
Morningstar's US Active/Passive Barometer

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Morningstar Manager Research

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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 Morningstar Categories. The US Active/Passive Barometer spans nearly 8,326 unique funds that accounted for approximately \$21 trillion in assets, or about 72% of the US fund market, at the midpoint of 2024.

The Active/Passive Barometer measures active managers' success in several unique ways:

- ▶ It evaluates active funds against a composite of passive funds. In this way, the "benchmark" reflects the actual, net-of-fees performance of investable passive funds.
- ▶ It considers how the average dollar invested in active funds has fared versus the average dollar invested in passive funds.
- ▶ It examines trends in active-fund success by fee level.
- ▶ It shows the distribution of surviving active funds' excess returns versus their average passive peer to help investors understand not just the odds of picking a successful manager but also the prospective payout or penalty.

The Active/Passive Barometer is a useful measuring stick that helps investors calibrate the odds of succeeding with active funds in different categories.

Key Takeaways

- ▶ It was basically a coin flip whether an actively managed mutual fund or exchange-traded fund outperformed its average passive peer from July 2023 through June 2024. About 51% of active strategies survived and beat the average passive fund in their Morningstar Category over that span, a tick up from their 47% success rate in 2023.
- ▶ Slightly less than half of active US equity funds beat their average indexed peer over the 12 months through June 2024. Solid results from active large-cap (53% success rate) and small-cap managers (52%) helped the cause, but mid-cap managers weighed on the group by succeeding just 36% of the time.

- ▶ Active funds that invest in foreign stocks measured up worse than their US-focused peers. Just 43% of them survived and outperformed, well below their 63% clip from the one-year period ended June 2023. Five of these six Morningstar Categories saw success rates slide, headlined by a tumble of nearly 30 percentage points in the foreign large-value category.
- ▶ June 2024 concluded a stellar 12-month run for active bond managers. Roughly two out of every three beat their average passive counterpart, led by a 72% success rate in the intermediate core-bond category. Those active bond portfolios tend to sport shorter duration and take more credit risk than their indexed peers, an ideal combination amid the higher-than-expected interest rates and narrowing credit spreads that characterized the period.
- ▶ Actively managed real estate funds continued their recent winning ways. Their 66% one-year success rate mirrored last year's figure and further bolstered their solid long-term results.
- ▶ The overall long-term track record for active funds is subpar. About 29% of them survived and beat their average indexed peer over the decade through June 2024. Success rates were generally higher among foreign-stock, real estate, and bond funds and lowest among US large-cap strategies.
- ▶ Survival has meant success for most active fixed-income strategies. Forty-eight percent that existed at the start of the trailing 15-year period survived it. The 38% overall success rate means that 80% of the surviving group outperformed the index composite.
- ▶ The distribution of 10-year excess returns for surviving active funds versus the average of their passive peers varies across categories. It skews negative for US large-cap funds, indicating that the likelihood and performance penalty for picking an underperforming manager typically outweigh the reward for finding a winner. The inverse tends to be true of the real estate and foreign-stock categories we examined, where excess returns among surviving active managers skewed positive over the past decade.
- ▶ Investors have chosen active funds wisely. Over the past 10 years, the average dollar invested in active funds outperformed the average active fund in 19 of the 20 categories examined. That implies that investors have effectively identified and selected cheaper, higher-quality strategies.
- ▶ Cheap active funds succeeded more often than expensive ones. Over the trailing 10 years, more than 32% of active funds in their category's cheapest quintile beat their average indexed peer, compared with 24% for those in the priciest quintile.

Exhibit 1 Active Funds' Success Rate by Category (%)

Category	1-Year	3-Year	5-Year	10-Year	15-Year	20-Year	10-Year (Lowest Cost) *	10-Year (Highest Cost)
US Large Blend	51.3	41.4	39.1	15.2	8.9	11.1	19.7	6.8
US Large Value	52.2	39.9	36.5	20.9	7.3	17.2	20.3	18.5
US Large Growth	55.2	42.6	29.4	22.4	3.5	5.3	27.5	18.2
US Mid Blend	38.8	48.5	36.7	15.3	13.4	11.4	18.2	4.3
US Mid Value	46.2	49.1	45.0	23.6	16.3	36.8	26.3	31.8
US Mid Growth	25.5	48.7	30.6	35.0	23.6	19.5	33.3	27.9
US Small Blend	57.7	67.2	50.0	31.1	25.8	19.4	33.3	36.8
US Small Value	70.8	73.9	45.6	40.6	29.9	33.3	38.1	45.5
US Small Growth	30.3	42.3	36.5	42.0	30.8	25.3	42.9	41.9
Foreign Large Blend	44.6	31.7	42.0	31.8	31.9	23.6	45.5	17.1
Foreign Large Value	45.4	40.7	46.7	40.8	26.0	—	41.2	30.0
Foreign Small/Mid Blend	62.1	33.3	33.3	32.0	35.3	—	40.0	16.7
Global Large Blend	42.1	35.1	29.8	8.1	13.2	—	0.0	16.7
Diversified Emerging Markets	40.1	26.8	37.6	30.1	31.4	35.3	37.8	27.0
Europe Stock	41.2	31.3	33.3	28.6	45.0	20.5	25.0	40.0
US Real Estate	68.8	73.2	68.3	50.0	31.6	25.4	53.8	42.9
Global Real Estate	62.2	78.7	63.6	54.5	41.3	—	44.4	36.4
Intermediate Core Bond	72.2	40.7	59.4	45.5	29.1	15.9	52.2	25.9
Corporate Bond	67.9	18.8	27.5	56.5	60.0	—	57.1	60.0
High-Yield Bond	64.2	38.3	56.4	40.9	52.4	—	38.7	24.3

Source: Morningstar. Data and calculations as of June 30, 2024. *Green/red shading indicates that active funds in this fee quintile had above/below-average success rates.

Exhibit 2 Year-Over-Year Change in Active Funds' One-Year Success Rate by Category (%)

	2024	2023	Year-Over-Year Change
US Large Blend	51.3	50.4	0.9
US Large Value	52.2	54.2	-2.0
US Large Growth	55.2	54.5	0.7
US Mid Blend	38.8	48.7	-9.9
US Mid Value	46.2	64.1	-17.9
US Mid Growth	25.5	56.1	-30.6
US Small Blend	57.7	74.7	-17.0
US Small Value	70.8	57.3	13.6
US Small Growth	30.3	62.3	-32.0
Foreign Large Blend	44.6	57.6	-13.0
Foreign Large Value	45.4	75.0	-29.6
Foreign Small/Mid Blend	62.1	66.7	-4.6
Global Large Blend	42.1	44.1	-2.1
Diversified Emerging Markets	40.1	57.1	-17.1
Europe Stock	41.2	31.3	9.9
US Real Estate	68.8	54.8	13.9
Global Real Estate	62.2	84.1	-21.9
Intermediate Core Bond	72.2	60.0	12.2
Corporate Bond	67.9	40.0	27.9
High-Yield Bond	64.2	56.4	7.9

Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 3 Trends in Active Funds' One-Year Success Rates by Category (%)

	2017		2018		2019		2020		2021		2022		2023		2024		Trend
	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun			
US Large Blend	36.0	33.4	28.3	33.0	37.4	39.2	34.0	43.8	41.7	46.4	54.1	50.4	46.8	51.3			
US Large Value	33.7	31.5	29.0	33.9	36.8	44.3	51.3	47.5	36.5	33.9	47.2	54.2	49.1	52.2			
US Large Growth	44.6	42.4	48.0	51.2	42.1	46.3	41.2	36.3	31.9	39.1	37.5	54.5	53.2	55.2			
US Mid Blend	30.8	22.2	31.4	47.6	57.9	32.7	25.0	42.2	66.0	67.3	50.5	48.7	48.7	38.8			
US Mid Value	49.1	36.6	21.2	27.7	59.5	68.5	74.8	37.6	31.8	29.4	39.6	64.1	45.4	46.2			
US Mid Growth	52.8	42.2	72.1	78.6	74.9	61.8	41.8	19.2	44.3	49.7	46.5	56.1	33.6	25.5			
US Small Blend	40.2	16.9	19.1	41.7	47.0	28.8	36.9	42.5	58.9	59.4	52.9	74.7	57.1	57.7			
US Small Value	55.1	26.3	19.3	44.2	45.8	41.2	47.0	23.8	37.1	64.7	61.0	57.3	34.3	70.8			
US Small Growth	58.7	42.6	50.7	76.0	75.4	69.1	71.9	40.8	47.4	43.3	56.9	62.3	30.1	30.3			
Foreign Large Blend	55.8	30.3	17.7	29.3	58.3	55.7	60.7	58.7	44.2	27.8	36.8	57.6	45.9	44.6			
Foreign Large Value	68.5	37.8	15.4	10.3	34.5	66.3	82.2	52.3	24.7	27.3	29.4	75.0	61.7	45.4			
Foreign Small/Mid Blend	54.5	26.7	20.6	35.5	50.0	35.3	53.1	51.7	48.1	25.9	44.0	66.7	62.1	62.1			
Global Large Blend	46.6	37.0	30.4	37.0	43.9	25.6	33.7	55.3	38.5	37.1	56.0	44.1	24.1	42.1			
Diversified Emg Mrkts	63.0	47.8	21.4	32.8	66.8	64.0	69.5	64.6	30.2	18.4	23.4	57.1	44.8	40.1			
Europe Stock	52.2	29.2	25.0	20.8	50.0	77.8	76.5	62.5	46.7	31.3	25.0	31.3	35.3	41.2			
US Real Estate	30.0	36.4	23.9	72.3	82.0	85.7	80.6	11.7	82.5	73.2	42.9	54.8	42.9	68.8			
Global Real Estate	15.4	23.3	61.0	75.0	66.1	72.7	68.5	64.0	83.3	85.1	20.0	84.1	71.1	62.2			
Intermediate Core Bond	51.5	59.8	44.7	37.5	36.2	31.5	54.1	84.7	70.1	34.1	37.9	60.0	56.9	72.2			
Corporate Bond	70.0	25.5	37.0	29.6	31.7	56.1	64.3	66.1	66.7	22.2	22.6	40.0	49.0	67.9			
High-Yield Bond	74.6	38.7	25.1	51.9	61.5	57.4	62.7	70.3	73.1	31.9	27.2	56.4	51.1	64.2			

Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 4 Comparison of Asset- and Equal-Weighted 10-Year Returns %

Category	Active Funds			Passive Funds			Difference Between Passive and Active Returns	
	Asset- Weighted	Equal- Weighted	Difference	Asset- Weighted	Equal- Weighted	Difference	Asset- Weighted	Equal- Weighted
US Large Blend	11.1	10.2	0.9	12.4	12.0	0.5	1.4	1.8
US Large Value	9.1	8.2	0.8	9.3	9.0	0.3	0.2	0.8
US Large Growth	13.7	12.7	1.0	16.0	14.1	1.9	2.3	1.4
US Mid Blend	8.4	6.9	1.4	8.7	8.6	0.1	0.4	1.7
US Mid Value	7.9	7.3	0.6	7.9	7.9	0.0	0.0	0.6
US Mid Growth	9.5	9.3	0.1	9.9	9.5	0.4	0.4	0.1
US Small Blend	7.0	6.7	0.3	7.6	7.2	0.5	0.6	0.4
US Small Value	7.0	6.4	0.6	7.1	6.5	0.6	0.1	0.1
US Small Growth	8.5	8.2	0.3	7.8	7.8	0.0	-0.7	-0.4
Foreign Large Blend	4.4	4.0	0.3	4.2	4.2	-0.1	-0.2	0.2
Foreign Large Value	4.2	3.4	0.8	3.0	3.2	-0.2	-1.2	-0.2
Foreign Small/Mid Blend	3.7	3.5	0.1	3.8	3.9	0.0	0.1	0.3
Global Large Blend	7.6	7.5	0.1	8.5	9.2	-0.6	0.9	1.6
Diversified Emerging Markets	2.8	2.5	0.3	2.8	2.8	0.0	0.0	0.2
Europe Stock	3.7	4.4	-0.8	4.5	4.3	0.2	0.9	-0.1
US Real Estate	5.7	5.2	0.5	5.1	4.4	0.7	-0.6	-0.8
Global Real Estate	2.4	2.3	0.1	0.4	0.6	-0.2	-2.0	-1.8
Intermediate Core Bond	1.6	1.5	0.2	1.3	1.2	0.2	-0.3	-0.3
Corporate Bond	2.4	2.3	0.1	2.3	2.0	0.3	-0.1	-0.3
High-Yield Bond	3.8	3.4	0.4	3.3	3.5	-0.2	-0.5	0.1

Source: Morningstar. Data and calculations as of June 30, 2024.

