
Morningstar's European Active/Passive Barometer

Midyear 2019

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Executive Summary

The Morningstar Active/Passive Barometer is a semiannual report that measures the performance of Europe-domiciled active funds against passive peers in their respective Morningstar Categories.

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

- ▶ It evaluates active funds not versus a costless index but against a composite of actual passive funds. In this way, the "benchmark" reflects the actual, net-of-fee performance of passive funds.
- ▶ It assesses active funds based on their beginning-of-period category classification, to better simulate the funds an investor would have had to choose from 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 the passive composite.

The Active/Passive Barometer is also comprehensive, spanning approximately 10,840 unique active and passive Europe-domiciled funds that account for approximately EUR 2.7 trillion in assets, or about one third of the total European fund market.

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

Key Takeaways

- ▶ European stock-pickers' long-term success rates are low. A majority of active managers both survived and outperformed their average passive peer in just two of the 66 categories that we examined over the decade through June 2019.
- ▶ Over the 10 years through June 2019, active managers' success rate was less than 25% in nearly two thirds of the categories surveyed.
- ▶ Active funds' 10-year success rates in the largest equity categories (as measured by assets under management) were among the lowest of all the categories we examined. A small percentage (between 9.1% and 35.5%) of managers achieved long-term success in the Europe large-cap blend, global large-cap blend, and global emerging-markets categories. The same subpar result was echoed across the two largest ex-Europe single-country categories — US large-cap blend and Japan large cap — in which active managers achieved success rates of just 8.8% and 16.9%, respectively.
- ▶ Active managers fared better in some categories than others. For example, those in the UK mid-cap category consistently outpaced their average passive peer. Over three fourths of active funds available

to investors in this category 10 years ago both survived and outperformed their average passive peer over the ensuing decade. Beat rates for the Pacific ex-Japan equity category were slightly lower, but still favor active. Half of active Pacific ex-Japan equity funds survived and outperformed their average passive competitor over the past 10 years.

- ▶ Survivorship rates are positively correlated with odds for success. The biggest driver of active funds' failure is their inability to survive, which is often a result of lacklustre performance.
- ▶ Comparing mortality rates between active and passive funds shows that the latter have had better odds of survival over the long term. The contrast is starker over longer lookback periods.
- ▶ Active fixed-income managers' success rates have also been low. Over the past decade, less than a fourth managed to both outlive and outsmart their average passive peer in 11 of the 15 categories we studied.

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

Category Name	1-Year	3-Year	5-Year	10-Year
Asia ex Japan Equity	40.5	33.2	40.9	27.4
Asia-Pacific ex-Japan Equity	17.1	43.8	34.8	8.6
Asia-Pacific inc. Japan Equity	10.5	17.4	25.0	14.6
Austria Equity	53.8	8.3	9.1	14.3
Brazil Equity	40.9	26.1	15.0	12.5
BRIC Equity	35.7	43.5	16.7	5.3
Canada Equity	28.6	0.0	22.2	10.0
China Equity	22.6	43.8	43.8	35.6
Denmark Equity	31.4	12.1	40.0	26.7
Emerging Europe ex-Russia Equity	13.3	0.0	23.1	10.9
Europe ex-UK Large-Cap Equity	18.8	33.6	39.1	25.0
Europe Large-Cap Blend Equity	19.0	14.2	21.9	15.5
Europe Large-Cap Growth Equity	10.4	2.6	3.9	9.8
Europe Large-Cap Value Equity	34.3	13.2	30.4	17.9
Europe Small-Cap Equity	47.4	57.9	68.8	35.3
Eurozone Large-Cap Equity	14.7	14.6	20.8	20.3
France Large-Cap Equity	4.9	7.1	12.3	20.9
Germany Large-Cap Equity	23.9	34.4	38.7	29.1
Global Emerging Markets Equity	41.1	23.9	33.7	35.5
Global Large-Cap Blend Equity	21.4	16.0	15.2	9.1
Global Large-Cap Value Equity	45.1	16.4	39.9	13.9
Hong Kong Equity	58.6	64.9	51.6	22.2
India Equity	17.3	51.1	66.3	47.6
Islamic Equity - Other	41.9	24.4	25.0	7.1
Italy Equity	28.1	30.0	55.6	34.8
Japan Large-Cap Equity	33.3	27.6	25.9	16.9
Japan Small/Mid-Cap Equity	23.7	84.4	66.7	36.4
Korea Equity	28.6	5.9	17.6	11.8
Latin America Equity	51.5	33.3	26.1	31.4
Netherlands Equity	0.0	14.3	18.2	10.0
Nordic Equity	25.0	53.8	43.3	35.8
Norway Equity	41.2	32.7	62.3	43.6
Pacific ex-Japan Equity	25.0	18.2	20.0	50.0
Property - Indirect Asia	21.7	0.0	12.5	15.4
Property - Indirect Europe	60.3	52.5	51.9	19.4
Property - Indirect Eurozone	54.2	39.1	44.0	18.2
Property - Indirect Global	29.7	42.2	27.5	12.1
Russia Equity	2.4	29.4	35.5	30.9
South Africa & Namibia Equity	20.9	13.0	23.6	20.8
Spain Equity	5.8	33.3	34.6	32.7
Sweden Equity	22.9	42.9	50.0	26.3
Switzerland Large-Cap Equity	21.2	19.2	35.9	19.4
Switzerland Small/Mid-Cap Equity	30.4	51.1	52.3	47.1
Taiwan Large-Cap Equity	9.1	31.8	18.5	20.6
Turkey Equity	37.5	9.5	11.5	11.8
UK Large-Cap Equity	27.7	43.1	40.4	33.1
UK Mid-Cap Equity	42.9	60.0	84.6	77.8
US Large-Cap Blend Equity	26.0	21.7	20.1	8.8
US Large-Cap Growth Equity	56.9	14.2	5.2	1.5
US Large-Cap Value Equity	27.5	36.2	19.8	7.2
US Small-Cap Equity	70.6	53.8	38.7	27.5

