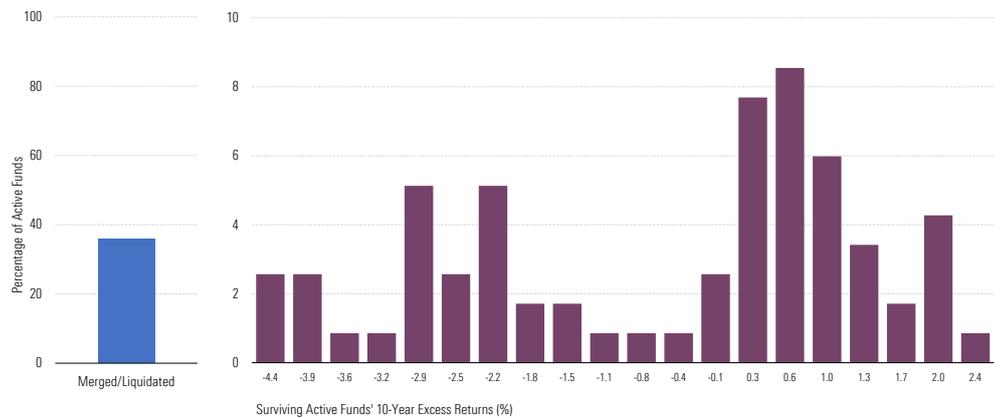
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 172 Rolling Success Rates for Surviving Active GBP Corporate Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 173 Mortality and Distribution of 10-Year Annualized Excess Returns for GBP Corporate Bond Funds (%)



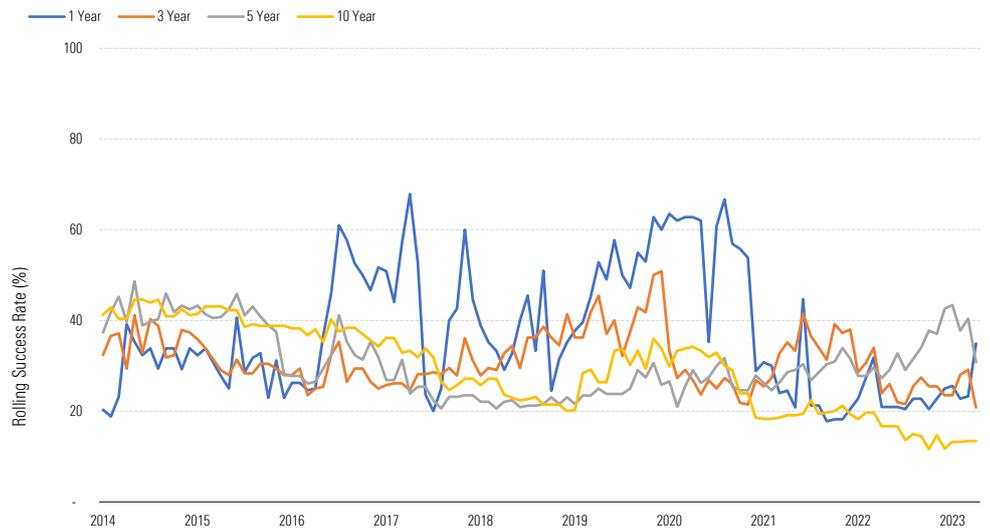
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 174 GBP Government Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	43	93.0	30	96.7	- 9.1	- 11.9	- 13.9	- 13.2	34.9
3-year	48	79.2	26	96.2	- 8.1	- 10.3	- 11.6	- 11.3	20.8
5-Year	52	67.3	24	95.8	- 2.4	- 3.6	- 4.3	- 4.3	30.8
10-Year	67	41.8	22	68.2	1.2	- 0.1	0.2	0.1	13.4
15-Year	71	31.0	12	41.7	2.2	2.3	2.2	2.2	16.9
20-Year	61	24.6	7	28.6	2.2	1.9	2.3	1.8	19.7

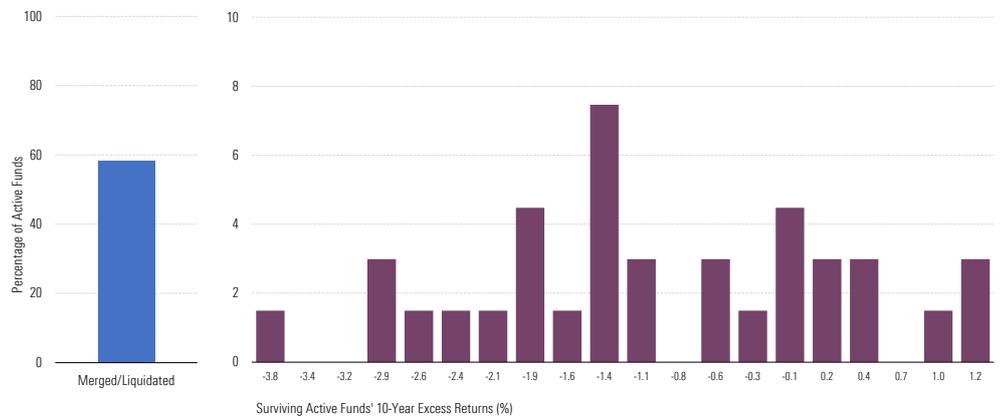
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 175 Rolling Success Rates for Surviving Active GBP Government Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 176 Mortality and Distribution of 10-Year Annualized Excess Returns for GBP Government Bond Funds (%)



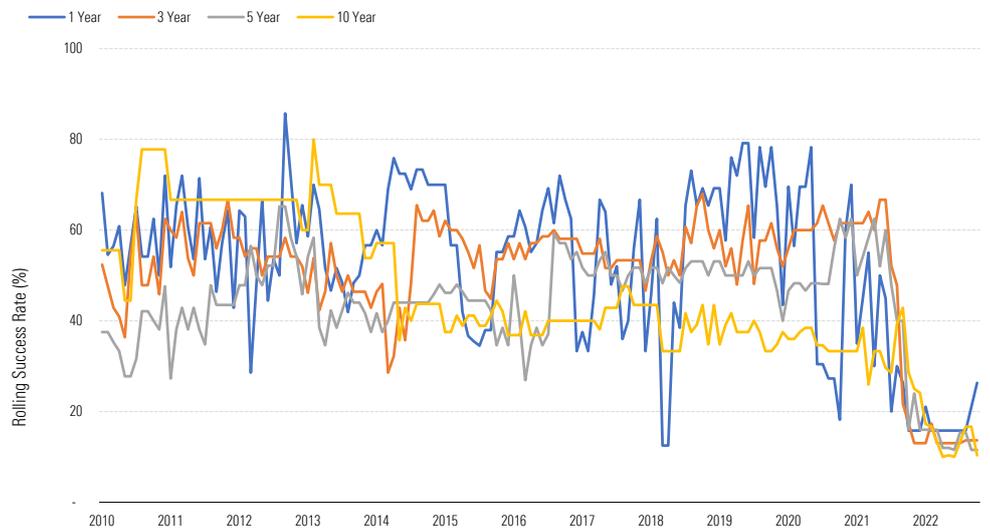
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 177 GBP Inflation-Linked Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	19	100.0	8	100.0	12.8	17.8	15.7	14.8	26.3
3-year	22	86.4	8	100.0	10.0	13.5	12.9	12.0	13.6
5-Year	26	73.1	10	80.0	3.0	4.9	4.5	4.3	11.5
10-Year	29	55.2	13	53.8	2.2	1.4	1.4	1.6	10.3
15-Year	22	45.5	9	33.3	3.0	3.3	3.0	3.3	13.6

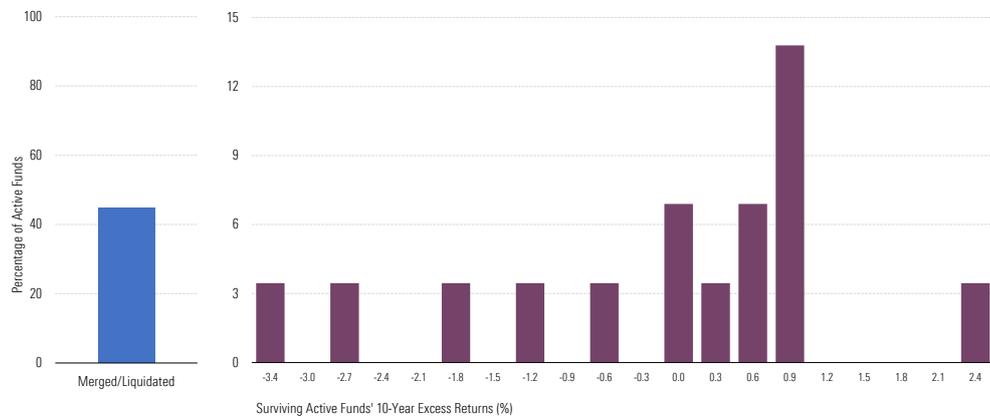
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 178 Rolling Success Rates for Surviving Active GBP Inflation-Linked Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 179 Mortality and Distribution of 10-Year Annualized Excess Returns for GBP Inflation-Linked Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 180 Global Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	260	94.2	39	97.4	-0.2	-1.2	0.5	-1.7	64.2
3-year	255	82.7	34	94.1	-5.0	-5.1	-4.9	-5.5	48.2
5-Year	275	69.8	30	86.7	-2.2	-1.3	-1.8	-1.5	28.0
10-Year	264	54.2	25	64.0	-0.9	-0.2	-0.8	-0.5	26.1
15-Year	211	49.8	10	60.0	1.0	1.2	0.6	0.9	17.1
20-Year	156	50.0	3	66.7	2.1	2.0	1.9	1.9	20.5