Results by Category

US Large-Cap Funds

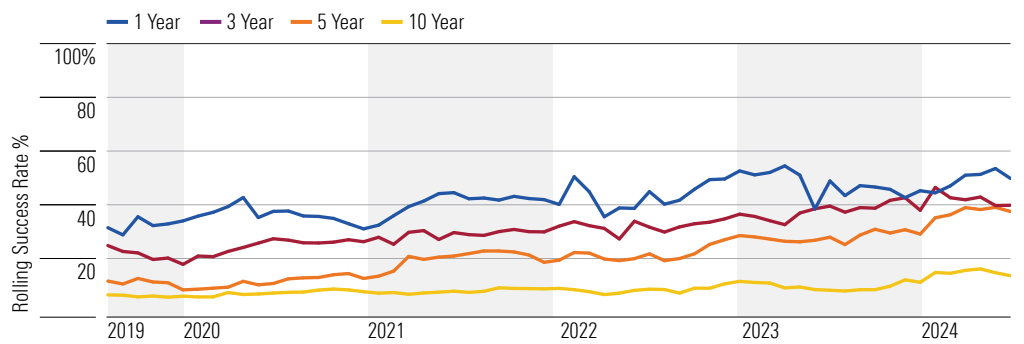
- ▶ The large-cap equity market has challenged active managers for years. Just 20% of active large-cap funds survived and beat their average passive peer over the decade through June 2024, a lower rate than active mid-cap (27%) and small-cap funds (38%).
- ▶ Expensive active large-cap funds have fared the worst: Those that rank in their respective category's priciest quintile succeeded just 15% of the time compared with 23% for those in the cheapest.
- ▶ Nearly 53% of active large-cap equity funds beat their average index-tracking peer over the 12 months through June 2024, a tick above their 50% success rate in 2023.
- ▶ Active large-cap managers have consistently succeeded around half the time in recent 12-month periods, as evidenced by their 47% success rate over the three years through June 2024.
- ▶ Active funds had similar levels of success among the three large-cap categories over the 12 months through June 2024. Active large-growth managers led with a 55% success rate; active large blend's 51% clip brought up the rear.
- ▶ Index funds that use alternative weighting schemes—especially those focused on dividends, low volatility, or the quality factor—hurt large-blend passive composite returns over the past 12 months, lowering the hurdle for active funds.
- ▶ The average active large-growth portfolio was more concentrated and growth-oriented than its average indexed peer entering July 2023. Those biases proved to be tailwinds over the subsequent 12 months, as a handful of high-octane mega-cap stocks powered the market rally.
- ▶ Long-term success is hard to find in the large-growth category. About 55% of the active funds that existed there 15 years ago are now shut down. Over that span, the average dollar in a passive large-growth fund beat the average dollar in active funds by 2.3 percentage points per year—the widest margin among all categories. Passive large-blend funds ranked second with an annual edge of 1.4 percentage points.
- ▶ The median 10-year excess return for surviving active funds was negative in all three large-cap categories, and the distribution of excess returns had a negative skew. That indicates the penalty for picking a poor active fund normally exceeded the reward for picking a good one.

Exhibit 5 US Large Blend

	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	409	93.4	215	95.3	22.9	23.5	21.0	21.3	51.3
3-Year	377	87.8	203	90.1	8.9	9.0	7.7	8.2	41.4
5-Year	366	77.6	183	87.4	13.5	14.4	12.6	13.2	39.1
10-Year	362	63.5	113	82.3	11.1	12.4	10.2	12.0	15.2
15-Year	447	47.7	118	61.9	12.8	14.6	12.4	14.3	8.9
20-Year	431	35.3	110	49.1	9.7	10.1	8.9	9.9	11.1
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	71	54.9	23	100.0	11.6	12.5	10.9	12.5	19.7
40th Percentile	73	75.3	22	81.8	11.2	11.7	10.7	12.4	23.3
60th Percentile	72	72.2	21	85.7	10.5	11.3	10.2	12.1	12.5
80th Percentile	72	61.1	24	75.0	10.2	12.3	10.0	12.0	13.9
100th Percentile	73	53.4	23	69.6	9.5	11.3	8.9	10.7	6.8

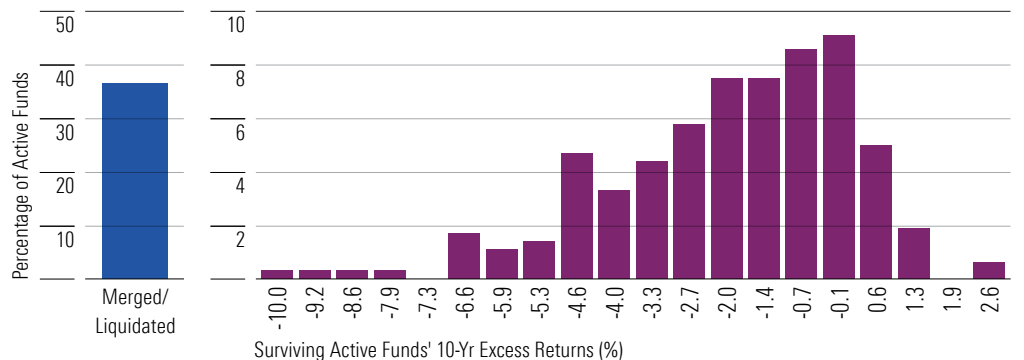
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 6 Rolling Success Rates for Surviving Active US Large Blend Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 7 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Large-Blend Funds



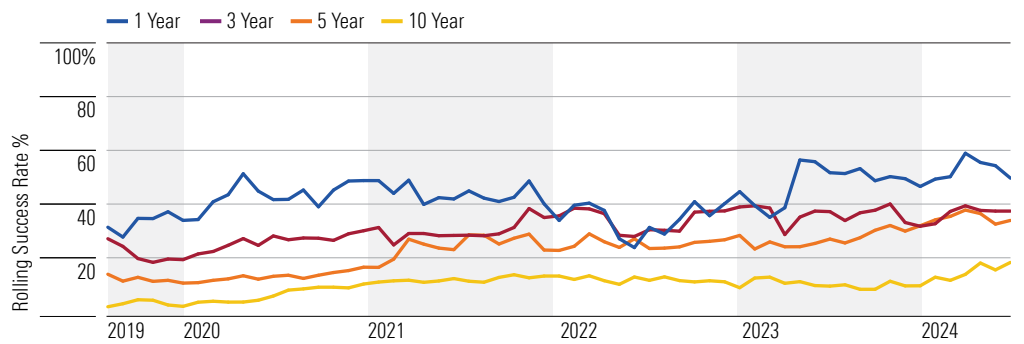
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 8 US Large Value

	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	322	97.2	100	99.0	15.4	14.1	14.9	14.3	52.2
3-Year	313	90.7	107	88.8	6.8	6.6	6.4	6.8	39.9
5-Year	318	78.0	99	84.8	10.2	9.8	9.8	9.9	36.5
10-Year	321	64.5	49	91.8	9.1	9.3	8.2	9.0	20.9
15-Year	344	48.8	32	81.3	11.9	12.4	11.2	12.6	7.3
20-Year	343	37.6	16	68.8	8.6	8.4	7.8	8.0	17.2
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	64	51.6	10	100.0	9.4	9.8	8.8	9.3	20.3
40th Percentile	64	68.8	10	90.0	9.6	8.4	8.5	9.0	25.0
60th Percentile	64	71.9	8	87.5	8.5	9.9	8.2	10.0	17.2
80th Percentile	64	73.4	10	100.0	8.1	8.3	7.9	9.0	21.9
100th Percentile	65	56.9	11	81.8	8.6	7.9	7.8	7.8	18.5

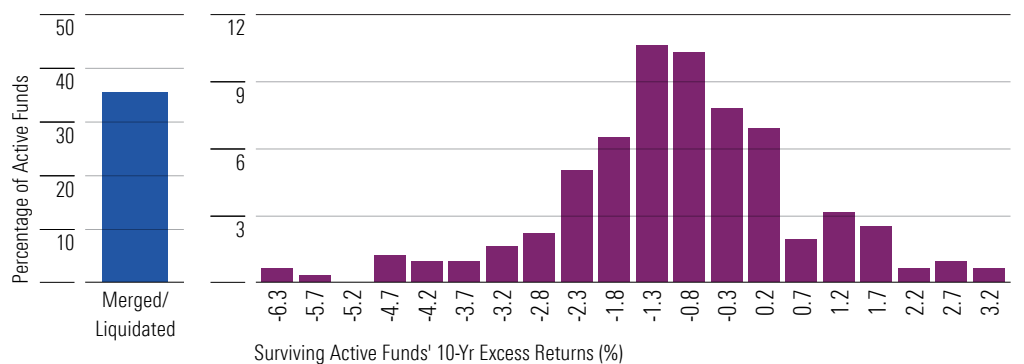
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 9 Rolling Success Rates for Surviving Active US Large-Value Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 10 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Large-Value Funds



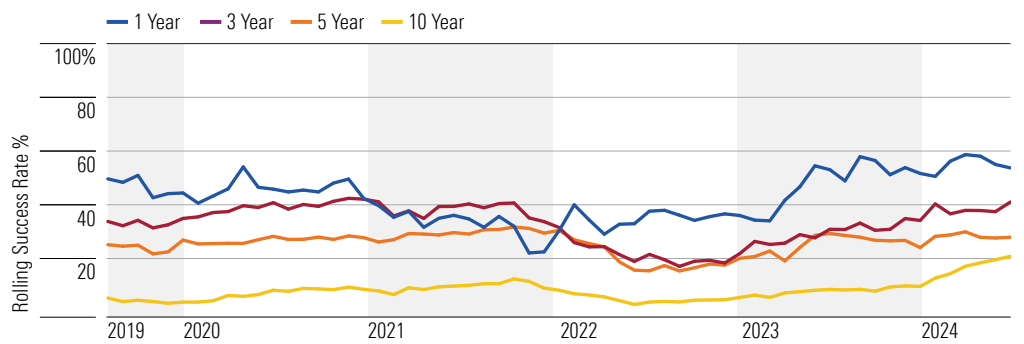
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 11 US Large Growth

	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	344	94.5	80	98.8	32.5	31.8	28.9	28.5	55.2
3-Year	350	88.3	70	91.4	6.6	10.2	6.0	7.3	42.6
5-Year	377	79.8	62	91.9	15.5	19.0	14.5	15.8	29.4
10-Year	434	62.0	40	97.5	13.7	16.0	12.7	14.1	22.4
15-Year	480	45.0	28	89.3	15.2	17.6	14.2	16.6	3.5
20-Year	450	31.6	24	75.0	10.9	12.8	10.0	12.0	5.3
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	80	57.5	8	100.0	14.9	15.0	13.8	15.1	27.5
40th Percentile	90	68.9	8	100.0	12.9	17.3	12.8	15.6	20.0
60th Percentile	84	69.0	6	100.0	13.8	13.9	13.0	14.5	29.8
80th Percentile	89	62.9	10	100.0	13.1	14.4	12.5	13.7	19.1
100th Percentile	88	53.4	8	87.5	12.4	13.4	11.4	11.4	18.2