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 2 Active Fixed-Income Funds' Success Rate by Category (%)

Category Name	1-Year	3-Year	5-Year	10-Year
CHF Bond	33.6	48.7	26.5	15.8
EUR Bond - Long Term	46.9	22.9	21.2	15.7
EUR Corporate Bond	48.1	58.2	40.8	47.0
EUR Diversified Bond	36.4	21.6	17.0	15.1
EUR Government Bond	38.4	20.7	24.3	20.7
EUR Government Bond - Short Term	48.7	39.1	30.5	29.8
EUR Inflation-Linked Bond	15.8	8.6	10.1	14.5
Global Bond	52.3	50.3	38.5	45.5
GBP Government Bond	57.9	43.8	18.2	7.9
GBP Inflation-Linked Bond	63.2	47.1	27.3	23.1
ILS Government Bond	2.7	5.3	1.8	10.7
JPY Bond	60.0	25.0	41.7	5.9
USD Corporate Bond	41.3	33.8	36.5	27.3
USD Diversified Bond	8.5	0.7	8.5	16.5
USD Government Bond	21.6	31.3	31.4	12.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 3 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 (%)	
Period									
1-Year	205	92.2	21	95.2	-0.9	0.8	-0.7	0.2	40.5
3-Year	205	83.4	23	82.6	11.5	12.6	9.6	10.9	33.2
5-Year	198	71.2	20	70.0	7.4	5.9	6.2	5.3	40.9
10-Year	157	55.4	8	62.5	8.5	8.0	7.9	8.0	27.4

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 4 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 (%)	
Period									
1-Year	117	93.2	9	77.8	0.8	6.5	2.4	5.3	17.1
3-Year	130	84.6	11	45.5	10.3	11.2	10.5	10.0	43.8
5-Year	138	63.8	13	30.8	5.1	7.8	6.0	5.9	34.8
10-Year	152	42.8	10	20.0	7.1	9.7	7.9	10.4	8.6

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 5 Asia-Pacific including 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 (%)	
Period									
1-Year	114	91.2	19	89.5	-3.0	-1.4	-3.5	1.8	10.5
3-Year	121	77.7	20	80.0	9.9	9.8	6.9	8.7	17.4
5-Year	124	66.1	15	73.3	4.3	5.7	4.9	6.2	25.0
10-Year	158	45.6	7	100.0	6.2	7.4	6.3	8.0	14.6

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 6 Austria 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 (%)	
Period									
1-Year	13	84.6	4	75.0	-6.6	-6.4	-6.9	-7.2	53.8
3-Year	12	83.3	4	75.0	10.8	15.0	12.2	14.6	8.3
5-Year	11	90.9	3	100.0	3.7	6.0	4.6	5.9	9.1
10-Year	7	57.1	3	66.7	4.9	5.9	5.3	5.7	14.3