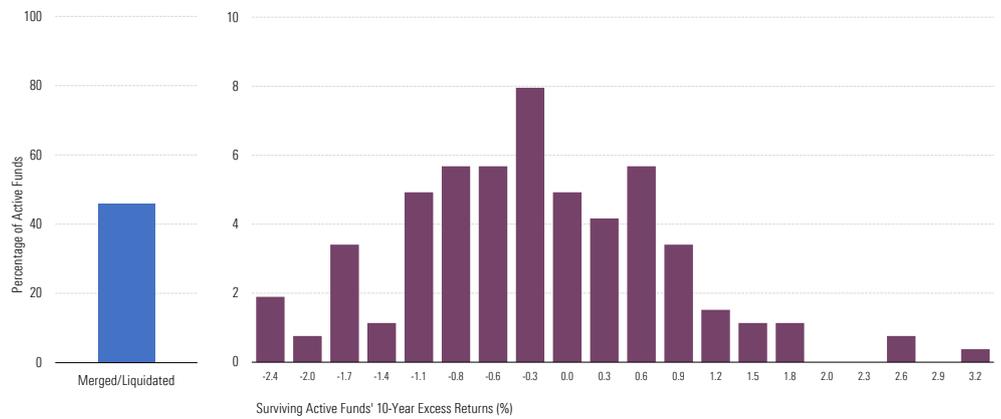
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 181 Rolling Success Rates for Surviving Active Global Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 182 Mortality and Distribution of 10-Year Annualized Excess Returns for Global Bond Funds (%)



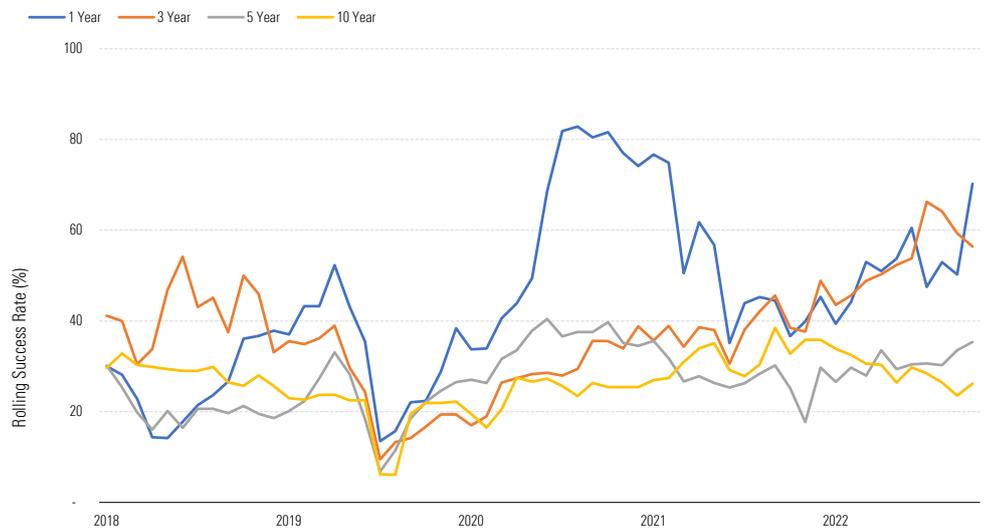
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 183 Global Bond—EUR Hedged

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	205	94.1	28	100.0	- 2.2	- 2.9	- 2.5	- 3.4	70.2
3-year	172	87.8	24	100.0	- 4.4	- 4.8	- 4.1	- 4.9	56.4
5-Year	164	73.2	17	88.2	- 1.7	- 1.5	- 1.7	- 1.5	35.4
10-Year	126	56.3	4	50.0	0.2	0.1	- 0.3	- 0.1	26.2

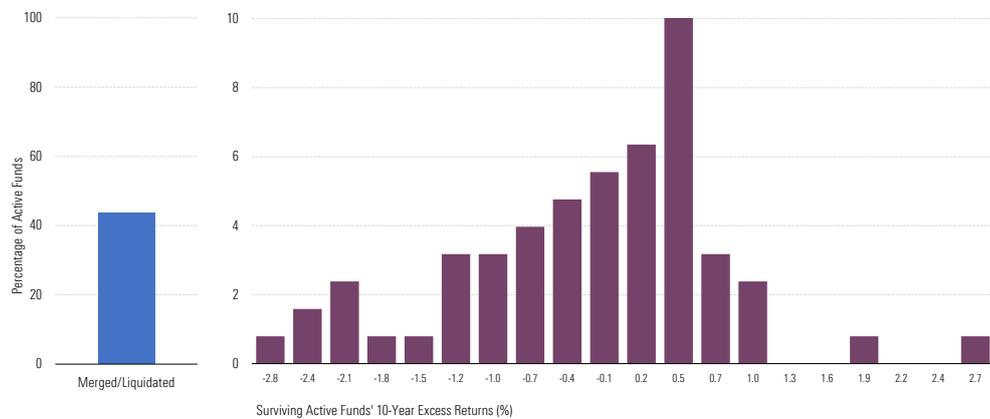
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 184 Rolling Success Rates for Surviving Active Global Bond—EUR Hedged Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 185 Mortality and Distribution of 10-Year Annualized Excess Returns for Global Bond—EUR Hedged Funds (%)



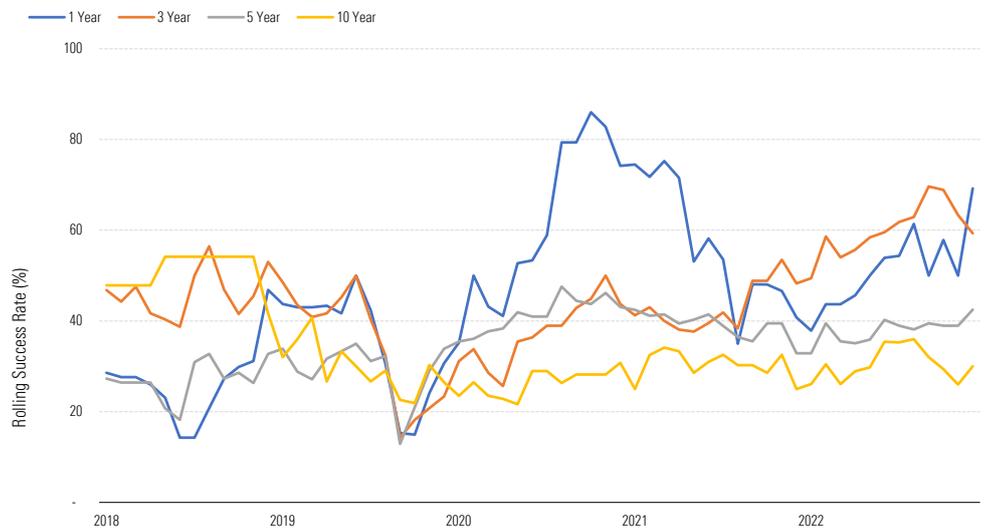
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 186 Global Bond—GBP Hedged

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	104	92.3	24	100.0	- 1.2	- 1.5	- 0.7	- 1.8	69.2
3-year	91	83.5	17	100.0	- 2.9	- 3.9	- 2.9	- 4.0	59.3
5-Year	80	72.5	13	92.3	- 0.5	- 0.4	- 0.2	- 0.4	42.5
10-Year	50	56.0	4	75.0	0.9	1.2	1.1	1.1	30.0

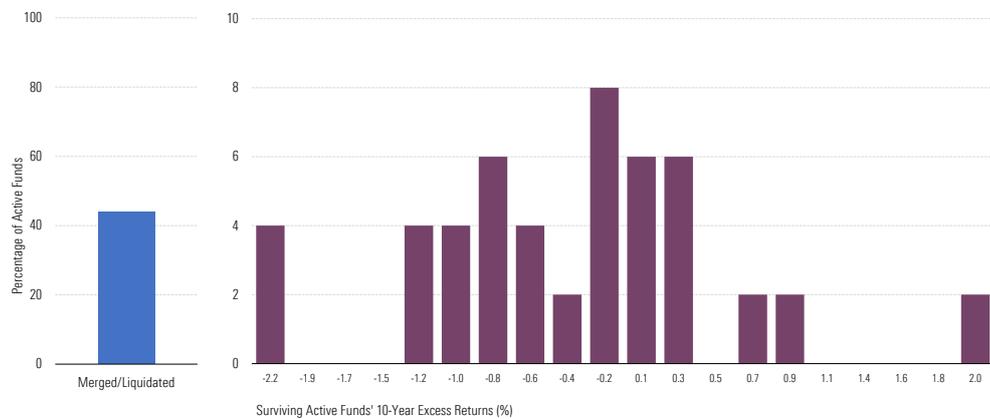
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 187 Rolling Success Rates for Surviving Active Global Bond—GBP Hedged Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 188 Mortality and Distribution of 10-Year Annualized Excess Returns for Global Bond—GBP Hedged Funds (%)