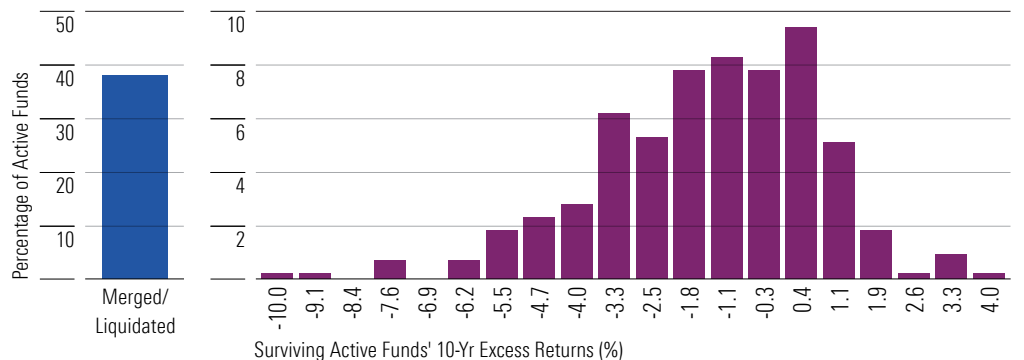
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 12 Rolling Success Rates for Surviving Active US Large-Growth Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 13 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Large-Growth Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

US Mid-Cap Funds

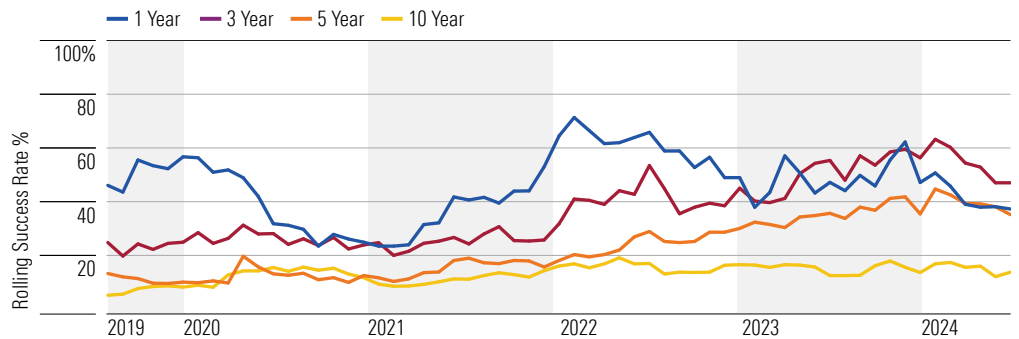
- ▶ Active mid-cap managers have run into hard times. About 36% of them succeeded over the 12 months through June 2024, down about 20 percentage points from one year earlier.
- ▶ That turnaround hit active mid-cap growth funds the hardest. In just 12 months, their one-year success rate slid from 56% to 26%, the lowest success rate among all the categories included in this study. Active mid-cap blend and value success also slid, though not by as much.
- ▶ A leaner, more formidable group of passive mid-cap growth funds challenged their active counterparts. The index composite spanned just 31 funds after a handful of expensive thematic funds shuttered. The market-cap-weighted index funds that represented a larger share of the composite thrived during the growth-driven market rally, creating a steep benchmark for active mid-cap growth strategies.
- ▶ Success rates for active mid-cap funds tend to be more volatile than large- or small-cap categories, and that rang true over the past five years. These extremes owe to the “crossroads” status of the mid-cap category, which houses many funds that hold stocks from a mix of market-cap segments and styles or that could otherwise be passersby as they migrate “south” from large-cap territory or “north” from small-cap status.

Exhibit 14 US Mid-Blend

	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	116	97.4	70	98.6	12.6	13.2	12.6	13.8	38.8
3-Year	103	92.2	66	87.9	2.7	2.9	3.6	3.5	48.5
5-Year	109	77.1	64	79.7	9.2	9.3	9.2	9.2	36.7
10-Year	111	55.0	43	79.1	8.4	8.7	6.9	8.6	15.3
15-Year	134	53.7	35	80.0	12.4	12.9	11.4	12.8	13.4
20-Year	114	54.4	23	56.5	8.8	9.4	8.2	9.4	11.4
Performance by Fee Quintile									
(Trailing 10 Years)									
20th Percentile	22	63.6	9	77.8	9.5	8.7	8.1	8.6	18.2
40th Percentile	22	72.7	8	100.0	8.2	9.0	8.8	9.2	36.4
60th Percentile	22	50.0	9	77.8	6.5	8.8	6.2	9.1	9.1
80th Percentile	22	50.0	8	62.5	6.6	8.3	7.3	8.2	9.1
100th Percentile	23	39.1	9	77.8	3.7	8.5	3.6	7.9	4.3

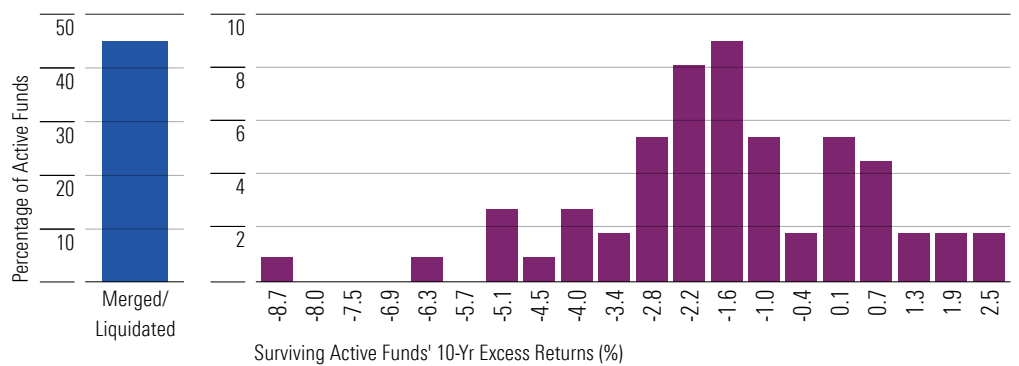
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 15 Rolling Success Rates for Surviving Active US Mid-Blend Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 16 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Mid-Blend Funds



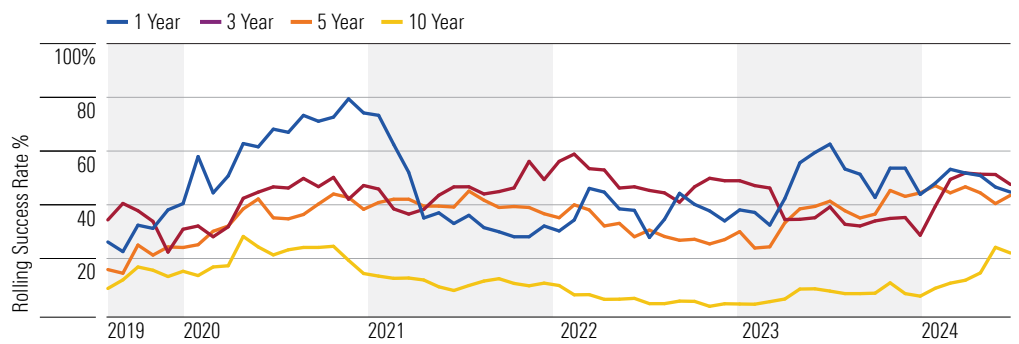
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 17 US Mid-Value

	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	106	97.2	35	91.4	12.8	10.7	11.7	12.3	46.2
3-Year	108	88.9	32	87.5	5.7	4.5	5.0	5.0	49.1
5-Year	111	77.5	24	91.7	10.4	8.4	9.6	8.9	45.0
10-Year	106	62.3	20	95.0	7.9	7.9	7.3	7.9	23.6
15-Year	123	45.5	12	91.7	11.7	12.3	11.4	12.3	16.3
20-Year	106	58.5	4	75.0	7.9	7.8	8.0	7.8	36.8
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	19	52.6	2	100.0	8.4	8.1	7.6	8.1	26.3
40th Percentile	22	54.5	6	100.0	8.4	7.5	7.3	8.6	22.7
60th Percentile	21	76.2	4	100.0	7.8	8.0	7.0	6.3	19.0
80th Percentile	21	71.4	4	75.0	6.6	8.7	7.3	9.3	19.0
100th Percentile	22	59.1	4	100.0	7.6	6.9	7.4	7.0	31.8

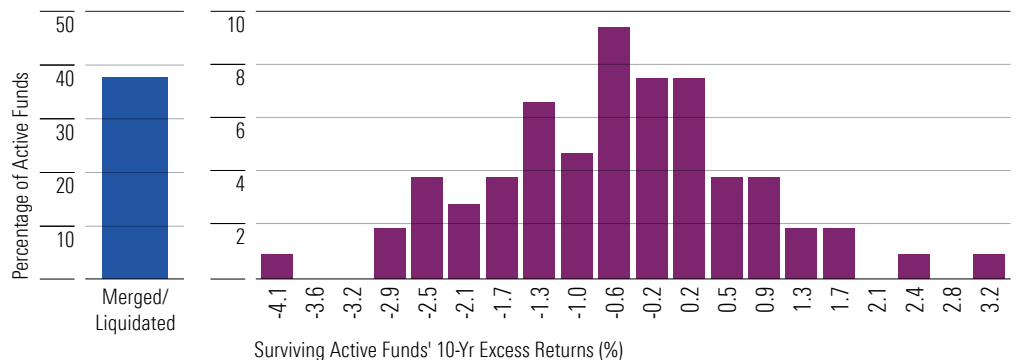
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 18 Rolling Success Rates for Surviving Active US Mid-Value Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 19 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Mid-Value Funds



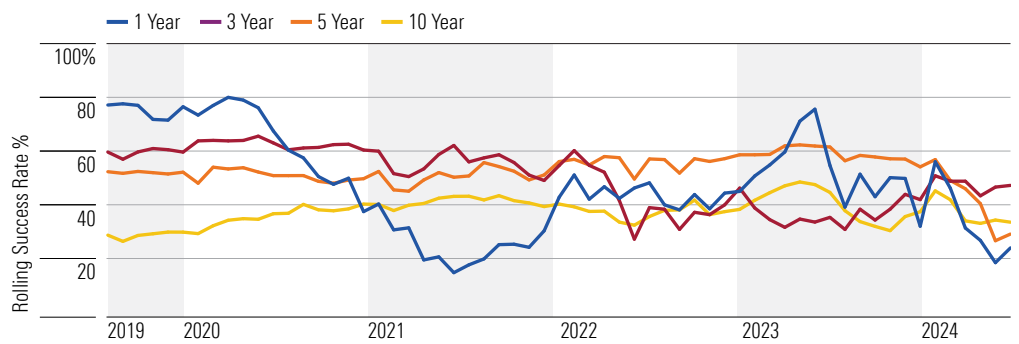
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 20 US Mid-Growth

	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	96.6	31	87.1	10.4	13.9	12.1	14.6	25.5
3-Year	158	89.9	33	87.9	-3.0	-1.9	-2.0	-1.7	48.7
5-Year	173	85.0	27	85.2	8.2	9.6	9.3	9.6	30.6
10-Year	214	69.2	18	77.8	9.5	9.9	9.3	9.5	35.0
15-Year	258	46.1	10	80.0	12.6	13.7	12.3	12.8	23.6
20-Year	282	34.8	4	75.0	9.3	9.9	8.9	9.0	19.5
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	42	61.9	3	100.0	9.2	9.8	9.1	9.4	33.3
40th Percentile	43	79.1	4	100.0	9.5	10.0	9.5	9.7	39.5
60th Percentile	42	69.0	4	50.0	10.6	11.2	10.0	12.3	45.2
80th Percentile	44	65.9	3	100.0	8.8	9.8	9.1	10.2	29.5
100th Percentile	43	69.8	4	50.0	9.0	5.7	9.0	6.2	27.9

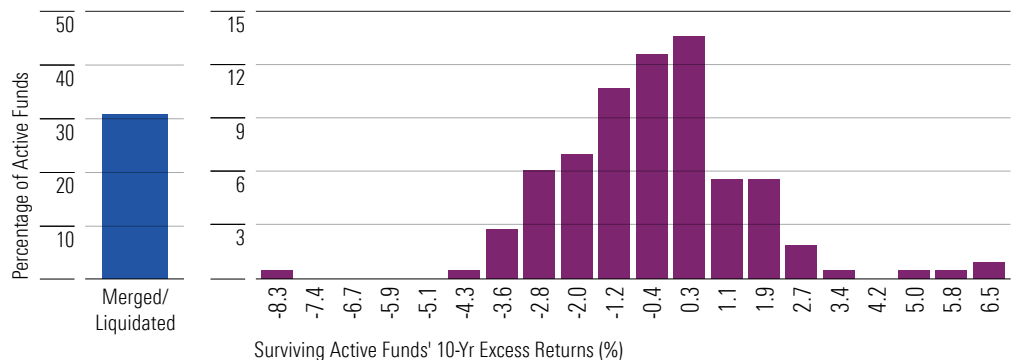
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 21 Rolling Success Rates for Surviving Active US Mid-Growth Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 22 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Mid-Growth Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

US Small-Cap Funds

- ▶ The small-cap segment has historically accommodated active management better than most other equity markets. Nearly 38% of active funds succeeded there over the past decade, a higher rate than the US large-cap, US mid-cap, and foreign-stock cohorts over the same span.
- ▶ Active small-cap funds measured up well in the 12 months through June 2024. Nearly 52% of them survived and beat their average passive peer over that span, just behind active large-cap funds (53%) but well ahead of mid-caps (36%).
- ▶ The small-value category's 71% success rate over the year through June 2024 led all equity categories and more than doubled its 34% figure from calendar-year 2023. Relatively weak small-value performance in the first half of 2024 could have helped the swift turnaround because shaky markets historically favor active funds.
- ▶ Pricier active small-cap funds proved their worth over the 10 years through June 2024. Those in the most expensive quintile succeeded 41% of the time, compared with 38% for those in the cheapest.