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 7 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 (%)	
Period									
1-Year	22	90.9	8	87.5	38.1	38.5	36.4	38.8	40.9
3-Year	23	78.3	9	66.7	15.7	14.8	14.1	15.5	26.1
5-Year	40	37.5	12	50.0	1.3	1.3	0.6	2.1	15.0
10-Year	16	43.8	7	28.6	-1.5	0.6	1.1	1.2	12.5

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 8 BRIC 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 (%)	
Period									
1-Year	14	100.0	3	66.7	10.4	7.3	10.7	12.9	35.7
3-Year	23	69.6	3	66.7	14.0	14.8	13.7	13.6	43.5
5-Year	36	55.6	6	33.3	5.7	6.3	6.2	7.5	16.7
10-Year	38	47.4	3	33.3	4.6	5.5	5.2	6.4	5.3

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 9 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 (%)	
Period									
1-Year	7	85.7	13	100.0	4.2	2.6	2.5	3.2	28.6
3-Year	8	75.0	14	92.9	6.2	8.0	5.9	8.0	0.0
5-Year	9	55.6	18	61.1	2.8	2.9	1.4	3.1	22.2
10-Year	10	30.0	3	66.7	6.1	6.3	5.0	6.2	10.0

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 10 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 (%)	
Period									
1-Year	124	93.5	23	91.3	-4.3	-5.8	-6.1	-3.5	22.6
3-Year	121	81.8	20	70.0	11.1	12.6	10.6	11.1	43.8
5-Year	121	70.2	20	65.0	7.3	6.9	6.8	6.1	43.8
10-Year	87	50.6	8	50.0	4.9	1.5	5.1	4.3	35.6

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 11 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 (%)	
Period									
1-Year	35	100.0	4	100.0	2.7	3.7	0.9	3.2	31.4
3-Year	33	93.9	4	100.0	6.5	6.7	6.3	8.3	12.1
5-Year	30	93.3	5	80.0	9.9	9.2	10.0	10.4	40.0
10-Year	30	70.0	3	66.7	15.0	14.5	14.7	14.9	26.7

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 12 Emerging Europe ex-Russia 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 (%)	
Period									
1-Year	30	86.7	4	75.0	3.6	9.4	2.8	9.6	13.3
3-Year	35	71.4	3	33.3	10.6	13.1	7.5	12.8	0.0
5-Year	39	56.4	5	20.0	4.6	2.6	2.9	3.4	23.1
10-Year	46	23.9	5	0.0	4.0	4.5	4.2	4.8	10.9

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 13 Europe ex-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 (%)	
Period									
1-Year	112	93.8	23	95.7	4.2	6.8	3.1	7.0	18.8
3-Year	110	77.3	17	94.1	10.9	10.7	10.3	10.8	33.6
5-Year	110	64.5	12	75.0	8.3	7.2	7.2	7.3	39.1
10-Year	108	43.5	6	83.3	10.0	9.4	9.8	9.7	25.0

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 14 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 (%)	
Period									
1-Year	641	94.4	131	93.9	0.8	4.1	0.4	4.2	19.0
3-Year	605	84.0	139	76.3	7.2	9.5	6.5	8.6	14.2
5-Year	570	74.2	93	71.0	4.6	5.6	3.8	5.0	21.9
10-Year	627	46.1	63	60.3	7.7	8.7	7.3	8.5	15.5

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 15 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 (%)	
Period									
1-Year	77	93.5	5	100.0	4.6	10.0	3.2	8.6	10.4
3-Year	76	89.5	3	66.7	8.6	9.1	7.5	12.2	2.6
5-Year	77	81.8	3	66.7	7.0	7.6	6.2	10.0	3.9
10-Year	61	54.1	3	66.7	9.8	10.6	9.3	11.8	9.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 16 Europe 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 (%)	
Period									
1-Year	108	92.6	13	92.3	-1.8	1.1	-2.2	-1.1	34.3
3-Year	114	85.1	13	69.2	6.5	7.9	6.2	8.5	13.2
5-Year	125	72.0	10	60.0	3.4	4.2	2.6	3.0	30.4
10-Year	251	45.8	20	30.0	7.2	8.0	6.8	7.8	17.9