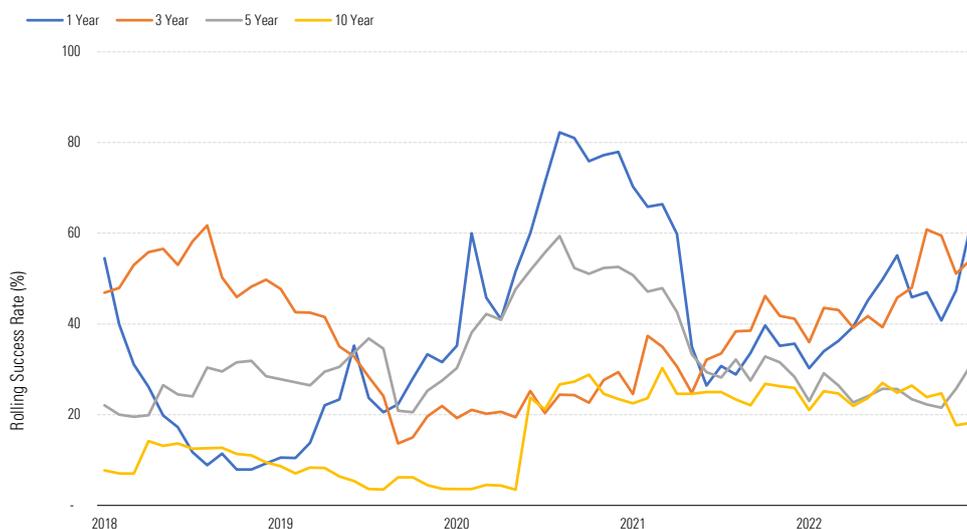
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 189 Global Emerging Markets Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	264	92.8	29	96.6	7.8	6.7	7.9	6.2	61.7
3-year	229	88.6	25	96.0	- 2.4	- 3.2	- 2.2	- 3.1	54.1
5-Year	217	78.8	22	90.9	- 0.8	0.4	- 0.1	0.4	30.9
10-Year	165	60.6	9	66.7	0.9	2.4	0.9	1.8	18.2

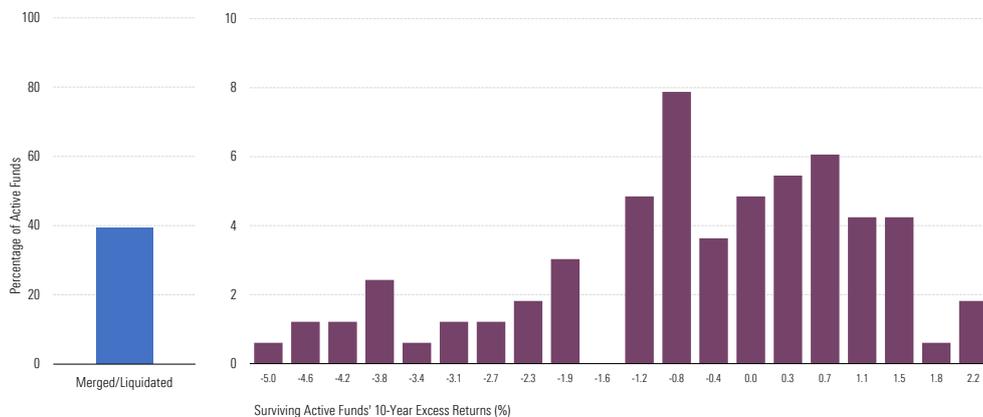
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 190 Rolling Success Rates for Surviving Active Global Emerging Markets Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 191 Mortality and Distribution of 10-Year Annualized Excess Returns for Global Emerging Markets Bond Funds (%)



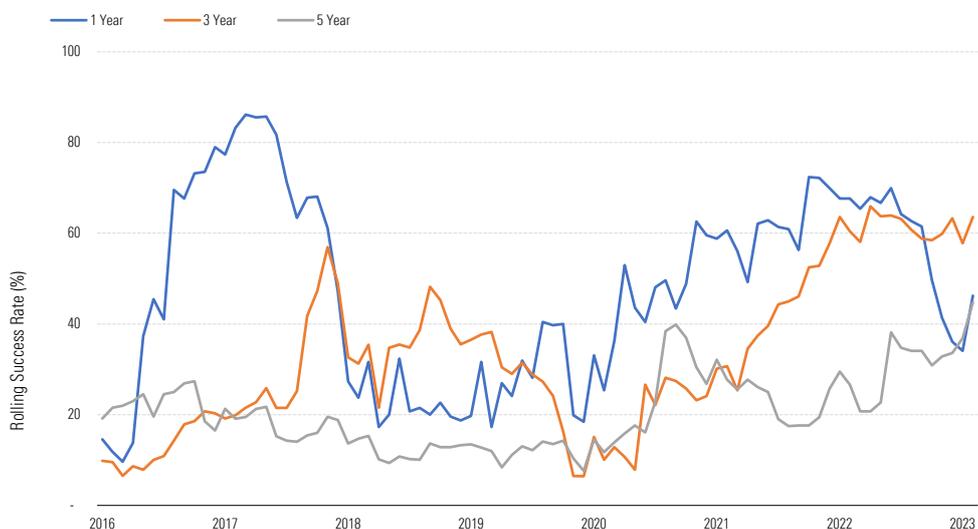
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 192 Global Emerging Markets Bond—Local Currency

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	129	99.2	12	100.0	- 11.8	- 13.3	- 11.9	- 13.0	65.9
3-year	125	96.0	12	100.0	- 5.9	- 7.1	- 6.2	- 6.9	65.6
5-Year	131	80.9	7	85.7	- 3.0	- 3.5	- 3.4	- 3.2	38.9
10-Year	119	52.9	5	80.0	- 2.7	- 2.5	- 3.0	- 1.8	5.0

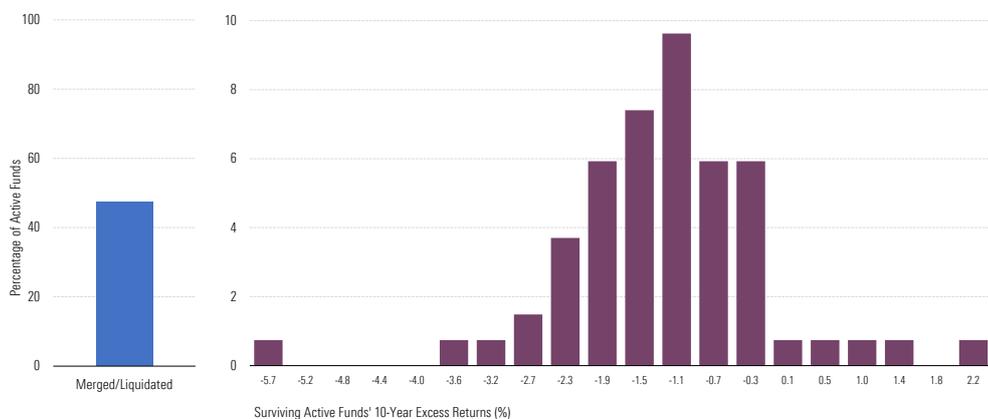
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 193 Rolling Success Rates for Surviving Active Global Emerging Markets Bond—Local Currency Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 194 Mortality and Distribution of 10-Year Annualized Excess Returns for Global Emerging Markets Bond—Local Currency Funds (%)



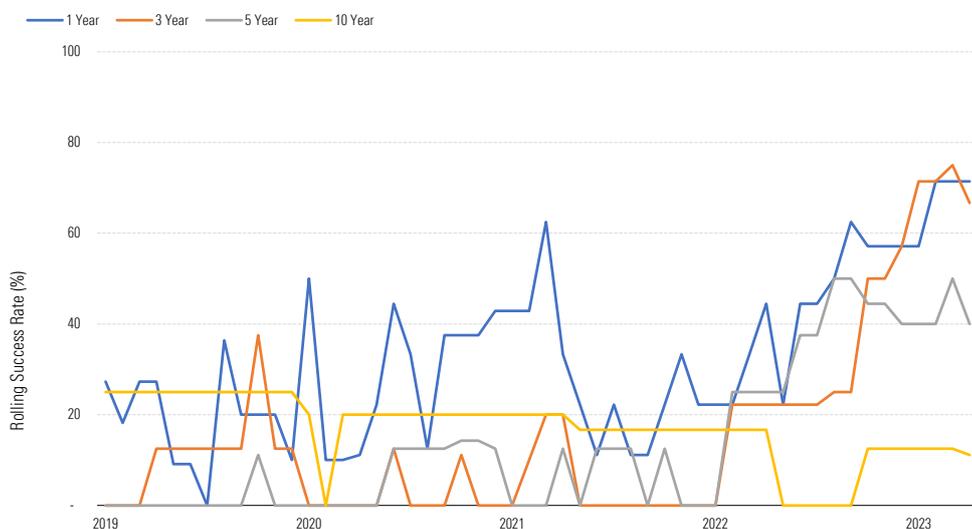
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 195 Global Inflation-Linked Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	7	100.0	6	100.0	2.1	- 2.9	- 0.6	- 2.4	71.4
3-year	9	88.9	5	100.0	1.2	- 3.6	- 1.1	- 3.0	66.7
5-Year	10	60.0	3	100.0	1.6	- 0.6	0.2	- 0.6	40.0
10-Year	9	44.4	3	33.3	0.1	0.8	0.3	0.9	11.1