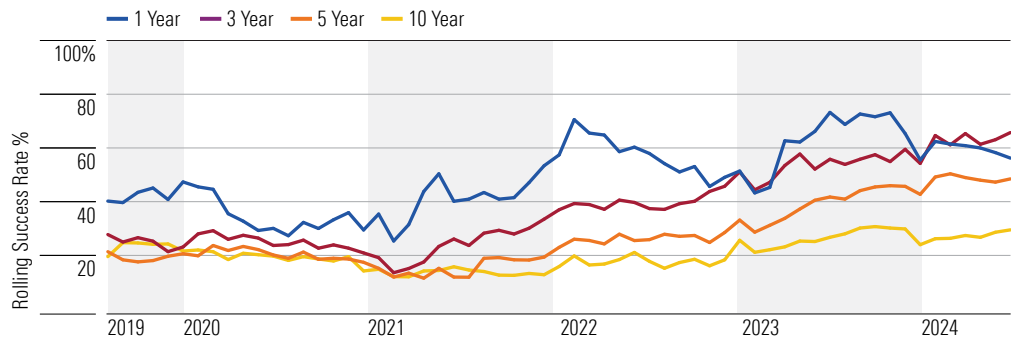
Active success has been hard to sustain in the small-cap sphere of late. About 30% of active small-growth funds beat their average index rival over the year ended June 2024 after notching a 62% success rate 12 months earlier. That was the largest step back among all the categories in this study. The wide dispersion of small-cap fund performance — both active and index-tracking — can spark volatile short-term results, but the longer-term signal has remained intact.

Exhibit 23 US Small Blend

	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	71	97.2	11.4	10.1	10.9	9.8	57.7
3-Year	177	89.8	70	85.7	1.7	-0.7	1.5	-0.3	67.2
5-Year	204	72.5	65	86.2	8.6	7.8	8.2	7.5	50.0
10-Year	190	64.7	46	73.9	7.0	7.6	6.7	7.2	31.1
15-Year	186	50.5	39	69.2	11.4	12.1	10.7	11.4	25.8
20-Year	139	45.3	28	57.1	8.2	8.4	7.4	8.0	19.4
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	36	55.6	9	88.9	7.8	7.9	7.3	7.7	33.3
40th Percentile	39	84.6	9	77.8	6.9	7.0	7.0	7.2	43.6
60th Percentile	38	55.3	9	66.7	6.3	7.5	6.4	7.1	18.4
80th Percentile	38	60.5	9	66.7	6.5	7.3	6.5	7.2	31.6
100th Percentile	38	68.4	10	70.0	5.7	7.0	6.5	6.6	36.8

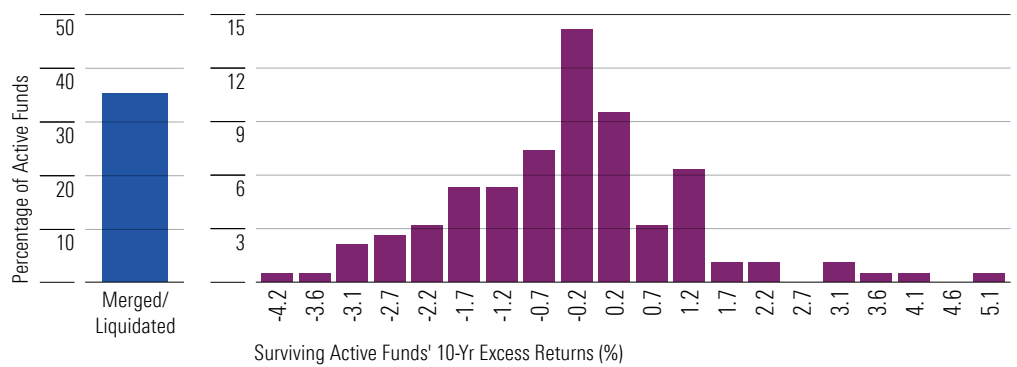
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 24 Rolling Success Rates for Surviving Active US Small-Blend Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 25 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Small-Blend Funds



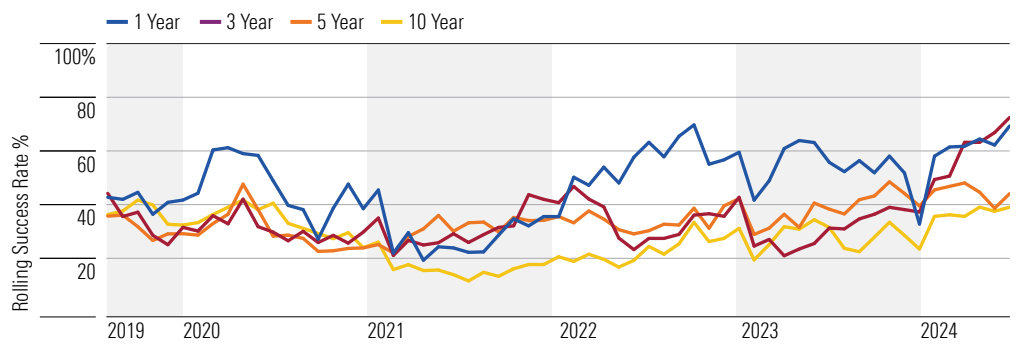
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 26 US Small Value

	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	137	99.3	29	96.6	12.6	10.3	11.5	8.8	70.8
3-Year	119	90.8	26	100.0	4.3	1.9	3.4	1.2	73.9
5-Year	114	75.4	24	95.8	9.7	8.1	9.2	8.5	45.6
10-Year	106	69.8	19	94.7	7.0	7.1	6.4	6.5	40.6
15-Year	117	58.1	11	90.9	11.3	11.5	10.9	11.0	29.9
20-Year	117	49.6	7	71.4	7.9	7.7	7.6	7.4	33.3
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	21	61.9	3	100.0	7.3	7.8	6.9	7.1	38.1
40th Percentile	20	80.0	5	100.0	5.9	6.2	6.1	6.3	40.0
60th Percentile	22	59.1	3	100.0	7.8	6.1	6.4	7.1	31.8
80th Percentile	21	66.7	2	100.0	6.8	5.0	6.6	7.0	47.6
100th Percentile	22	81.8	6	83.3	6.9	6.0	6.0	5.8	45.5

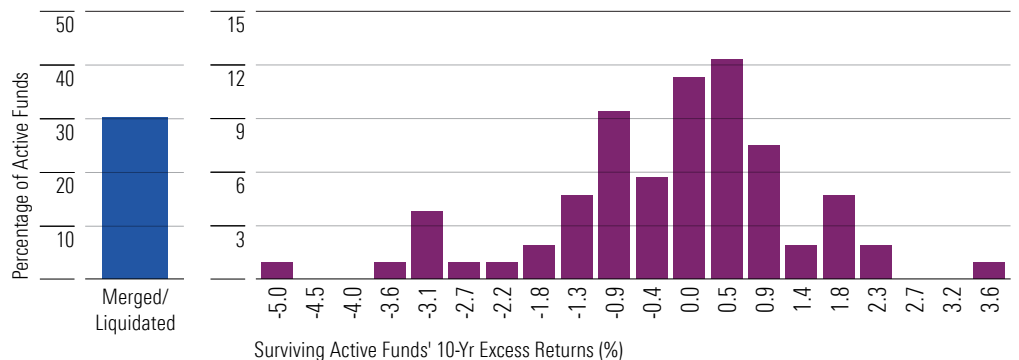
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 27 Rolling Success Rates for Surviving Active US Small-Value Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 28 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Small-Value Funds



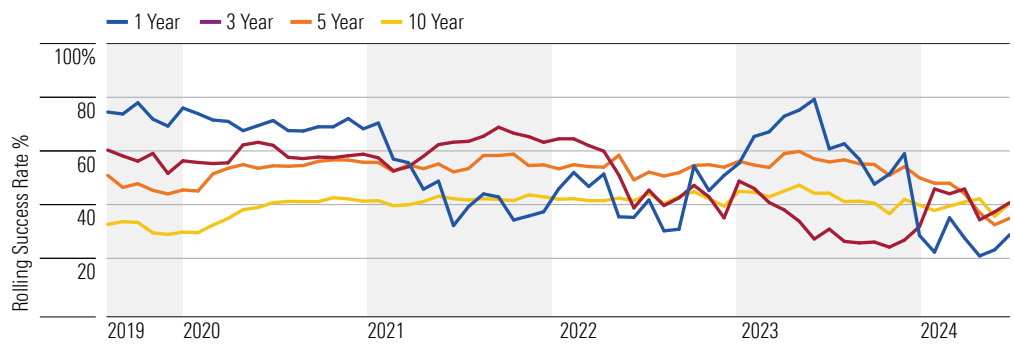
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 29 US Small Growth

	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	165	96.4	15	100.0	9.5	10.0	9.4	11.3	30.3
3-Year	168	91.1	17	94.1	-4.1	-3.7	-4.3	-2.7	42.3
5-Year	192	81.3	15	100.0	6.7	6.7	7.7	7.6	36.5
10-Year	212	67.0	14	100.0	8.5	7.8	8.2	7.8	42.0
15-Year	237	50.2	10	100.0	12.4	12.2	11.8	11.8	30.8
20-Year	202	41.6	3	100.0	9.5	10.2	8.4	9.9	5.9
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	42	71.4	3	100.0	9.5	7.8	8.5	8.1	42.9
40th Percentile	42	69.0	3	100.0	8.0	8.0	8.3	8.5	45.2
60th Percentile	43	58.1	2	100.0	7.9	6.8	8.7	7.4	48.8
80th Percentile	42	64.3	3	100.0	8.0	8.2	7.5	9.1	31.0
100th Percentile	43	72.1	3	100.0	8.1	6.0	8.2	5.8	41.9

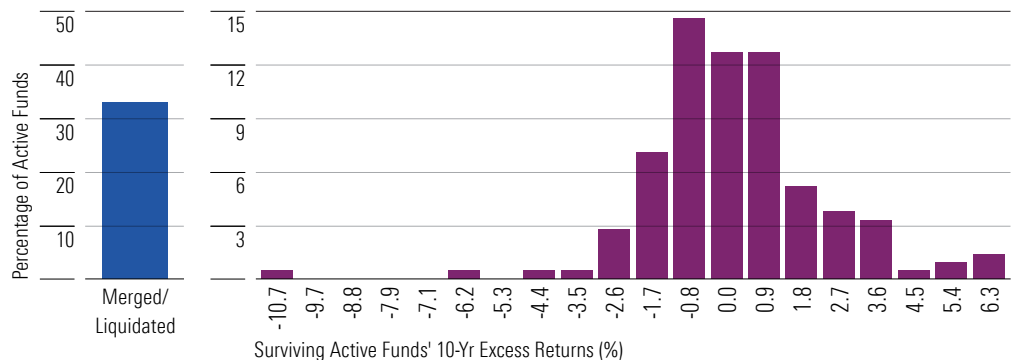
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 30 Rolling Success Rates for Surviving Active US Small-Growth Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 31 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Small-Growth Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Foreign Stock