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 17 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 (%)	
Period									
1-Year	152	97.4	7	100.0	-5.5	-5.1	-5.9	-5.3	47.4
3-Year	114	93.0	11	90.9	10.8	9.5	10.2	9.1	57.9
5-Year	93	88.2	8	62.5	9.2	5.3	8.4	6.5	68.8
10-Year	85	55.3	5	80.0	12.2	11.5	11.9	12.0	35.3

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 18 Eurozone 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 (%)	
Period									
1-Year	436	97.0	105	97.1	-0.2	4.3	-0.1	3.7	14.7
3-Year	445	86.5	105	81.9	7.9	10.0	7.7	9.8	14.6
5-Year	467	77.5	93	71.0	4.5	5.1	4.0	5.1	20.8
10-Year	587	53.8	85	50.6	7.3	7.6	6.7	7.5	20.3

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 19 France 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 (%)	
Period									
1-Year	123	93.5	20	95.0	0.6	6.9	-0.6	6.6	4.9
3-Year	126	81.0	24	75.0	8.7	12.2	8.7	12.0	7.1
5-Year	138	74.6	22	72.7	5.5	7.4	5.2	7.0	12.3
10-Year	148	60.8	30	46.7	7.8	8.9	7.7	8.6	20.9

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 20 Germany 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 (%)	
Period									
1-Year	67	94.0	27	96.3	-3.9	0.0	-3.5	-1.0	23.9
3-Year	61	88.5	28	85.7	7.8	7.9	6.9	7.2	34.4
5-Year	62	80.6	20	90.0	4.7	4.3	3.7	3.9	38.7
10-Year	79	55.7	15	66.7	10.1	9.5	9.1	9.1	29.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 21 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 (%)	
Period									
1-Year	550	93.5	98	95.9	2.7	3.0	2.6	3.2	41.1
3-Year	532	83.8	81	90.1	10.7	11.3	8.8	10.3	23.9
5-Year	514	72.0	65	84.6	3.9	5.2	4.1	4.2	33.7
10-Year	299	61.5	13	69.2	6.5	4.6	6.1	5.7	35.5

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 22 Global 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 (%)	
Period									
1-Year	1683	93.8	187	98.9	7.4	8.8	4.1	7.7	21.4
3-Year	1565	81.3	153	86.9	13.1	12.3	9.1	11.6	16.0
5-Year	1357	71.3	113	79.6	11.1	10.8	7.0	9.3	15.2
10-Year	1411	44.6	55	56.4	11.2	12.3	8.7	11.2	9.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 23 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 (%)	
Period									
1-Year	195	91.8	8	100.0	5.3	2.2	1.3	2.1	45.1
3-Year	201	83.6	8	87.5	9.5	11.3	8.2	10.8	16.4
5-Year	193	69.9	7	57.1	9.0	8.5	6.6	6.5	39.9
10-Year	216	48.6	4	100.0	10.5	10.1	9.0	10.6	13.9

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 24 Hong Kong 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 (%)	
Period									
1-Year	16	93.8	12	91.7	-1.7	2.4	-1.4	0.3	31.3
3-Year	18	88.9	14	64.3	14.0	14.6	13.2	14.1	27.8
5-Year	17	82.4	15	40.0	6.8	7.7	6.2	7.6	5.9
10-Year	16	56.3	3	33.3	8.0	7.8	6.3	8.1	18.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 25 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 (%)	
Period									
1-Year	98	87.8	13	100.0	4.2	7.9	2.6	7.0	17.3
3-Year	88	85.2	12	75.0	10.7	7.9	8.8	8.5	51.1
5-Year	83	80.7	11	72.7	7.8	5.5	8.6	5.8	66.3
10-Year	63	57.1	8	50.0	9.0	6.3	8.3	6.3	47.6

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 26 Islamic Equity—Other

	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 (%)	
Period									
1-Year	43	93.0	4	100.0	7.4	5.3	3.5	4.8	41.9
3-Year	45	77.8	4	100.0	0.3	-0.4	4.3	6.3	24.4
5-Year	32	75.0	7	57.1	1.0	1.0	1.7	3.0	25.0
10-Year	14	35.7	6	33.3	7.7	6.7	6.0	8.0	7.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 27 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 (%)	
Period									
1-Year	57	96.5	12	100.0	-2.9	-1.0	-2.6	-0.5	28.1
3-Year	50	86.0	9	88.9	9.8	11.7	10.4	11.7	30.0
5-Year	45	77.8	10	70.0	2.7	2.3	3.2	2.6	55.6
10-Year	66	42.4	8	50.0	5.0	3.9	5.1	4.2	34.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 28 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 (%)	
Period									
1-Year	228	92.5	100	98.0	-8.0	-6.3	-6.7	-5.3	33.3
3-Year	210	81.4	92	83.7	9.6	10.2	8.3	9.4	27.6
5-Year	228	67.5	71	78.9	5.5	6.2	6.6	6.7	25.9
10-Year	308	36.7	48	58.3	6.4	7.0	6.8	6.9	16.9