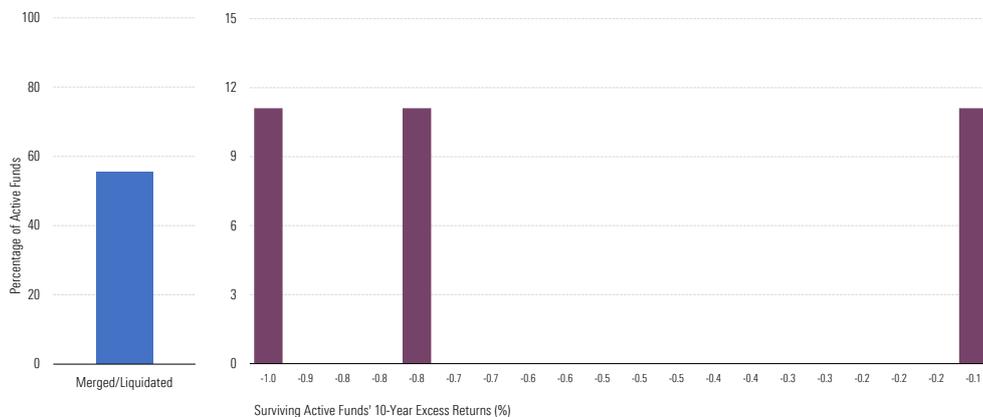
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 196 Rolling Success Rates for Surviving Active Global Inflation-Linked Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 197 Mortality and Distribution of 10-Year Annualized Excess Returns for Global Inflation-Linked Bond Funds (%)



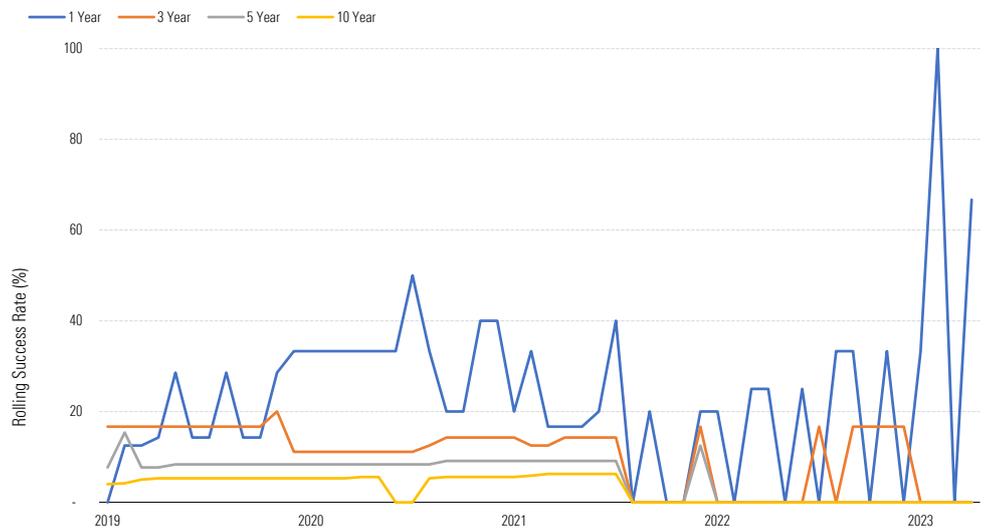
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 198 JPY Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	3	100.0	8	100.0	-0.2	0.0	0.4	0.1	66.7
3-year	6	50.0	7	100.0	-1.3	1.3	-1.6	-1.2	-
5-Year	7	42.9	6	100.0	-0.9	0.6	-1.1	-0.6	-
10-Year	14	21.4	4	100.0	0.4	0.8	0.2	0.8	-
15-Year	25	12.0	3	100.0	0.8	1.3	0.6	1.2	-

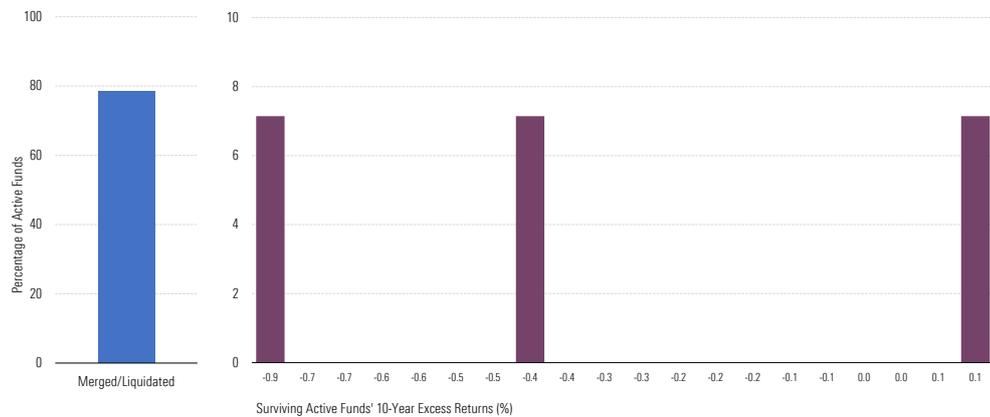
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 199 Rolling Success Rates for Surviving Active JPY Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 200 Mortality and Distribution of 10-Year Annualized Excess Returns for JPY Bond Funds (%)



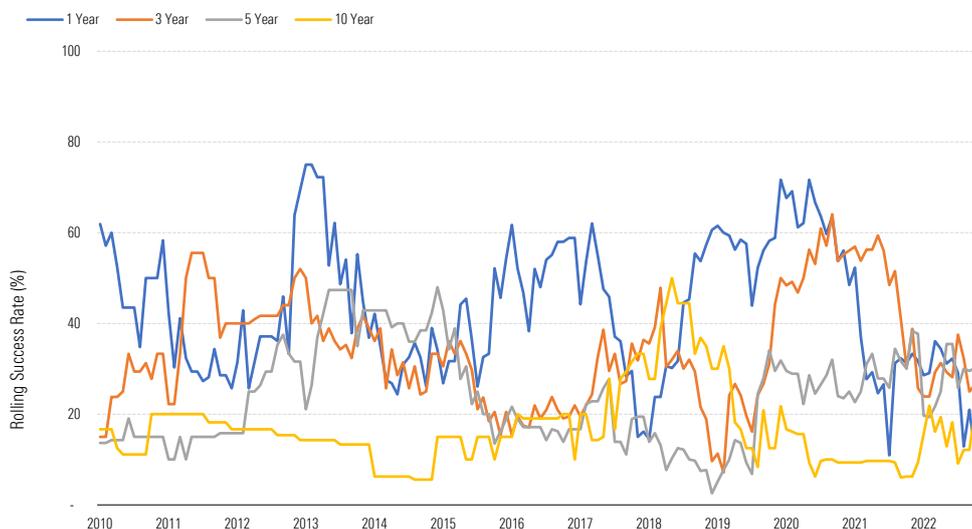
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 201 USD Corporate Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	62	95.2	28	89.3	1.6	1.8	1.3	2.3	11.3
3-year	64	90.6	25	80.0	- 2.7	- 2.6	- 3.2	- 2.7	26.6
5-Year	63	77.8	23	73.9	1.9	1.9	1.3	1.7	30.2
10-Year	34	64.7	7	57.1	2.5	2.6	1.9	2.5	20.6
15-Year	17	64.7	5	60.0	4.2	3.9	3.5	3.9	29.4
20-Year	11	45.5	4	50.0	2.8	3.3	3.1	3.8	9.1

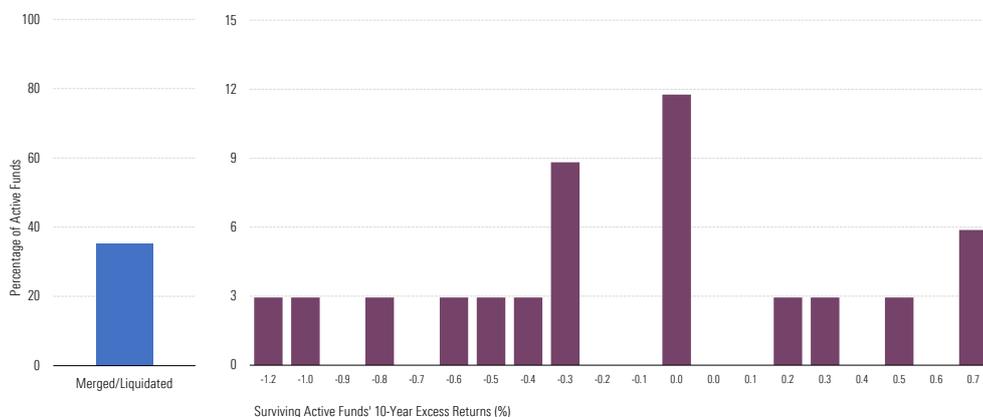
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 202 Rolling Success Rates for Surviving Active USD Corporate Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 203 Mortality and Distribution of 10-Year Annualized Excess Returns for USD Corporate Bond Funds (%)



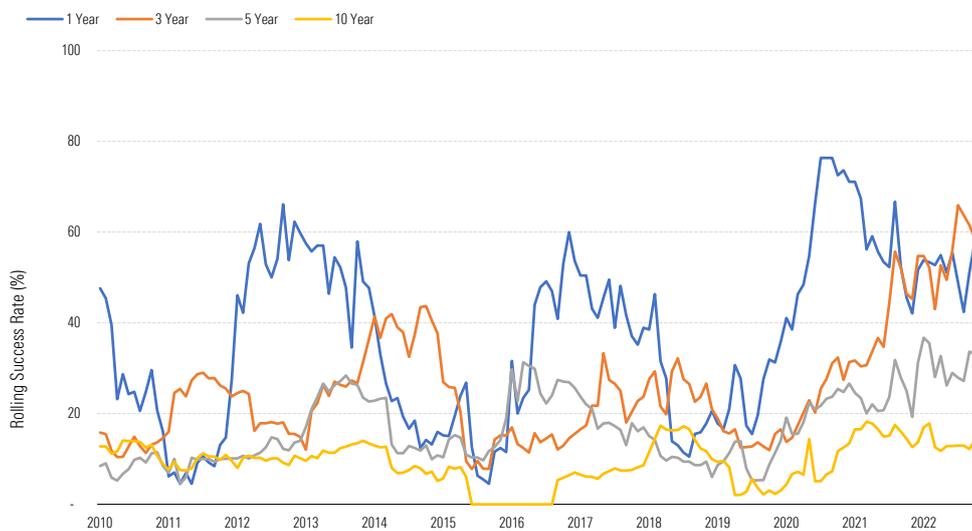
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 204 USD Diversified Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	91	93.4	3	100.0	-0.4	-1.0	0.0	1.1	58.2
3-year	89	85.4	3	100.0	-3.6	-4.0	-2.8	-4.1	58.4
5-Year	100	73.0	3	100.0	0.5	0.7	0.8	0.6	33.0
10-Year	112	55.4	4	75.0	1.2	1.5	1.1	1.3	14.3
15-Year	186	25.3	3	33.3	2.2	2.6	1.8	2.6	6.5