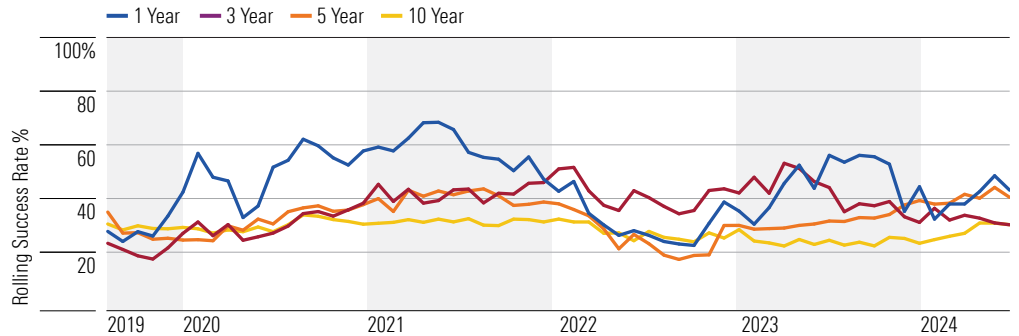
- ▶ Active global- or foreign-stock portfolios survived and beat their typical passive rival about 43% of the time in the 12 months ended June 2024, a step back from their 57% hit rate during the year ended June 2023.
- ▶ Five of this group's six categories posted lower active success rates than the year prior. Active foreign large-value funds fell hardest, plummeting 30 percentage points from their 75% success rate during the year ended June 2023. That was unusually high, though, and the category's 45% success rate this time around better represents its 10-year rate of 41%.
- ▶ Global- and foreign-stock categories have been kinder to active managers than US markets. Roughly three out of 10 active foreign-stock managers succeeded over the past 15 years, while just two out of 10 in the US could say the same. This advantage used to be wider, though. Squeeze the lookback window to 10 years, and the US stock success rate improves to 25% while the foreign clip stays near 30%, a trend worth keeping an eye on.

Exhibit 32 Foreign Large Blend

	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	195	92.8	86	98.8	10.9	11.0	10.4	10.9	44.6
3-Year	189	86.2	95	89.5	2.0	1.4	1.2	2.0	31.7
5-Year	174	76.4	85	87.1	6.4	6.1	5.8	5.9	42.0
10-Year	173	64.7	41	80.5	4.4	4.2	4.0	4.2	31.8
15-Year	182	47.3	37	67.6	7.1	6.4	6.3	6.4	31.9
20-Year	161	36.6	21	47.6	6.2	5.5	5.3	5.4	23.6
Performance by Fee Quintile									
(Trailing 10 Years)									
20th Percentile	33	63.6	8	100.0	4.0	4.2	4.6	4.3	45.5
40th Percentile	36	69.4	7	85.7	4.8	3.8	4.1	3.7	30.6
60th Percentile	34	70.6	9	88.9	3.9	4.4	4.0	5.1	29.4
80th Percentile	34	61.8	8	75.0	4.1	3.6	3.9	4.2	38.2
100th Percentile	35	60.0	9	55.6	3.1	3.9	3.5	3.7	17.1

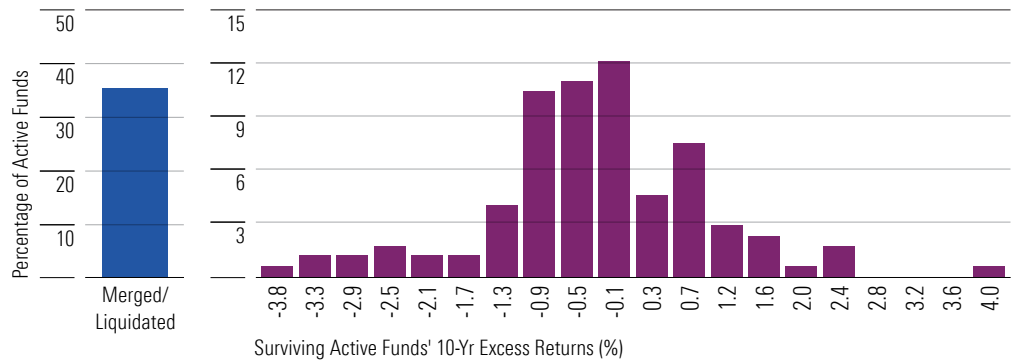
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 33 Rolling Success Rates for Surviving Active Foreign Large-Blend Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 34 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Foreign Large-Blend Funds



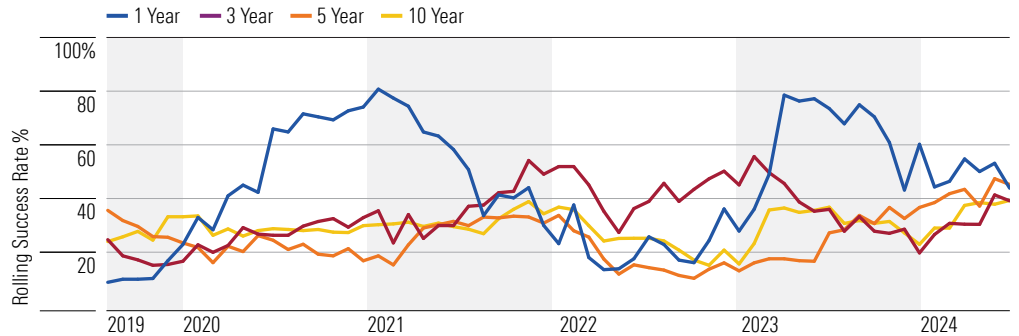
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 35 Foreign Large Value

	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	97	95.9	39	100.0	9.5	12.2	10.5	11.3	45.4
3-Year	91	83.5	37	94.6	3.6	4.6	3.7	3.9	40.7
5-Year	92	73.9	36	83.3	6.9	6.4	6.4	5.8	46.7
10-Year	98	59.2	17	76.5	4.2	3.0	3.4	3.2	40.8
15-Year	96	49.0	4	50.0	6.5	5.7	5.9	6.0	26.0
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	17	47.1	4	75.0	3.8	3.5	3.8	4.4	41.2
40th Percentile	19	57.9	2	100.0	4.3	2.6	3.6	2.4	47.4
60th Percentile	20	75.0	3	100.0	5.3	3.1	3.2	3.2	35.0
80th Percentile	19	68.4	3	66.7	4.0	3.3	3.8	3.2	47.4
100th Percentile	20	45.0	5	60.0	3.3	2.2	2.9	2.6	30.0

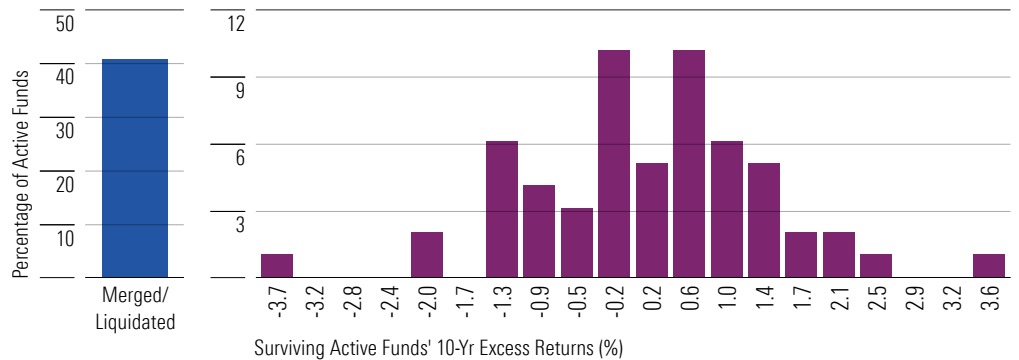
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 36 Rolling Success Rates for Surviving Active Foreign Large-Value Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 37 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Foreign Large-Value Funds



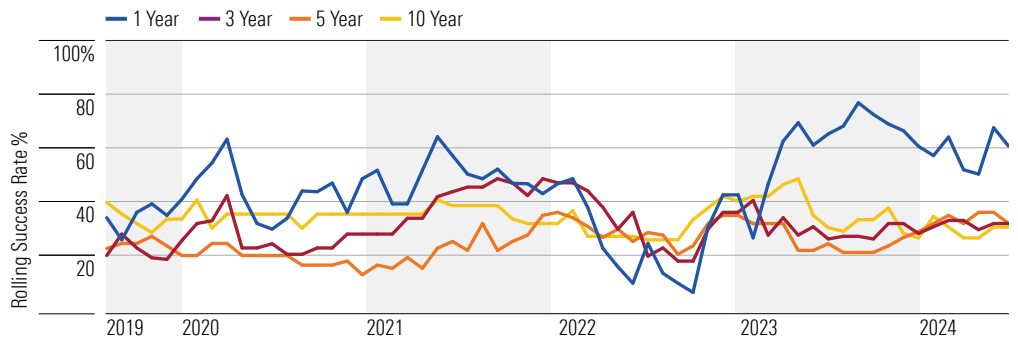
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 38 Foreign Small/Mid-Blend

	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	29	96.6	7	100.0	10.9	8.4	9.3	9.3	62.1
3-Year	27	74.1	7	100.0	-0.6	-2.7	-2.3	-1.2	33.3
5-Year	33	51.5	8	100.0	5.5	4.5	4.4	5.3	33.3
10-Year	25	48.0	8	87.5	3.7	3.8	3.5	3.9	32.0
15-Year	17	64.7	6	66.7	7.1	7.5	7.4	7.1	35.3
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	5	80.0	2	100.0	4.2	3.3	3.5	3.2	40.0
40th Percentile	5	20.0	1	100.0	4.0	4.2	3.8	4.2	20.0
60th Percentile	5	20.0	2	50.0	2.3	4.2	3.1	4.1	20.0
80th Percentile	4	100.0	1	100.0	3.4	4.1	4.0	4.1	75.0
100th Percentile	6	33.3	2	100.0	4.4	3.4	3.4	4.0	16.7

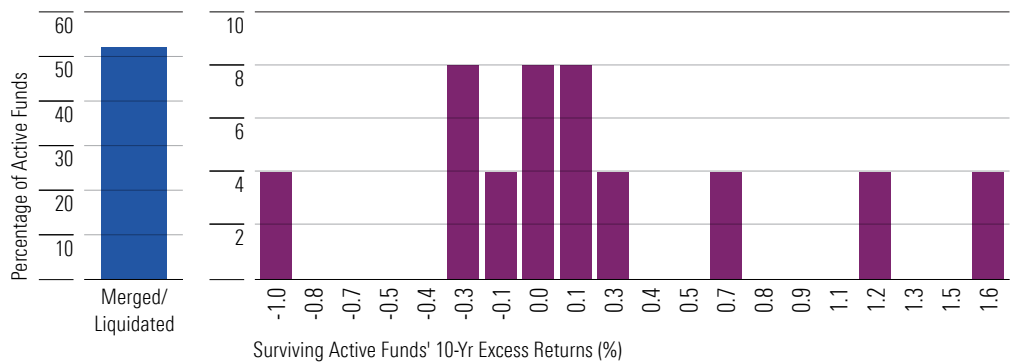
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 39 Rolling Success Rates for Surviving Active Foreign Small/Mid-Blend Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 40 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Foreign Small/Mid-Blend Funds



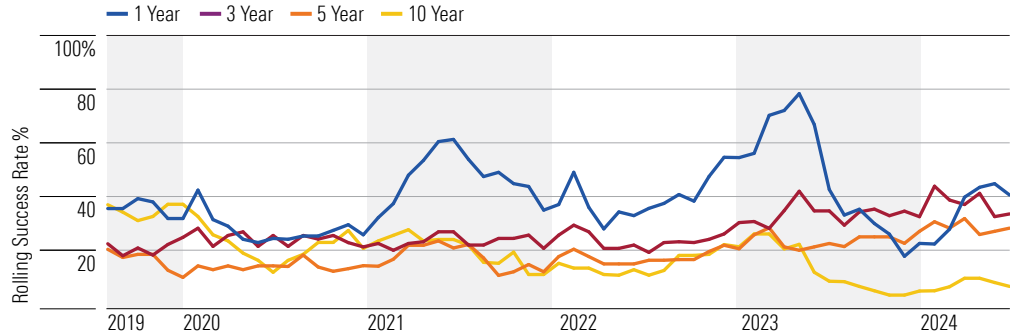
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 41 Global Large Blend