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 29 Japan 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 (%)	
Period									
1-Year	38	100.0	3	100.0	-15.8	-10.4	-13.3	-9.5	23.7
3-Year	32	93.8	3	100.0	9.2	7.0	9.7	6.7	84.4
5-Year	36	83.3	4	75.0	7.5	5.0	10.5	7.0	66.7
10-Year	55	40.0	6	50.0	8.6	5.4	10.5	7.0	36.4

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 30 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 (%)	
Period									
1-Year	14	85.7	10	80.0	-9.2	-8.0	-12.6	-8.3	28.6
3-Year	17	64.7	10	70.0	1.8	1.9	0.3	6.2	5.9
5-Year	17	64.7	10	60.0	-1.5	-0.5	-2.3	1.1	17.6
10-Year	17	47.1	29	72.4	1.4	6.0	2.9	5.9	11.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 31 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 (%)	
Period									
1-Year	68	85.3	7	85.7	22.8	18.6	20.3	19.2	51.5
3-Year	78	73.1	9	55.6	10.3	9.6	9.4	9.5	33.3
5-Year	88	59.1	10	50.0	2.0	-0.7	0.5	-0.2	26.1
10-Year	70	44.3	7	57.1	3.3	0.0	3.2	1.7	31.4

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 32 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 (%)	
Period									
1-Year	7	85.7	8	87.5	1.7	5.8	-2.5	5.7	0.0
3-Year	7	57.1	8	62.5	10.2	12.1	10.6	11.9	14.3
5-Year	11	45.5	9	55.6	9.3	9.3	9.0	8.9	18.2
10-Year	20	25.0	8	25.0	10.9	11.3	10.5	11.5	10.0

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 33 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 (%)	
Period									
1-Year	44	86.4	8	100.0	3.5	7.9	3.5	5.8	25.0
3-Year	52	75.0	7	71.4	8.8	8.3	8.3	6.8	53.8
5-Year	60	56.7	8	50.0	9.5	8.3	7.5	5.9	43.3
10-Year	53	49.1	10	30.0	11.2	11.6	11.5	10.6	35.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 34 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 (%)	
Period									
1-Year	51	96.1	10	100.0	-3.5	-1.7	-2.9	-1.8	41.2
3-Year	52	92.3	11	81.8	12.0	12.8	12.4	12.9	32.7
5-Year	53	81.1	11	72.7	7.4	6.7	8.4	6.5	62.3
10-Year	55	69.1	8	62.5	10.9	11.7	11.7	11.3	43.6

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 35 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 (%)	
Period									
1-Year	12	91.7	23	100.0	8.2	8.6	6.7	8.4	25.0
3-Year	11	81.8	22	95.5	11.5	12.1	10.1	11.9	18.2
5-Year	10	80.0	19	94.7	6.9	5.8	5.5	5.6	20.0
10-Year	6	83.3	8	100.0	9.7	8.8	9.4	8.7	50.0

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 36 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 (%)	
Period									
1-Year	23	87.0	9	88.9	10.6	15.0	12.2	15.0	21.7
3-Year	25	80.0	9	66.7	6.1	10.8	7.4	11.6	0.0
5-Year	24	79.2	9	55.6	7.9	8.0	6.5	10.8	12.5
10-Year	26	38.5	4	50.0	8.8	7.7	8.0	8.2	15.4

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 37 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 (%)	
Period									
1-Year	58	94.8	15	86.7	0.2	-1.8	-0.2	-2.5	60.3
3-Year	59	84.7	15	80.0	6.0	4.7	5.5	4.3	52.5
5-Year	54	77.8	14	57.1	7.9	7.1	7.1	6.0	51.9
10-Year	67	47.8	9	44.4	10.0	12.0	9.9	11.2	19.4

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 38 Property—Indirect Eurozone