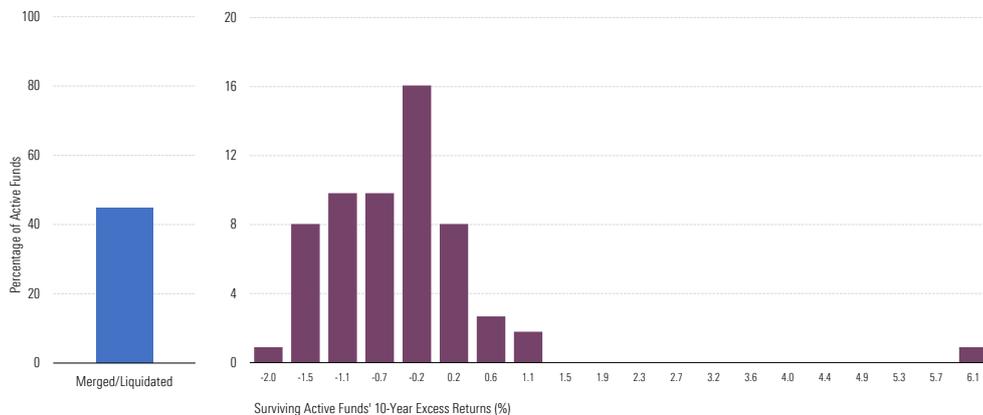
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 205 Rolling Success Rates for Surviving Active USD Diversified Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 206 Mortality and Distribution of 10-Year Annualized Excess Returns for USD Diversified Bond Funds (%)



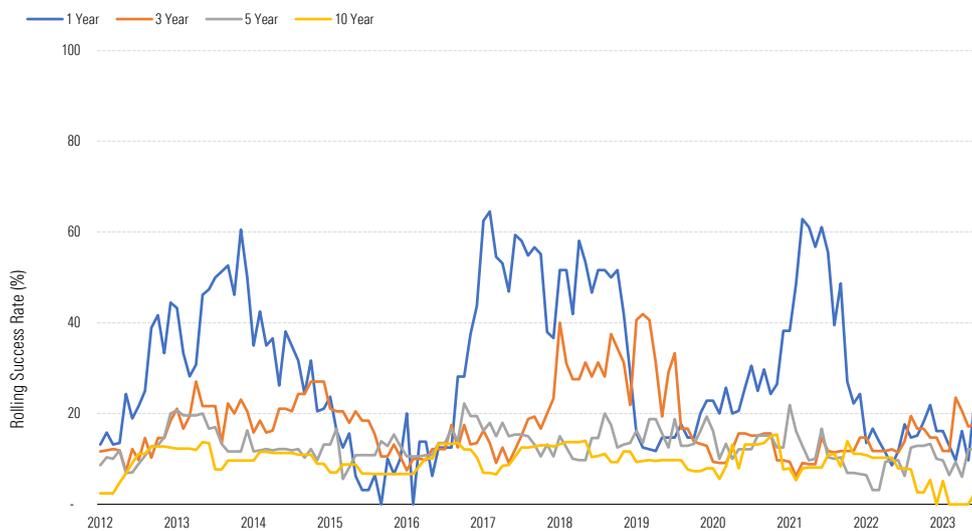
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 207 USD Government Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	30	93.3	52	94.2	-1.9	1.4	-2.0	1.0	23.3
3-year	34	79.4	48	89.6	-4.5	3.8	-4.8	3.9	17.6
5-Year	33	69.7	35	74.3	-0.4	0.3	-0.4	0.4	12.1
10-Year	40	40.0	29	58.6	0.1	0.8	0.0	1.0	2.5
15-Year	47	29.8	5	60.0	1.8	2.2	1.2	2.0	10.6

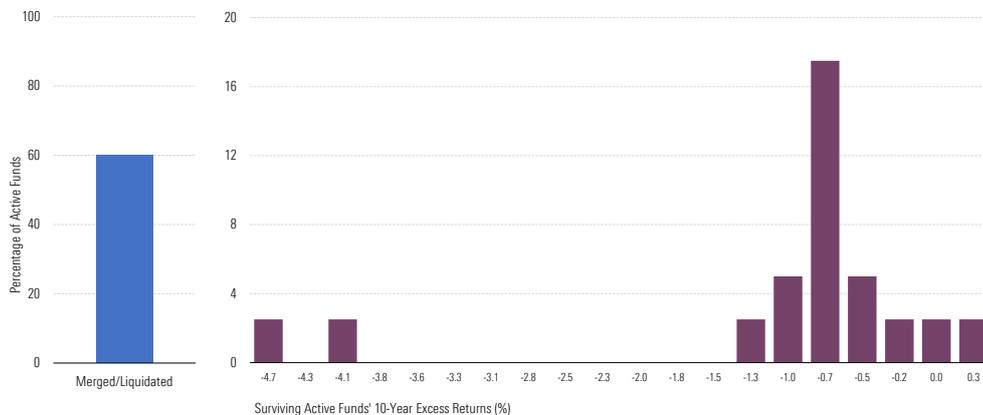
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 208 Rolling Success Rates for Surviving Active USD Government Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 209 Mortality and Distribution of 10-Year Annualized Excess Returns for USD Government Bond Funds (%)



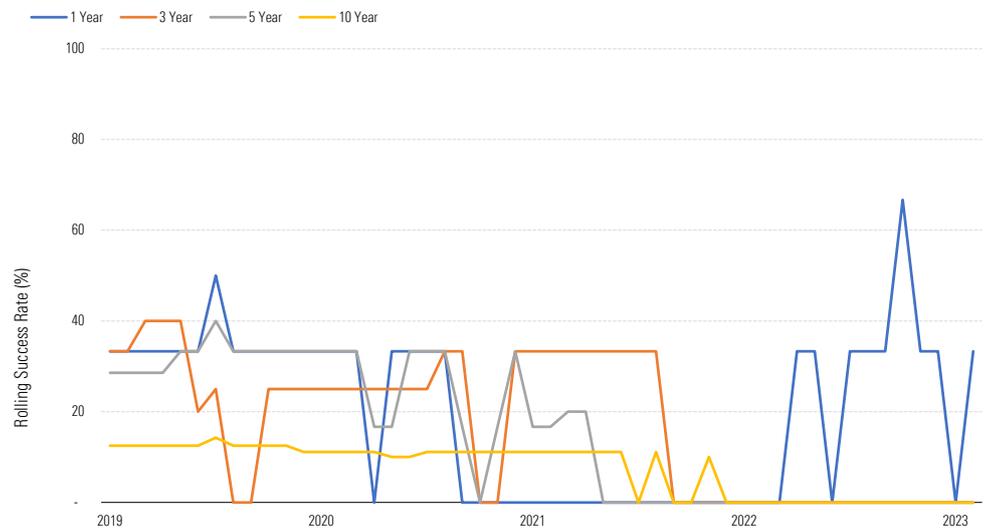
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 210 USD Inflation-Linked Bond

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	3	100.0	11	100.0	- 1.6	- 1.2	- 2.1	- 1.3	33.3
3-year	3	100.0	9	100.0	- 1.3	0.0	- 1.3	- 0.4	-
5-Year	3	66.7	10	90.0	1.9	2.4	1.4	2.4	-
10-Year	7	28.6	3	33.3	1.5	2.0	0.8	2.0	-

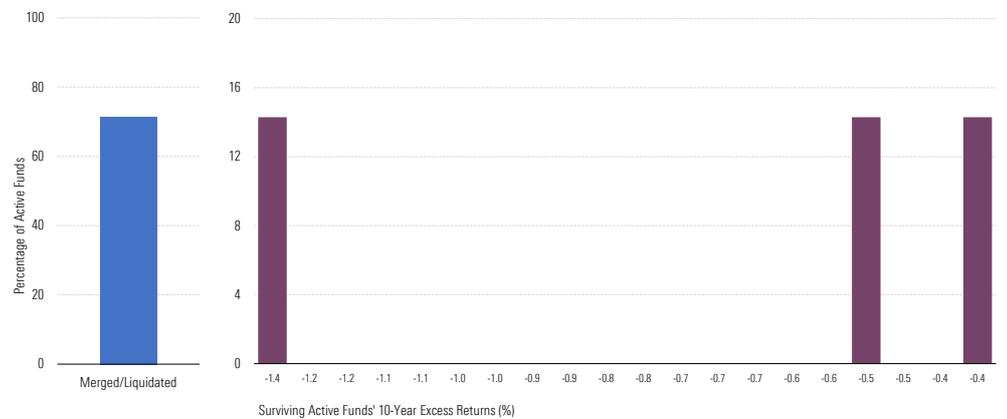
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 211 Rolling Success Rates for Surviving Active USD Inflation-Linked Bond Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 212 Mortality and Distribution of 10-Year Annualized Excess Returns for USD Inflation-Linked Bond Funds (%)