	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	93.5	25	92.0	17.1	18.8	14.4	16.4	42.1
3-Year	97	84.5	21	95.2	4.3	5.6	4.0	5.3	35.1
5-Year	84	82.1	20	90.0	9.6	10.4	9.1	10.4	29.8
10-Year	62	82.3	9	100.0	7.6	8.5	7.5	9.2	8.1
15-Year	38	84.2	6	100.0	9.6	10.5	9.6	11.1	13.2
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	13	92.3	2	100.0	7.5	8.1	7.8	7.8	0.0
40th Percentile	12	75.0	1	100.0	7.6	9.4	7.5	9.4	0.0
60th Percentile	13	76.9	2	100.0	7.9	9.0	7.6	9.2	15.4
80th Percentile	12	83.3	2	100.0	7.4	8.6	7.9	9.0	8.3
100th Percentile	12	83.3	2	100.0	6.6	11.4	6.7	10.4	16.7

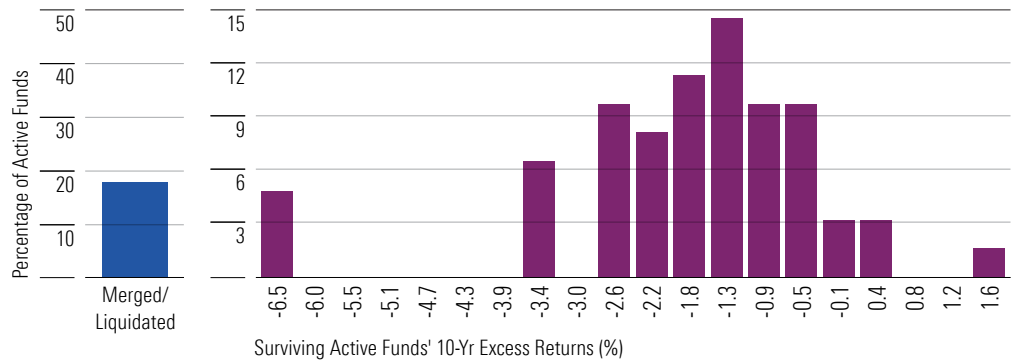
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 42 Rolling Success Rates for Surviving Active Global Large Blend Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 43 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Global Large Blend Fund



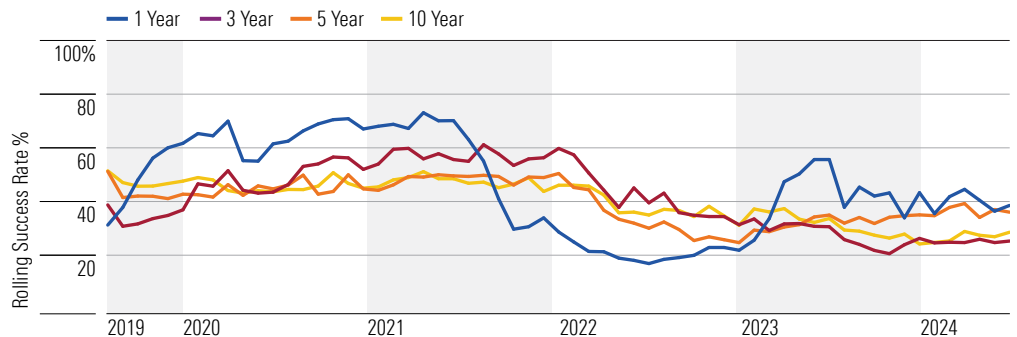
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 44 Diversified Emerging Markets

	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	237	91.6	76	92.1	12.2	12.4	11.8	13.2	40.1
3-Year	220	82.3	72	88.9	-5.0	-3.9	-4.8	-2.6	26.8
5-Year	237	67.5	72	75.0	3.5	3.4	3.6	3.4	37.6
10-Year	186	59.1	50	56.0	2.8	2.8	2.5	2.8	30.1
15-Year	102	63.7	15	73.3	5.4	4.6	4.8	4.8	31.4
20-Year	68	57.4	3	66.7	7.4	6.6	6.7	6.7	35.3
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	37	64.9	10	90.0	3.3	2.9	2.5	2.6	37.8
40th Percentile	37	64.9	10	50.0	3.7	3.5	3.0	3.3	32.4
60th Percentile	37	62.2	10	60.0	1.5	3.6	2.4	3.7	24.3
80th Percentile	38	44.7	10	40.0	2.0	2.1	2.2	2.0	28.9
100th Percentile	37	59.5	10	40.0	2.0	2.8	2.4	2.2	27.0

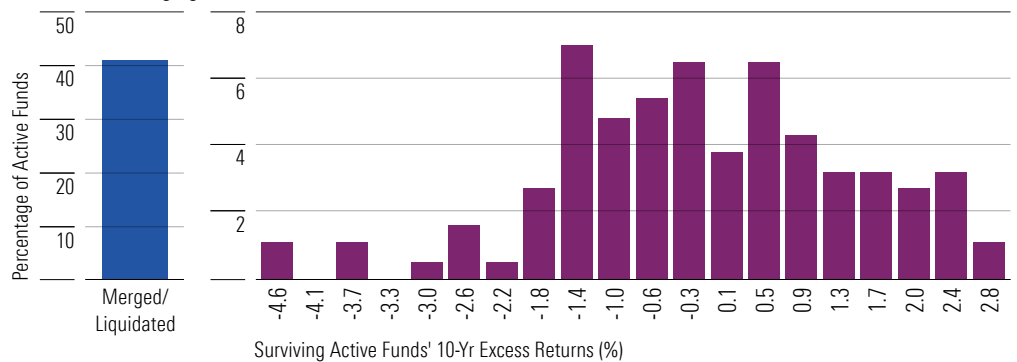
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 45 Rolling Success Rates for Surviving Active Diversified Emerging-Markets Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 46 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Diversified Emerging-Markets Funds



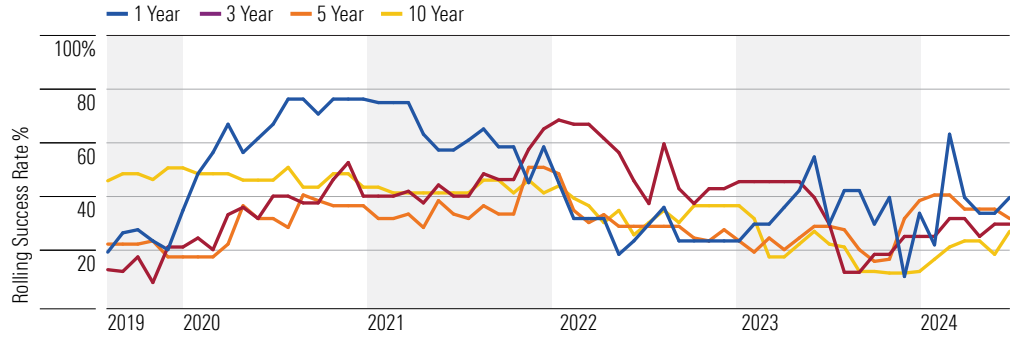
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 47 Europe Stock

	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	17	94.1	26	100.0	12.9	11.3	10.6	11.6	41.2
3-Year	16	93.8	27	96.3	2.9	3.6	1.0	3.4	31.3
5-Year	18	83.3	35	71.4	6.6	7.2	7.1	7.1	33.3
10-Year	21	57.1	14	78.6	3.7	4.5	4.4	4.3	28.6
15-Year	20	50.0	12	66.7	6.8	7.0	7.4	6.5	45.0
20-Year	39	25.6	9	66.7	6.0	5.8	6.3	5.4	20.5
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	4	75.0	3	100.0	3.9	4.3	4.2	4.2	25.0
40th Percentile	4	50.0	3	66.7	5.1	4.4	4.9	5.4	50.0
60th Percentile	4	75.0	2	100.0	3.0	7.2	3.7	6.2	0.0
80th Percentile	4	50.0	3	66.7	3.6	3.7	4.4	2.9	25.0
100th Percentile	5	40.0	3	66.7	4.1	2.8	5.2	3.2	40.0

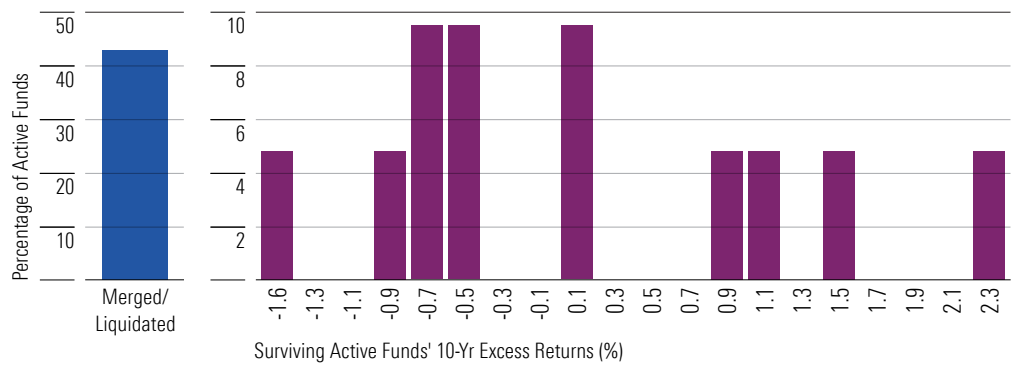
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 48 Rolling Success Rates for Surviving Active Europe-Stock Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 49 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Europe-Stock Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Real Estate

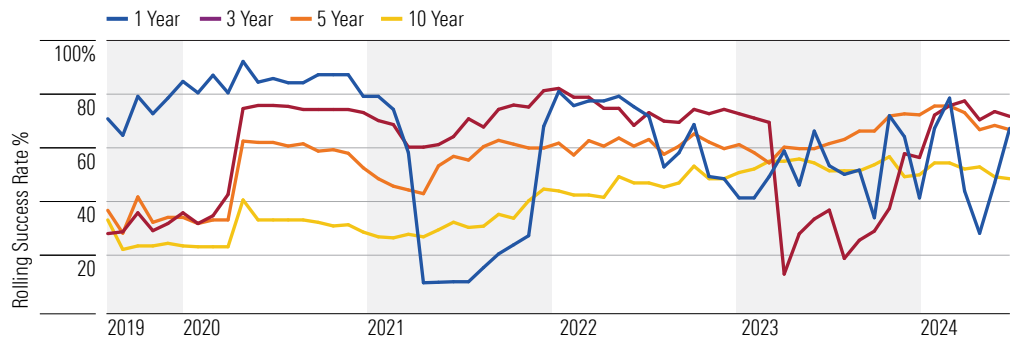
- ▶ Actively managed real estate funds survived and beat their average index-tracking peer 51% of the time over the decade through June 2024. It's the only category group whose 10-year success ratio exceeds 50%.
- ▶ Active success rates in the global real estate category fluctuate dramatically over short horizons. That owes to the diversity of funds that constitute it. Some invest exclusively outside the US, while others are truly global. Disparate returns between domestic and foreign real estate securities can whipsaw active managers' relative results. That explains how in 2023, active global real estate funds boosted their winning percentage to 71% from 20% in the year prior.