	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 (%)	
Period									
1-Year	24	100.0	3	100.0	-0.1	-1.9	-1.1	-1.8	54.2
3-Year	23	100.0	4	75.0	5.8	6.1	4.9	5.5	39.1
5-Year	25	84.0	5	60.0	7.7	8.9	6.9	7.4	44.0
10-Year	22	81.8	3	66.7	10.8	12.1	10.0	10.9	18.2

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 39 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 (%)	
Period									
1-Year	145	92.4	18	88.9	7.1	8.9	7.7	9.5	29.7
3-Year	135	80.7	15	80.0	5.2	4.3	4.0	3.8	42.2
5-Year	120	73.3	12	75.0	4.9	6.7	6.0	6.3	27.5
10-Year	116	45.7	4	75.0	9.0	11.6	9.3	11.7	12.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 40 Russia 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 (%)	
Period									
1-Year	42	90.5	12	83.3	22.2	29.1	19.1	27.4	2.4
3-Year	51	78.4	11	81.8	20.7	20.5	18.2	19.9	29.4
5-Year	62	59.7	11	72.7	7.2	5.2	6.2	5.6	35.5
10-Year	55	47.3	5	60.0	8.0	6.9	6.8	6.7	30.9

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 41 South Africa and Namibia 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 (%)	
Period									
1-Year	206	91.7	58	89.7	0.5	2.9	0.9	3.7	20.9
3-Year	193	81.3	40	92.5	3.0	6.0	2.7	5.7	13.0
5-Year	161	73.9	41	85.4	3.5	5.1	3.0	4.4	23.6
10-Year	106	56.6	13	61.5	11.4	12.7	10.5	12.1	20.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 42 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 (%)	
Period									
1-Year	86	97.7	13	92.3	-7.1	-0.9	-7.2	-0.9	5.1
3-Year	87	89.7	13	84.6	6.9	7.7	6.3	7.1	33.1
5-Year	78	83.3	14	64.3	0.5	0.1	-0.3	-0.2	34.1
10-Year	110	53.6	23	34.8	4.2	3.5	3.4	2.7	32.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 43 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 (%)	
Period									
1-Year	70	82.9	25	96.0	5.8	9.6	7.4	9.5	22.9
3-Year	70	77.1	23	82.6	11.8	12.2	11.8	12.1	42.9
5-Year	72	68.1	25	68.0	8.8	8.6	9.1	8.4	50.0
10-Year	80	40.0	20	70.0	12.3	12.1	12.0	12.1	26.3

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 44 Switzerland 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 (%)	
Period									
1-Year	146	96.6	55	96.4	11.9	16.4	9.3	15.4	21.2
3-Year	130	86.9	52	80.8	11.0	11.3	10.1	11.6	19.2
5-Year	128	78.1	55	69.1	7.2	6.9	6.5	7.1	35.9
10-Year	108	63.0	32	71.9	9.4	9.7	8.5	9.6	19.4

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 45 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 (%)	
Period									
1-Year	56	94.6	8	100.0	-2.6	-1.1	-4.9	-2.2	30.4
3-Year	47	89.4	8	100.0	12.2	12.5	10.8	11.0	51.1
5-Year	44	86.4	7	100.0	10.1	10.1	8.6	9.0	52.3
10-Year	51	64.7	3	100.0	11.4	11.3	10.3	9.6	47.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 46 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 (%)	
Period									
1-Year	22	95.5	25	96.0	-9.7	4.6	-6.8	2.3	9.1
3-Year	22	86.4	19	84.2	7.1	11.0	7.8	10.2	31.8
5-Year	27	70.4	22	68.2	3.5	7.3	3.6	5.1	18.5
10-Year	34	50.0	13	69.2	6.3	9.4	7.1	8.5	20.6