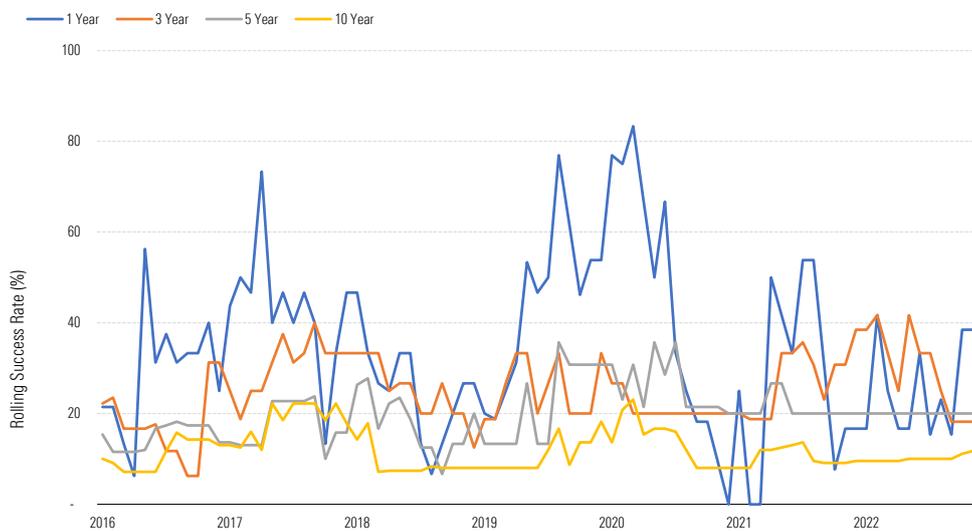
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 213 Property—Indirect Asia

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	13	76.9	3	100.0	- 7.2	- 6.5	- 7.0	- 7.4	38.5
3-year	11	72.7	3	100.0	- 2.7	0.0	- 1.7	- 0.2	18.2
5-Year	15	46.7	4	75.0	- 1.4	- 1.9	- 2.3	- 2.3	20.0
10-Year	17	35.3	6	33.3	0.8	1.2	0.6	1.8	11.8
15-Year	25	20.0	3	33.3	1.7	2.1	1.5	2.0	12.0

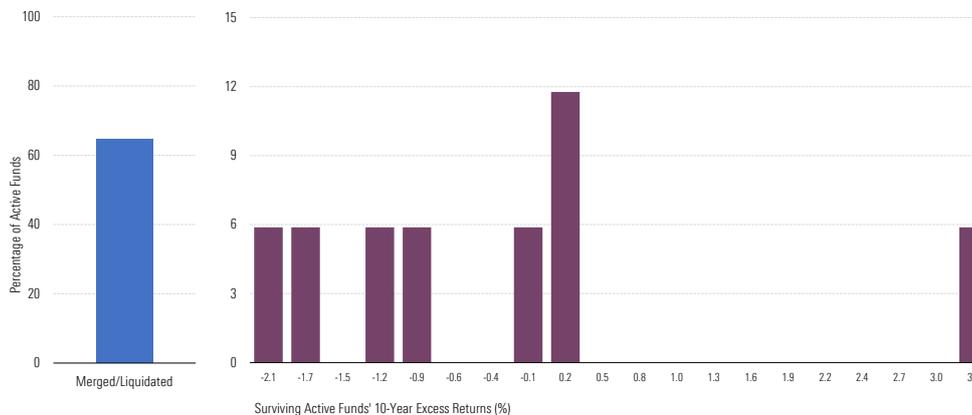
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 214 Rolling Success Rates for Surviving Active Property—Indirect Asia Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 215 Mortality and Distribution of 10-Year Annualized Excess Returns for Property—Indirect Asia Funds (%)



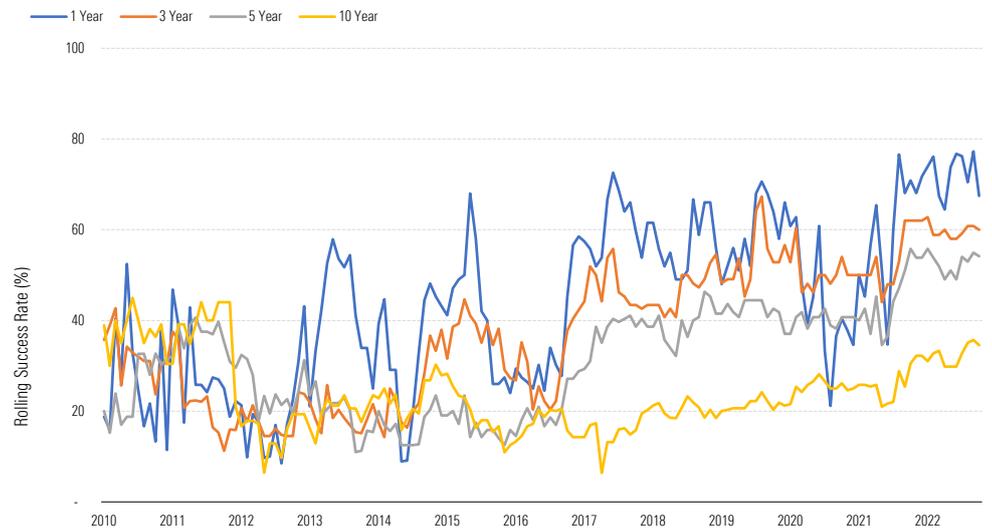
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 216 Property—Indirect Europe

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	43	90.7	13	92.3	-17.2	19.3	-16.5	19.7	67.4
3-year	50	74.0	14	85.7	-5.5	10.5	-5.6	9.0	60.0
5-Year	48	66.7	15	73.3	-4.4	7.8	-4.4	7.2	54.2
10-Year	55	49.1	15	46.7	3.5	1.7	3.2	1.9	34.5
15-Year	74	28.4	9	44.4	3.0	2.3	2.3	2.2	16.2
20-Year	30	43.3	4	25.0	4.6	5.5	4.4	5.3	10.0

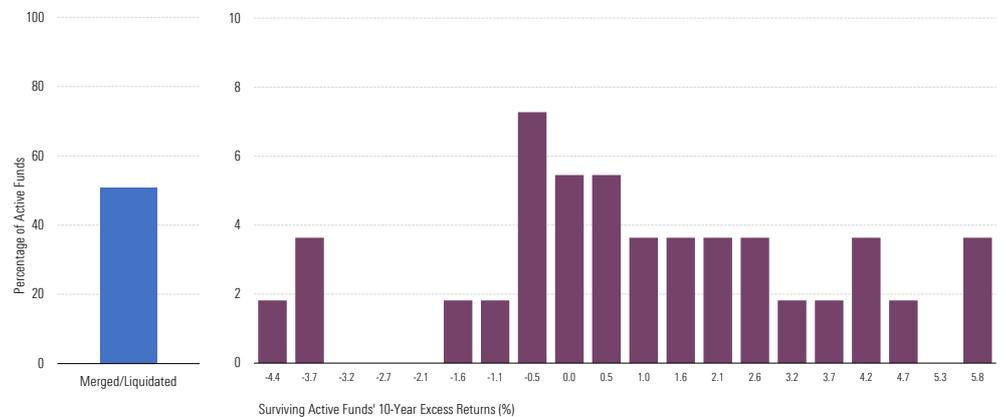
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 217 Rolling Success Rates for Surviving Property—Indirect Europe Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 218 Mortality and Distribution of 10-Year Annualized Excess Returns for Property—Indirect Europe Funds (%)



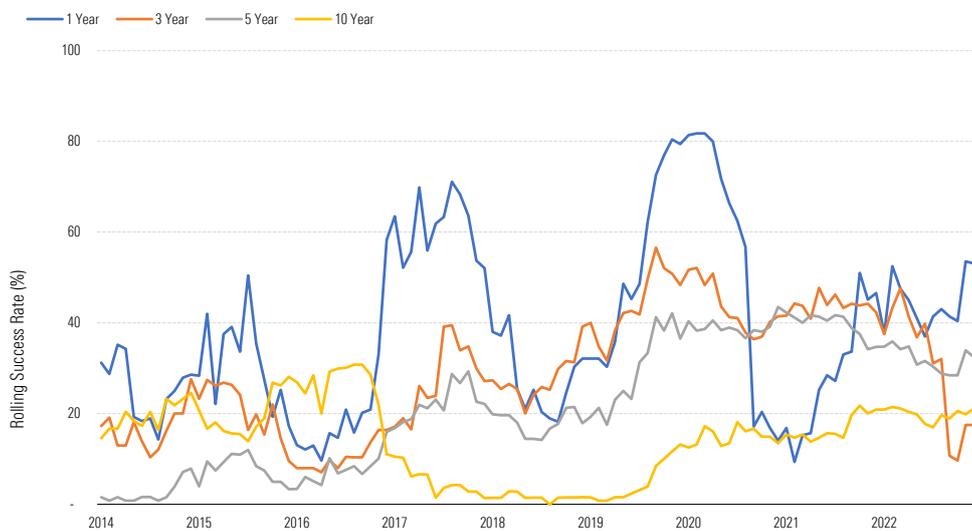
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 219 Property—Indirect Global

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	98	95.9	26	88.5	-4.8	-4.2	-5.1	-5.3	53.1
3-year	103	85.4	22	81.8	2.0	3.9	1.6	3.2	17.5
5-Year	108	71.3	17	82.4	0.2	0.1	-0.4	-0.0	32.4
10-Year	109	52.3	12	66.7	2.7	3.1	2.1	2.7	21.1
15-Year	141	29.8	4	75.0	2.7	3.9	1.6	4.4	0.7