Exhibit 50 US Real Estate

	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	64	95.3	32	93.8	6.3	5.0	5.8	4.9	68.8
3-Year	56	87.5	31	93.5	-1.1	-2.5	-1.8	-2.6	73.2
5-Year	63	79.4	29	89.7	3.8	2.6	3.5	1.7	68.3
10-Year	68	61.8	19	73.7	5.7	5.1	5.2	4.4	50.0
15-Year	76	55.3	12	66.7	11.0	11.0	9.9	10.6	31.6
20-Year	67	52.2	5	80.0	7.4	7.3	6.8	7.1	25.4
Performance by Fee Quintile									
(Trailing 10 Years)									
20th Percentile	13	61.5	4	100.0	5.8	5.1	5.5	4.6	53.8
40th Percentile	14	42.9	4	75.0	6.1	4.9	5.0	3.3	42.9
60th Percentile	14	64.3	1	100.0	5.4	5.4	5.6	5.4	57.1
80th Percentile	13	76.9	6	50.0	5.9	4.4	5.2	5.3	61.5
100th Percentile	14	71.4	4	75.0	5.1	4.3	4.8	3.7	42.9

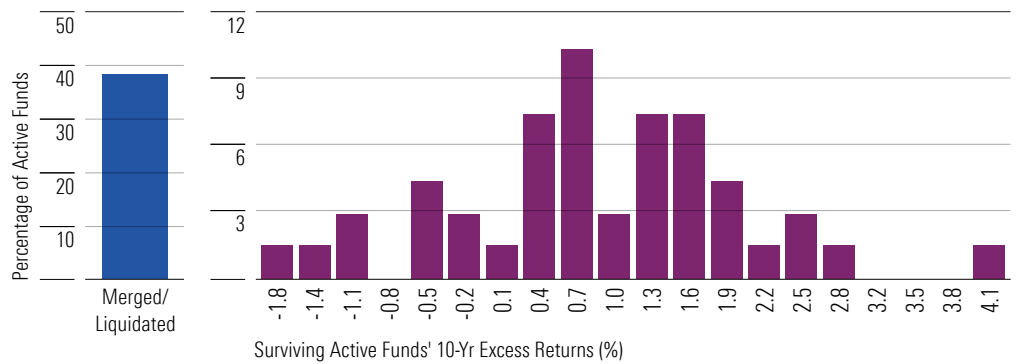
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 51 Rolling Success Rates for Surviving Active US Real Estate Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 52 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active US Real Estate Funds



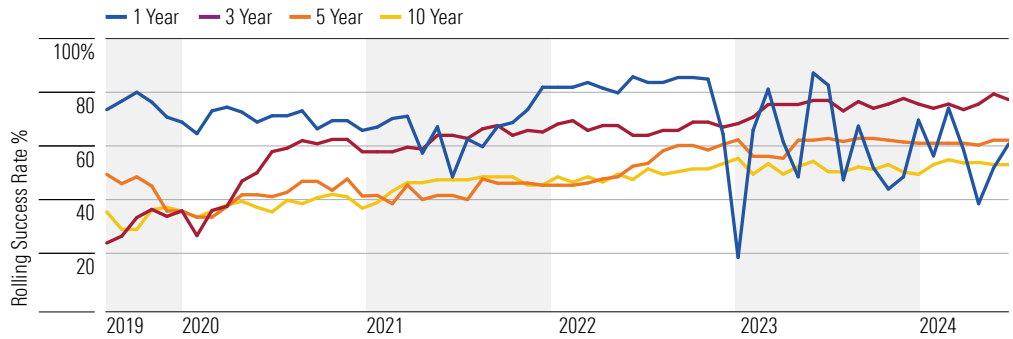
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 53 Global Real Estate

	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	45	91.1	17	94.1	4.9	4.8	5.3	4.1	62.2
3-Year	47	85.1	11	100.0	-4.7	-6.3	-4.4	-6.8	78.7
5-Year	55	67.3	13	92.3	0.1	-2.1	0.5	-2.0	63.6
10-Year	55	56.4	10	80.0	2.4	0.4	2.3	0.6	54.5
15-Year	46	45.7	11	63.6	6.4	5.4	6.2	5.2	41.3
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	9	55.6	1	100.0	2.4	0.3	2.1	0.3	44.4
40th Percentile	13	69.0	0	—	3.0	—	2.5	—	—
60th Percentile	10	80.0	4	50.0	2.7	-0.5	3.3	-0.2	80.0
80th Percentile	12	41.7	3	100.0	1.5	2.3	1.8	1.4	41.7
100th Percentile	11	36.4	2	100.0	3.0	-1.2	1.7	0.2	36.4

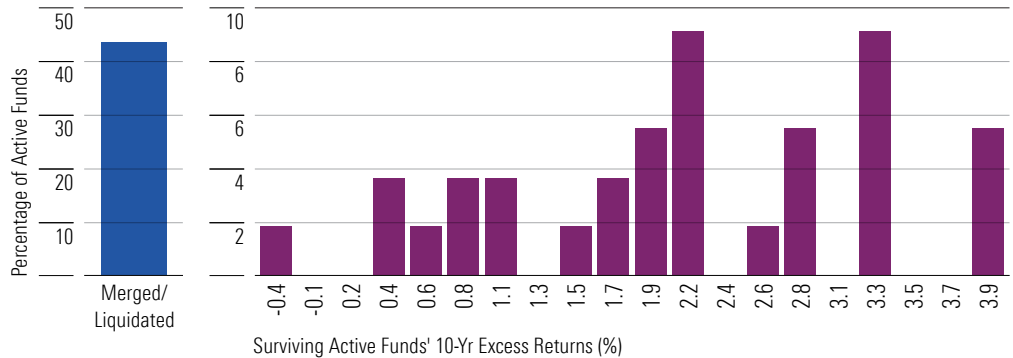
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 54 Rolling Success Rates for Surviving Active Global Real Estate Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 55 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Global Real Estate Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Fixed Income

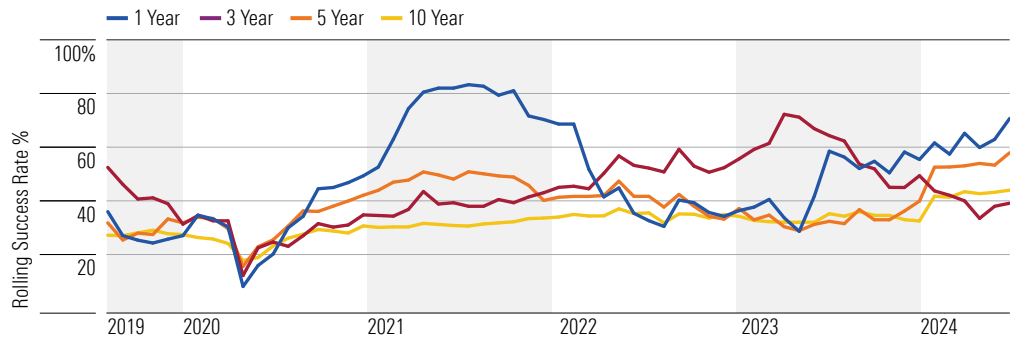
- ▶ Roughly two out of every three active bond funds survived and beat their average passive category peer in the 12 months through June 2024. Their 67% winning rate led all category groups in the trailing year.
- ▶ Actively managed funds in the intermediate core bond category tend to court more credit risk and sport shorter durations than index offerings. That posture was ideal during the year ended June 2024 as credit spreads narrowed and persistent inflation pushed back the timeline for interest-rate cuts. Indeed, active intermediate core bond funds notched a 72% success rate over that span, tops among Morningstar Categories.
- ▶ Active bond funds have fared relatively well in the long run. More than 38% of them succeeded over the past 15 years, more than any other category group. And investors have found the winners: Asset-weighted returns on active funds exceeded the indexed payoffs across all three fixed-income categories.
- ▶ Survival has meant success for most active fixed-income strategies. Forty-eight percent that existed at the start of the trailing 15-year period survived it. The 38% overall success rate means that 80% of the surviving group outperformed the index composite.

Exhibit 56 Intermediate Core 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	133	98.5	34	97.1	3.2	2.7	3.1	2.7	72.2
3-Year	123	88.6	31	96.8	-2.6	-3.0	-2.8	-2.9	40.7
5-Year	106	83.0	32	90.6	0.3	-0.2	0.0	-0.3	59.4
10-Year	134	56.0	26	84.6	1.6	1.3	1.5	1.2	45.5
15-Year	189	37.0	18	61.1	2.9	2.5	2.6	2.3	29.1
20-Year	239	23.0	19	42.1	2.8	3.1	2.6	2.8	15.9
Performance by Fee Quintile									
(Trailing 10 Years)									
20th Percentile	23	52.2	5	80.0	1.9	1.3	1.7	1.3	52.2
40th Percentile	28	60.7	5	100.0	1.4	1.4	1.4	1.3	46.4
60th Percentile	26	65.4	5	100.0	1.5	0.8	1.6	1.2	53.8
80th Percentile	27	59.3	5	60.0	1.4	1.2	1.4	1.2	51.9
100th Percentile	27	40.7	6	83.3	1.4	1.0	1.1	0.9	25.9

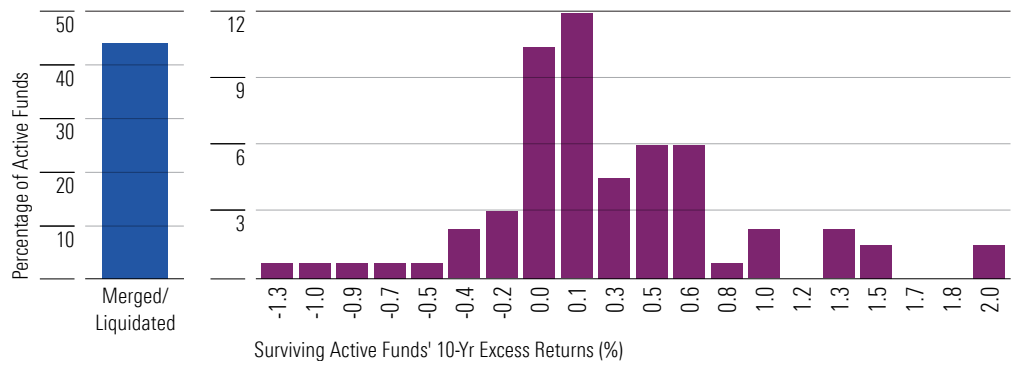
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 57 Rolling Success Rates for Surviving Active Intermediate Core Bond Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 58 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Intermediate Core Bond Funds



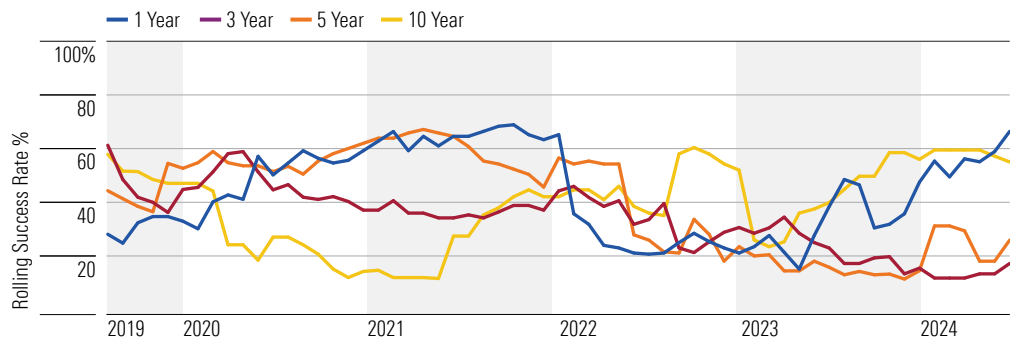
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 59 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	53	90.6	31	90.3	5.3	5.0	5.3	4.8	67.9
3-Year	48	87.5	30	80.0	-2.6	-2.7	-2.6	-2.2	18.8
5-Year	51	78.4	25	80.0	0.8	0.8	1.0	1.1	27.5
10-Year	46	76.1	25	52.0	2.4	2.3	2.3	2.0	56.5
15-Year	30	76.7	5	100.0	4.7	4.1	4.3	4.1	60.0
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	7	57.1	5	40.0	2.4	2.6	2.5	1.3	57.1
40th Percentile	6	83.3	5	100.0	2.5	2.3	2.4	2.2	66.7
60th Percentile	12	58.3	5	100.0	2.6	2.2	2.3	2.3	33.3
80th Percentile	11	91.0	5	0.0	2.0	—	1.8	—	—
100th Percentile	10	90.0	5	20.0	2.2	4.1	2.4	4.2	60.0