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 47 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 (%)	
Period									
1-Year	16	68.8	4	75.0	-13.4	-17.3	-14.7	-16.9	37.5
3-Year	21	52.4	8	37.5	-10.3	-12.7	-11.2	-9.6	9.5
5-Year	26	42.3	12	25.0	-7.8	-11.1	-8.6	-7.6	11.5
10-Year	17	47.1	9	11.1	-0.1	-0.8	0.9	3.4	11.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 48 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 (%)	
Period									
1-Year	137	89.8	57	94.7	-0.9	0.5	-1.1	0.4	27.7
3-Year	144	81.3	62	75.8	8.4	9.1	8.1	8.4	43.1
5-Year	141	70.9	60	70.0	5.7	6.0	5.5	5.4	40.4
10-Year	163	48.5	48	50.0	10.3	9.8	10.2	9.5	33.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 49 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 (%)	
Period									
1-Year	14	92.9	7	85.7	-7.3	-4.1	-4.4	-4.1	42.9
3-Year	15	86.7	7	85.7	11.2	9.0	10.7	8.8	60.0
5-Year	13	92.3	6	83.3	8.1	6.8	8.3	6.8	84.6
10-Year	9	88.9	5	60.0	13.6	12.7	14.0	12.7	77.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 50 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 (%)	
Period									
1-Year	408	92.4	188	96.3	8.1	10.7	7.8	10.1	26.0
3-Year	397	81.9	172	85.5	12.4	14.3	11.2	13.0	21.7
5-Year	369	71.8	134	76.9	10.3	12.4	9.7	11.4	20.1
10-Year	397	43.8	74	55.4	13.4	15.0	12.3	14.5	8.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 51 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 (%)	
Period									
1-Year	109	95.4	14	92.9	11.7	10.6	10.7	9.9	56.9
3-Year	106	80.2	14	78.6	18.3	20.3	15.2	19.4	14.2
5-Year	116	68.1	11	72.7	14.1	16.2	11.2	16.5	5.2
10-Year	132	47.0	10	60.0	13.9	18.7	12.9	17.9	1.5

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 52 US Large-Cap 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 (%)	
Period									
1-Year	91	92.3	22	95.5	4.7	8.8	5.0	7.8	27.5
3-Year	94	77.7	17	88.2	8.9	9.4	9.5	9.9	36.2
5-Year	86	69.8	12	75.0	7.7	9.5	7.5	9.6	19.8
10-Year	69	49.3	5	60.0	11.8	13.6	11.9	14.1	7.2

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 53 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 (%)	
Period									
1-Year	68	95.6	15	93.3	3.3	-3.3	0.8	-4.0	70.6
3-Year	65	81.5	13	84.6	14.3	11.1	13.2	10.6	53.8
5-Year	62	69.4	10	70.0	9.7	7.7	8.5	8.0	38.7
10-Year	51	52.9	3	100.0	13.9	13.8	12.8	14.0	27.5

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 54 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 (%)	
Period									
1-Year	116	97.4	41	92.7	3.2	3.6	2.7	3.2	33.6
3-Year	117	87.2	42	88.1	0.3	0.3	0.2	0.1	48.7
5-Year	117	76.1	41	85.4	1.4	1.8	1.1	1.6	26.5
10-Year	101	59.4	21	66.7	2.4	2.8	2.2	2.8	15.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 55 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 (%)	
Period									
1-Year	32	96.9	22	95.5	14.6	14.6	17.9	14.0	46.9
3-Year	35	74.3	21	81.0	2.9	3.0	2.3	2.8	22.9
5-Year	33	69.7	18	83.3	6.5	8.2	7.1	7.8	21.2
10-Year	51	35.3	14	71.4	8.6	7.8	8.4	7.9	15.7

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 56 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 (%)	
Period									
1-Year	341	95.9	56	89.3	3.9	4.3	3.7	4.0	48.1
3-Year	342	86.5	51	72.5	2.3	1.8	1.8	1.6	58.2
5-Year	338	76.0	42	76.2	2.4	2.3	1.9	2.1	40.8
10-Year	198	58.6	12	50.0	4.7	3.9	4.2	3.5	47.0

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 57 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 (%)	
Period									
1-Year	627	95.1	9	100.0	3.8	4.4	3.0	3.9	36.4
3-Year	670	83.7	6	100.0	1.0	1.5	0.9	1.4	21.6
5-Year	717	72.2	7	85.7	1.9	2.9	1.6	2.5	17.0
10-Year	728	47.9	11	36.4	3.1	4.0	2.9	3.8	15.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 58 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 (%)	
Period									
1-Year	219	91.3	104	94.2	4.0	5.4	4.2	5.2	38.4
3-Year	242	76.9	109	76.1	0.6	1.3	0.7	1.3	20.7
5-Year	247	67.6	106	67.9	2.4	2.9	2.1	2.8	24.3
10-Year	246	50.4	49	63.3	3.4	3.8	3.1	3.7	20.7