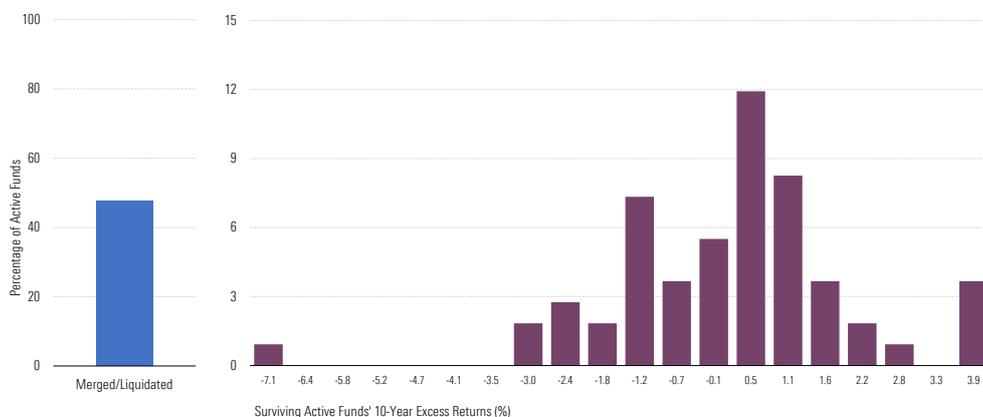
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 220 Rolling Success Rates for Surviving Property—Indirect Global Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 221 Mortality and Distribution of 10-Year Annualized Excess Returns for Property—Indirect Global Funds (%)



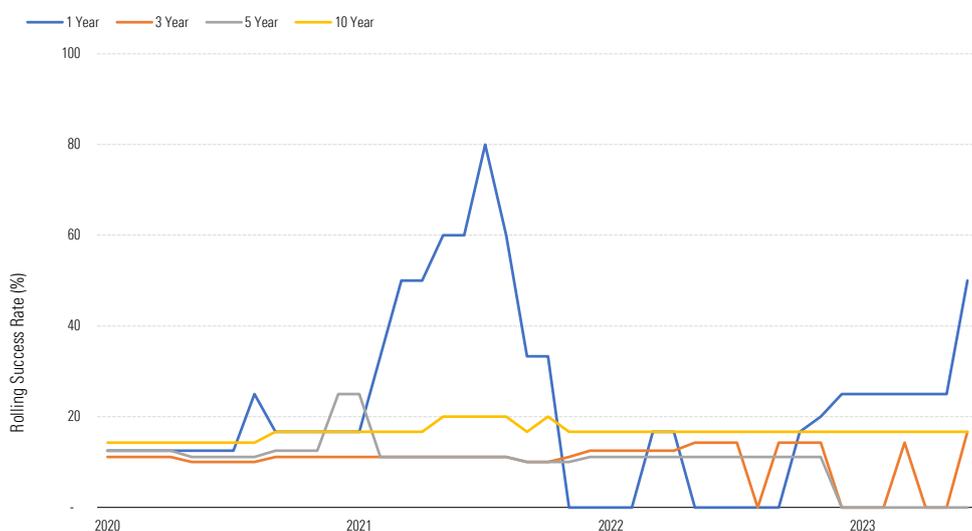
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 222 Property—Indirect North America

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	4	100.0	5	100.0	- 6.7	- 2.7	- 3.8	- 3.8	50.0
3-year	6	50.0	5	80.0	3.9	8.0	6.3	7.4	16.7
5-Year	9	33.3	8	50.0	0.4	2.9	1.4	3.4	-
10-Year	6	33.3	6	16.7	2.6	4.7	3.2	3.0	16.7

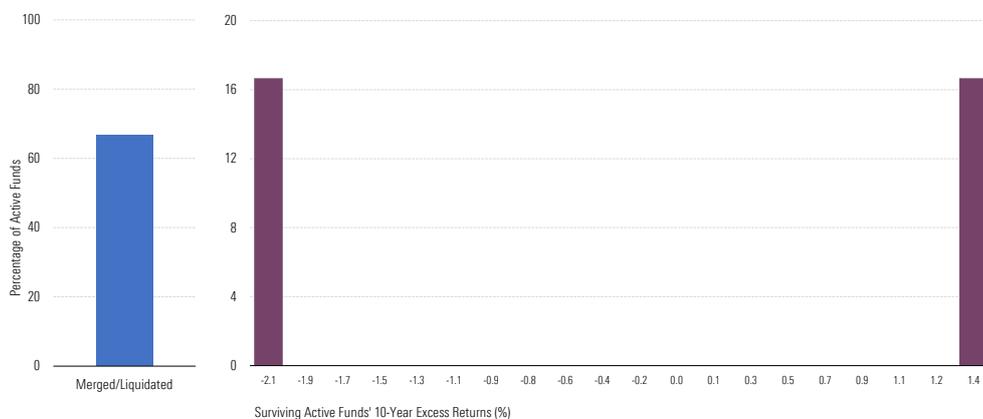
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 223 Rolling Success Rates for Surviving Property—Indirect North America Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 224 Mortality and Distribution of 10-Year Annualized Excess Returns for Property—Indirect North America Funds (%)



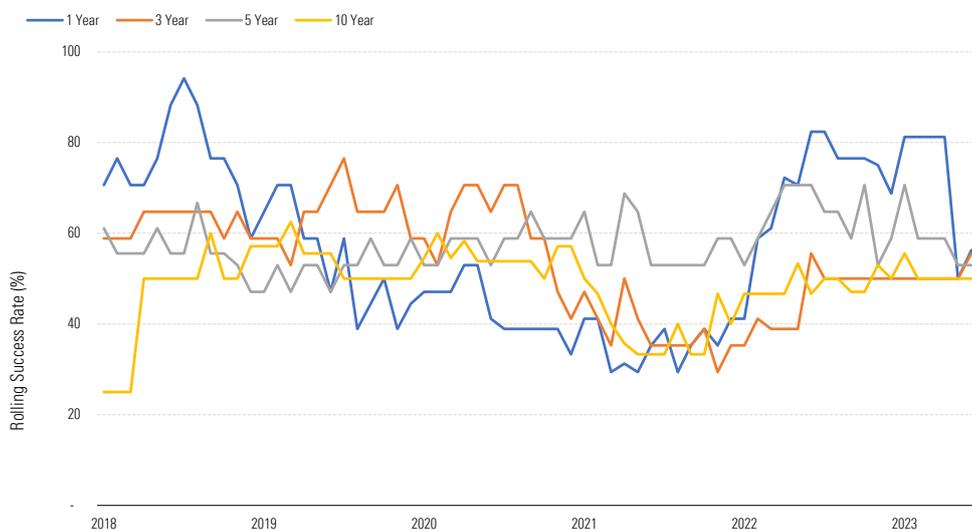
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 225 Property—Indirect Switzerland

	Active Funds		Passive Funds		Asset-Weighted Performance		Equal-Weighted Performance		Active Success Rate (%)
	# at Beginning of Period	Survivorship Rate (%)	# at Beginning of Period	Survivorship Rate (%)	Active (%)	Passive (%)	Active (%)	Passive (%)	
Trailing Total Return									
1-Year	16	100.0	5	100.0	-0.8	-0.8	1.0	1.0	56.3
3-year	18	94.4	5	100.0	1.0	0.7	0.8	0.6	55.6
5-Year	17	94.1	5	100.0	3.6	3.3	2.9	3.2	52.9
10-Year	18	88.9	5	100.0	5.1	4.8	4.7	4.8	50.0

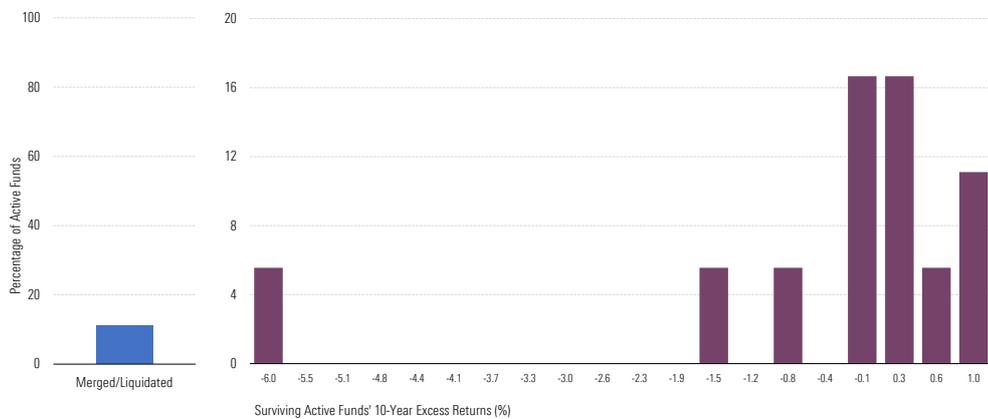
Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 226 Rolling Success Rates for Surviving Property—Indirect Switzerland Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Exhibit 227 Mortality and Distribution of 10-Year Annualized Excess Returns for Property—Indirect Switzerland Funds (%)



Source: Morningstar Direct. Data as of June 30, 2023.