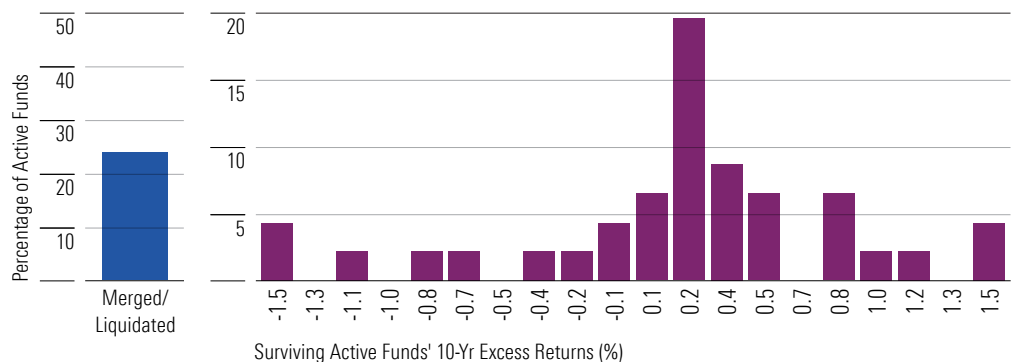
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 60 Rolling Success Rates for Surviving Active Corporate Bond Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 61 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active Corporate Bond Funds



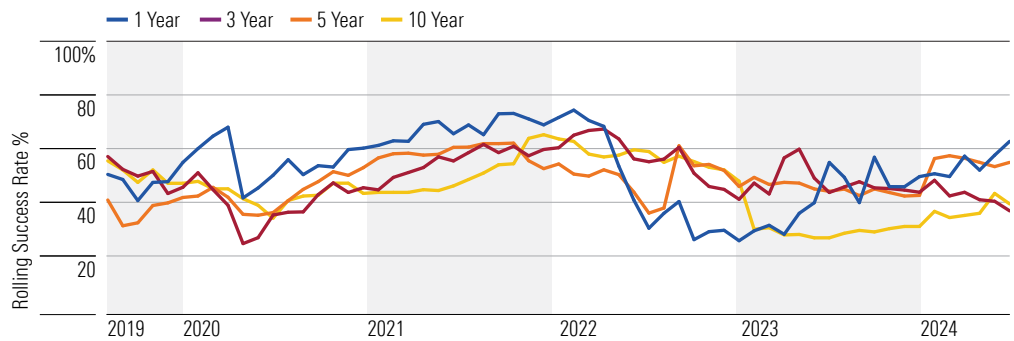
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 62 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	190	93.2	57	91.2	10.4	9.7	9.9	9.5	64.2
3-Year	180	86.1	45	75.6	1.9	1.3	1.6	1.7	38.3
5-Year	188	78.2	39	69.2	3.8	3.1	3.5	3.2	56.4
10-Year	176	69.9	17	47.1	3.8	3.3	3.4	3.5	40.9
15-Year	143	63.6	3	100.0	6.9	6.2	6.4	6.0	52.4
Performance by Fee Quintile (Trailing 10 Years)									
20th Percentile	31	67.7	2	50.0	4.2	3.2	3.7	3.4	38.7
40th Percentile	36	75.0	3	100.0	3.7	3.2	3.7	4.1	50.0
60th Percentile	33	75.8	3	0.0	3.7	—	3.4	—	—
80th Percentile	33	75.8	4	0.0	3.7	—	3.6	—	—
100th Percentile	37	59.5	5	80.0	3.4	3.3	2.9	3.5	24.3

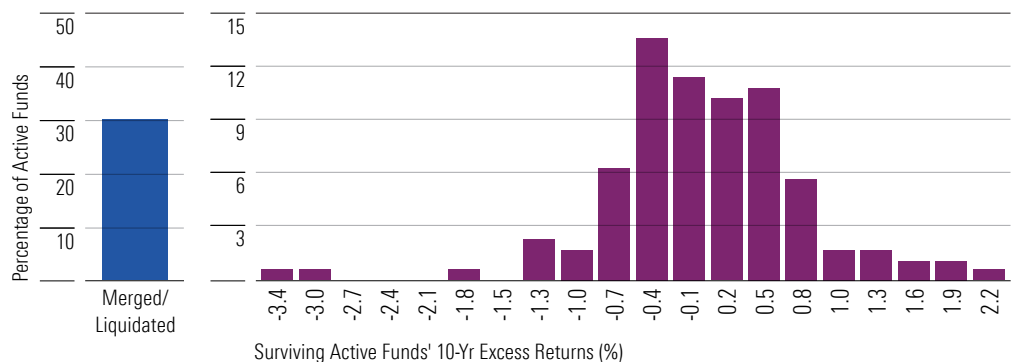
Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 63 Rolling Success Rates for Surviving Active High-Yield Bond Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Exhibit 64 Mortality and Distribution of 10-Year Annualized Excess Returns for Surviving Active High-Yield Bond Funds



Source: Morningstar. Data and calculations as of June 30, 2024.

Appendix A

Summary of Results for the Periods Ended June 30, 2023 and Dec. 31, 2023.

Exhibit 65 Summary Results for the Period Ended Dec. 31, 2023

Category	Active Funds' Success Rates by Category (%)							10-Year	10-Year
	1-Year	3-Year	5-Year	10-Year	15-Year	20-Year	(Lowest Cost)	(Highest Cost)	
US Large Blend	46.8	39.5	30.7	12.7	8.5	10.4	18.6	9.3	
US Large Value	49.1	34.3	34.5	12.2	7.2	12.8	16.7	13.1	
US Large Growth	53.2	35.7	25.6	11.2	2.1	4.9	14.6	3.4	
US Mid Blend	48.7	57.8	37.0	15.2	17.8	10.3	22.7	4.3	
US Mid Value	45.4	30.2	45.9	7.5	7.8	20.4	5.3	0.0	
US Mid Growth	33.6	43.4	55.6	38.9	23.1	18.5	38.1	29.5	
US Small Blend	57.1	55.7	44.2	25.5	24.9	21.3	35.1	30.0	
US Small Value	34.3	38.8	41.0	25.0	18.8	22.0	33.3	28.6	
US Small Growth	30.1	33.3	51.5	41.3	28.2	16.7	50.0	40.5	
Foreign Large Blend	45.9	32.6	40.8	24.9	23.3	21.6	33.3	21.6	
Foreign Large Value	61.7	21.3	38.2	24.5	11.1	—	38.9	5.3	
Foreign Small/Mid Blend	62.1	29.6	30.3	28.0	33.3	—	50.0	20.0	
Global Large Blend	24.1	34.0	28.6	6.3	15.4	18.2	0.0	15.4	
Diversified Emerging Markets	44.8	27.8	36.6	25.7	27.3	23.5	35.3	22.9	
Europe Stock	35.3	26.7	40.0	13.6	27.3	21.4	20.0	0.0	
US Real Estate	42.9	57.9	73.8	51.5	27.0	24.2	46.2	35.7	
Global Real Estate	71.1	77.1	62.5	50.9	29.2	—	50.0	36.4	
Intermediate Core Bond	56.9	50.9	41.4	34.0	26.9	14.2	53.8	24.1	
Corporate Bond	49.0	17.0	16.1	57.5	59.3	—	50.0	75.0	
High-Yield Bond	51.1	45.3	44.1	32.5	51.4	—	43.3	11.8	

Source: Morningstar. Data and calculations as of December 31, 2023..

Exhibit 66 Summary Results for the Period Ended June 30, 2023

Category	Active Funds' Success Rates by Category (%)							10-Year	10-Year
	1-Year	3-Year	5-Year	10-Year	15-Year	20-Year	(Lowest Cost)	(Highest Cost)	
US Large Blend	50.4	41.1	29.5	9.8	9.3	9.1	16.2	5.6	
US Large Value	54.2	39.7	29.5	12.0	5.5	16.1	15.0	8.5	
US Large Growth	54.5	32.4	30.8	10.1	2.1	4.9	16.3	6.8	
US Mid Blend	48.7	56.9	37.2	14.0	16.7	8.7	27.3	3.8	
US Mid Value	64.1	40.7	42.9	9.4	11.7	16.2	5.0	9.1	
US Mid Growth	56.1	36.8	63.0	46.1	27.3	9.0	46.3	35.7	
US Small Blend	74.7	57.3	43.3	28.3	19.5	23.4	45.9	27.5	
US Small Value	57.3	32.8	39.8	33.0	21.9	23.6	28.6	23.8	
US Small Growth	62.3	32.4	57.4	45.8	27.9	19.3	47.2	46.3	
Foreign Large Blend	57.6	45.6	33.1	26.0	23.9	17.6	40.6	22.2	
Foreign Large Value	75.0	37.5	28.7	38.3	23.7	—	47.1	25.0	
Foreign Small/Mid Blend	66.7	27.6	25.8	31.8	—	—	40.0	40.0	
Global Large Blend	44.1	36.2	24.1	10.0	11.4	23.8	8.3	8.3	
Diversified Emerging Markets	57.1	32.1	36.5	35.2	25.6	20.0	45.5	27.3	
Europe Stock	31.3	31.3	30.4	23.8	40.9	19.6	25.0	40.0	
US Real Estate	54.8	38.3	63.1	52.9	30.3	24.1	50.0	42.9	
Global Real Estate	84.1	78.4	64.3	51.9	33.3	—	36.4	45.5	
Intermediate Core Bond	60.0	65.8	33.9	36.7	22.0	13.1	48.1	20.0	
Corporate Bond	40.0	24.5	17.3	41.5	53.6	—	33.3	44.4	
High-Yield Bond	56.4	45.2	45.6	28.3	—	—	46.4	6.5	

Source: Morningstar. Data and calculations as of June 30, 2023.

Appendix B — Methodology

Data Source

Morningstar's US 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 at the beginning of the relevant period (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 date 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-, 10-, 15-, or 20-year period) 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 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-, 10-, 15-, or 20-year period).

Asset-Weighted Returns

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

Equal-Weighted Returns

In order 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 sample 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.

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 passive 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 funds 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 number of funds at the beginning of the period (using the same number from the denominator of the survivorship calculations).

Fees

We rank each fund by its annual report expense ratio from the year prior to the start of the sample period and group them into quintiles. We then apply the same steps described above to calculate the success rates for funds in each quintile. To be counted in the starting number of funds used for purposes of calculating the survivorship and success rates, each fund must have an annual report expense ratio at the beginning of the sample period.

Excess Returns

We measure surviving active funds' excess returns relative to the equal-weighted average passive fund return in each category.

Appendix C — How Our Approach Compares With Others'

How is our approach different from others'?

Our "benchmark" for measuring success is different from others'. We measure active managers' success relative to investable passive alternatives in the same category. For example, an active manager in the US large-blend category is measured against a composite of the performance of its index mutual fund and ETF peers (for example, Vanguard Total Stock Market Index VTSMX, SPDR S&P 500 ETF SPY, and so on). Specifically, we calculate the equal- and asset-weighted performance of the cohort of index-tracking (that is, "passive") options in each category that we examine and use that figure as the hurdle that defines success or failure for the active funds in the same category. The magnitude of outperformance or underperformance does not influence the success rate. However, this data is reflected in the average return figures for the funds in each group, which we report separately.

We believe this is a better benchmark because it reflects the performance of actual investable options and not an index. One cannot directly invest in indexes. Their performance does not account for the real costs associated with replicating their performance and packaging and distributing them in an investable format. Also, the success rate for active managers can vary depending on one's choice of benchmark. For example, the rate of success among US large-blend fund managers may vary depending on whether one uses the S&P 500 or the Russell 1000 Index as the basis for comparison. By using a composite of investable alternatives within funds' relevant categories as our benchmark, we account for the frictions involved in index investing (fees, as well as others) and we mitigate the effects that might stem from cherry-picking a single index as a benchmark. The net result is a much fairer comparison of how investors in actively managed funds have fared relative to those who have opted for a passive approach.

We measure each fund's performance based on the asset-weighted average performance of all of its share classes in calculating success rates. This approach reflects the experience of the average dollar invested in each fund. We then rank these composite fund returns from highest to lowest and count the number of funds with returns exceeding the equal-weighted average of the passive funds in the category. The success rates are defined as the ratio of these figures to the number of funds that existed at the beginning of the period. Given this unique approach, our field of study is narrower than others, as the universe of categories that contained a sufficient set of investable index-tracking funds was fairly narrow at the end of 2004. We expect the number of categories we include in this study will expand over time.

We cut along the lines of cost. Cost matters. Fees are one of the best predictors of future fund performance. We have sliced our universe into fee quintiles to highlight this relationship. ■■

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