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 59 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 (%)	
Period									
1-Year	39	97.4	21	95.2	6.0	0.5	1.9	0.3	48.7
3-Year	46	78.3	23	60.9	1.3	-0.1	0.0	-0.3	39.1
5-Year	59	64.4	25	56.0	0.9	0.2	0.5	0.1	30.5
10-Year	47	57.4	9	77.8	0.7	0.9	1.0	1.0	29.8

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 60 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 (%)	
Period									
1-Year	57	93.0	14	100.0	-0.1	1.8	0.1	1.8	15.8
3-Year	58	84.5	11	81.8	0.7	1.4	0.6	1.3	8.6
5-Year	69	66.7	13	61.5	1.1	2.0	1.1	1.9	10.1
10-Year	55	45.5	9	44.4	1.9	2.8	2.2	2.6	14.5

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 61 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 (%)	
Period									
1-Year	321	93.8	33	97.0	4.3	4.9	4.7	4.4	52.3
3-Year	308	83.8	32	87.5	4.7	0.8	1.0	0.6	50.3
5-Year	296	76.7	30	83.3	1.1	1.9	2.1	2.0	38.5
10-Year	211	61.1	15	80.0	4.4	2.3	3.5	2.3	45.5

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 62 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 (%)	
Period									
1-Year	38	84.2	20	100.0	4.9	4.3	5.2	4.5	57.9
3-Year	32	68.8	19	73.7	2.1	1.5	2.3	1.9	43.8
5-Year	44	40.9	20	70.0	5.3	4.6	5.9	5.4	18.2
10-Year	38	21.1	10	50.0	5.3	4.4	5.1	4.8	7.9

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 63 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 (%)	
Period									
1-Year	19	89.5	8	100.0	7.3	8.7	7.9	8.0	63.2
3-Year	17	88.2	8	37.5	5.1	5.6	5.4	5.6	47.1
5-Year	22	63.6	8	37.5	7.7	9.2	8.2	9.2	27.3
10-Year	13	38.5	9	22.2	8.8	8.4	8.6	8.3	23.1

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 64 ILS 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 (%)	
Period									
1-Year	73	95.9	28	85.7	1.7	3.6	1.5	3.7	2.7
3-Year	95	71.6	28	78.6	0.9	1.6	0.7	1.7	5.3
5-Year	110	60.0	20	80.0	0.9	2.3	0.9	2.7	1.8
10-Year	28	42.9	4	50.0	2.2	3.7	2.7	3.8	10.7

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 65 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 (%)	
Period									
1-Year	10	80.0	6	100.0	1.6	3.1	1.7	3.1	60.0
3-Year	12	66.7	6	100.0	-0.5	0.0	-1.4	0.0	25.0
5-Year	12	66.7	6	100.0	1.7	2.2	1.8	2.2	41.7
10-Year	17	17.6	3	100.0	3.4	2.3	1.6	2.2	5.9

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 66 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 (%)	
Period									
1-Year	80	96.3	31	100.0	7.4	14.4	8.2	8.5	41.3
3-Year	71	78.9	21	95.2	1.7	3.0	2.3	2.7	33.8
5-Year	52	80.8	11	100.0	2.1	3.7	2.8	3.0	36.5
10-Year	22	77.3	4	75.0	5.9	5.8	5.0	5.7	27.3

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 67 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 (%)	
Period									
1-Year	130	91.5	5	100.0	5.6	7.9	6.2	8.7	8.5
3-Year	137	80.3	6	100.0	1.6	3.6	1.8	7.0	0.7
5-Year	130	74.6	7	85.7	1.9	3.1	2.2	3.6	8.5
10-Year	133	45.1	6	66.7	3.3	3.5	3.2	3.8	16.5

Source: Morningstar Direct. Data as of 30/06/2019.

Exhibit 68 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 (%)	
Period									
1-Year	37	94.6	42	92.9	3.9	12.4	5.7	7.6	21.6
3-Year	32	81.3	31	71.0	0.2	1.1	0.5	1.1	31.3
5-Year	35	62.9	24	62.5	2.2	2.0	2.4	2.1	31.4
10-Year	33	42.4	8	75.0	2.9	3.3	2.7	3.5	12.1

Source: Morningstar Direct. Data as of 30/06/2019.

Appendix—Morningstar Categories Base Currencies

Exhibit 69 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 30/06/2019.

Exhibit 70 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 30/06/2019.

Appendix—Methodology

Data Source

Morningstar's European 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 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 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 period).

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 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 denominator of the survivorship calculation).

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