Appendix—Morningstar Categories Base Currencies

Exhibit 228 Morningstar Equity Categories Base Currencies

Name	Base Currency
Asia ex-Japan Equity	US Dollar
Asia-Pacific ex-Japan Equity	US Dollar
Asia-Pacific inc. Japan Equity	US Dollar
Austria Equity	Euro
Brazil Equity	US Dollar
BRIC Equity	US Dollar
Canada Equity	US Dollar
China Equity	US Dollar
Denmark Equity	Danish Krone
Emerging Europe ex-Russia Equity	Euro
Europe ex-UK Large-Cap Equity	Euro
Europe Large-Cap Blend Equity	Euro
Europe Large-Cap Growth Equity	Euro
Europe Large-Cap Value Equity	Euro
Europe Small-Cap Equity	Euro
Eurozone Large-Cap Equity	Euro
France Large-Cap Equity	Euro
Germany Large-Cap Equity	Euro
Global Emerging Markets Equity	US Dollar
Global Large-Cap Blend Equity	US Dollar
Global Large-Cap Value Equity	US Dollar
Hong Kong Equity	Hong Kong Dollar
India Equity	US Dollar
Islamic Equity - Other	US Dollar
Italy Equity	Euro
Japan Large-Cap Equity	Japanese Yen
Japan Small/Mid-Cap Equity	Japanese Yen
Korea Equity	US Dollar
Latin America Equity	US Dollar
Netherlands Equity	Euro
Nordic Equity	Swedish Krona
Norway Equity	Norwegian Krone
Pacific ex-Japan Equity	US Dollar
Property - Indirect Asia	US Dollar
Property - Indirect Europe	Euro
Property - Indirect Eurozone	Euro
Property - Indirect Global	US Dollar
Russia Equity	US Dollar
South Africa & Namibia Equity	South African Rand
Spain Equity	Euro
Sweden Equity	Swedish Krona
Switzerland Large-Cap Equity	Swiss Franc
Switzerland Small/Mid-Cap Equity	Swiss Franc
Taiwan Large-Cap Equity	New Taiwan Dollar
Turkey Equity	Euro
UK Large-Cap Equity	Pound Sterling
UK Mid-Cap Equity	Pound Sterling
US Large-Cap Blend Equity	US Dollar
US Large-Cap Growth Equity	US Dollar
US Large-Cap Value Equity	US Dollar
US Small-Cap Equity	US Dollar

Source: Morningstar Direct. Data as of June 30, 2019.

Exhibit 229 Morningstar Fixed-Income Categories Base Currencies

Name	Base Currency
CHF Bond	Swiss Franc
EUR Bond - Long Term	Euro
EUR Corporate Bond	Euro
EUR Diversified Bond	Euro
EUR Government Bond	Euro
EUR Government Bond - Short Term	Euro
EUR Inflation-Linked Bond	Euro
Global Bond	US Dollar
GBP Government Bond	Pound Sterling
GBP Inflation-Linked Bond	Pound Sterling
ILS Government Bond	New Israeli Sheqel
JPY Bond	Japanese Yen
USD Corporate Bond	US Dollar
USD Diversified Bond	US Dollar
USD Government Bond	US Dollar

Source: Morningstar Direct. Data as of Dec. 31, 2020.

Appendix—Methodology

Data Source

Morningstar's EAA open-end and exchange-traded funds database.

Universe

All ETFs and open-end mutual funds (excluding funds of funds and money market funds) in each Morningstar Category that existed in the beginning of the relevant periods (including funds that did not survive to the end of the period) defined the eligible universe. To be included, the fund's inception date must precede the start of the period and the obsolete data cannot predate the start of the period. In addition, each must have asset data for at least one share class in the month prior to the start of the sample period (the beginning of the trailing one-, three-, five- and 10-year periods) to facilitate asset-weighting.

Survivorship

To calculate survivorship, we divide the number of distinct funds (based on unique Fund ID at the beginning of the period) that started and ended up the period in question by the total number of funds that existed at the onset of the period in question (the beginning of the trailing one-, three-, five- and 10-year periods).

Asset-Weighted Returns

We calculate the asset-weighted returns for each cohort using each share class' monthly asset and returns. When a fund becomes obsolete, its historical remains in the sample. Funds that incept or migrate into the category after the start of the period are not included. The return calculations are made in each category's base currency.

Equal-Weighted Returns

To come up with a single return figure for funds with multiple share classes, we first calculate the asset-weighted average of all the fund's share classes. We then take the simple equal-weighted average of the monthly returns for each fund in the group and compound those returns over the same period. As before, when a fund becomes obsolete, its historical data remains in the sample. Funds that incept or are moved into the category after the start of the period are not included. The return calculations are made in each category's base currency.

Success Rate

The success rate indicates what percentage of funds that started the sample period went on to survive and generate a return in excess of the equal-weighted average passive fund return over the period. This approach differs from the convention of using a single representative index to gauge success. We do not consider magnitude of outperformance in defining success—a fund that just barely beat the benchmark alternative counts as much as a fund that significantly outperformed.

As in the equal-weighted return calculation, we calculate the asset-weighted average of all the fund's share classes to come up with a single return figure for funds with multiple share classes. We then rank the fund by their composite returns, count the number that rank higher than the equal-weighted average return for the passive funds in the category, and divide that number by the funds at the beginning of the period (using the same number from the denominator of the survivorship calculation).

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The Morningstar Analyst Rating™

The Morningstar Analyst Rating™ is a forward-looking analysis of a fund. The Analyst Rating does not express a view on a given asset class or peer group; rather, it seeks to evaluate each fund within the context of its objective, an appropriate benchmark, and peer group.

The Five Pillars

Morningstar has identified five key areas that we believe are crucial to predicting the future success of funds: People, Parent, Process, Performance, and Price. Each pillar is evaluated when assessing a fund as well as the interaction between the pillars, which we believe is crucial to understanding a fund's overall merit.

People

The overall quality of a fund's investment team is a significant key to its ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items including how key decisions are made.

Parent

We believe the parent organization is of utmost importance in evaluating funds. The fund's management set the tone for key elements of our evaluation, including capacity management, risk management, recruitment and retention of talent, and incentive pay. Beyond these operational areas, we prefer firms that have a culture of stewardship and put investors first to those that are too heavily weighted to salesmanship.

Process

We look for funds with a performance objective and investment process (for both security selection and portfolio construction) that is sensible, clearly defined, and repeatable. In addition, the portfolio should be constructed in a manner that is consistent with the investment process and performance objective.

Performance

We do not believe past performance is necessarily predictive of future results, and this factor accordingly receives a relatively small weighting in our evaluation process. In particular, we strive not to anchor on short-term performance. However, we do believe that the evaluation of long-term return and risk patterns is vital to determining if a fund is delivering to our expectations.

Price

To reflect actual investor experience, price is evaluated within the context of the relevant market or cross-border region—for example, the United States, Australia, Canada, or Europe. In recognition of differences in scale and distribution costs in various markets, the level at which a fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised if they land in the most expensive quintile of their Morningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using annual expense ratios, but in the case of funds with performance fees, expenses are evaluated excluding any performance fees and then the structure of the performance fee is evaluated separately.

Morningstar Analyst Ratings

Morningstar Analyst Ratings are assigned on a five-tier scale running from Gold to Negative. The top three ratings, Gold, Silver, and Bronze, all indicate that our analysts think highly of a fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken.

Gold

Represents funds that our analyst has the highest-conviction in for that given investment mandate. By giving a fund a Gold rating, we are expressing an expectation that it will outperform its relevant performance benchmark and/or peer group within the context of the level of risk taken over the long term (defined as a full market cycle or at least five years). To earn a Gold rating, a fund must distinguish itself across the five pillars that are the basis for our analysis.

Silver

Represents funds our analyst has high-conviction in, but not in all of the five pillars. With those fundamental strengths, we expect these funds will outperform their relevant performance benchmark and/or peer group within the context of the level of risk taken over the long term (defined as a full market cycle or at least five years).

Bronze

Represents funds that have advantages that clearly outweigh any disadvantages across the pillars, giving analyst the conviction to award them a positive rating. We expect these funds to beat their relevant performance benchmark and/or peer group within the context of the level of risk taken over a full market cycle (or at least five years).

Neutral

Represents funds in which our analysts don't have a strong positive or negative conviction. In our judgment, these funds are not likely to deliver standout returns, but they aren't likely to seriously underperform their relevant performance benchmark and/or peer group either.

Negative

Represents funds that possess at least one flaw that our analysts believe is likely to significantly hamper future performance, such as high fees or an unstable management team. Because of these faults, we believe these funds are inferior to most competitors and will likely underperform their relevant performance benchmark and/or peer group, within the context of the level of risk taken, over a full market cycle.

Morningstar may also use two other designations in place of a rating:

Under Review

This designation means that a change that occurred with the fund or at the fund company requires further review to determine the impact on the rating.

Not Ratable

This designation is used only where we are providing a report on a new strategy or on a strategy where there are no relevant comparators, but where investors require information as to suitability.

For more information about our Analyst Rating methodology please go to <http://corporate1.morningstar.com/ResearchLibrary/>.

Morningstar Rating

The Morningstar Rating for funds is a proprietary data point that is quantitatively driven. Funds are rated from 1 to 5 stars based on how well the fund performed (after adjusting for risk and accounting for sales charges) in comparison to similar funds. Within each Morningstar Category, the top 10% of funds receive 5 stars and the bottom 10% receive 1 star. Funds are rated for up to three time periods—three, five, and 10 years—and these ratings are combined to produce an overall star rating, which is noted within the Report. Funds with less than three years of history are not rated. Morningstar Ratings are based entirely on a mathematical evaluation of past performance. Star ratings are in no way to be considered a buy or sell signal nor should be viewed as a statement of fact.

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