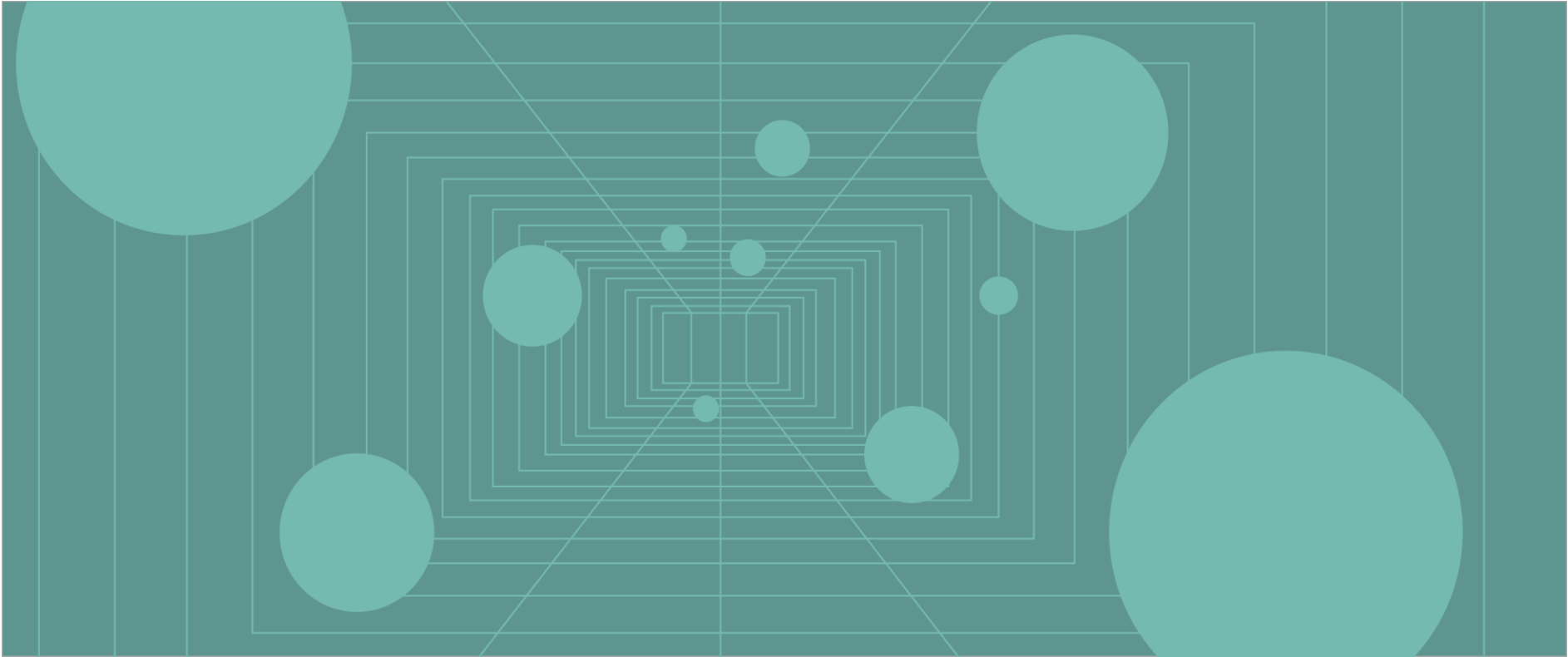


# EMERGING MARKETS EQUITY MANAGER PERFORMANCE

ANALYSIS OF 2018 AND PERFORMANCE SINCE 2000



## Summary Observations

- More than 63% of active emerging markets equity managers underperformed the MSCI Emerging Markets Index gross of fees in 2018, marking the third consecutive year of underperformance. The median manager underperformed the index by 106 basis points (bps). After applying a fee proxy of 93 bps, nearly 72% of managers underperformed. A mere 10% of managers outperformed the index by more than 250 bps.
- Active managers tend to make off-benchmark bets and hold some cash, so three factors can create a better environment for active management: outperformance of small-cap stocks, outperformance of stocks in frontier markets, and outperformance of cash over the index. In recent years, most of these factors have been absent. In 2018, cash did outperform the index, but the presence of this factor alone was not enough to help the median manager outperform. In fact, 2018 was the first time in eight instances during the 2000–17 period that the median emerging markets manager lagged the MSCI EM Index, even as cash outperformed stocks.
- Managers' sector allocations can differ substantially from the index. The median manager held a significant overweight position to consumer discretionary, which experienced more than double the loss of the broader index in 2018. Managers held a slight underweight position to energy, which was the only emerging markets sector in the black for the year. Other underweights to outperforming sectors—consumer staples, materials, and utilities—also dragged on manager performance, although managers fortuitously underweighted the struggling IT sector.

---

## Summary Observations (continued)

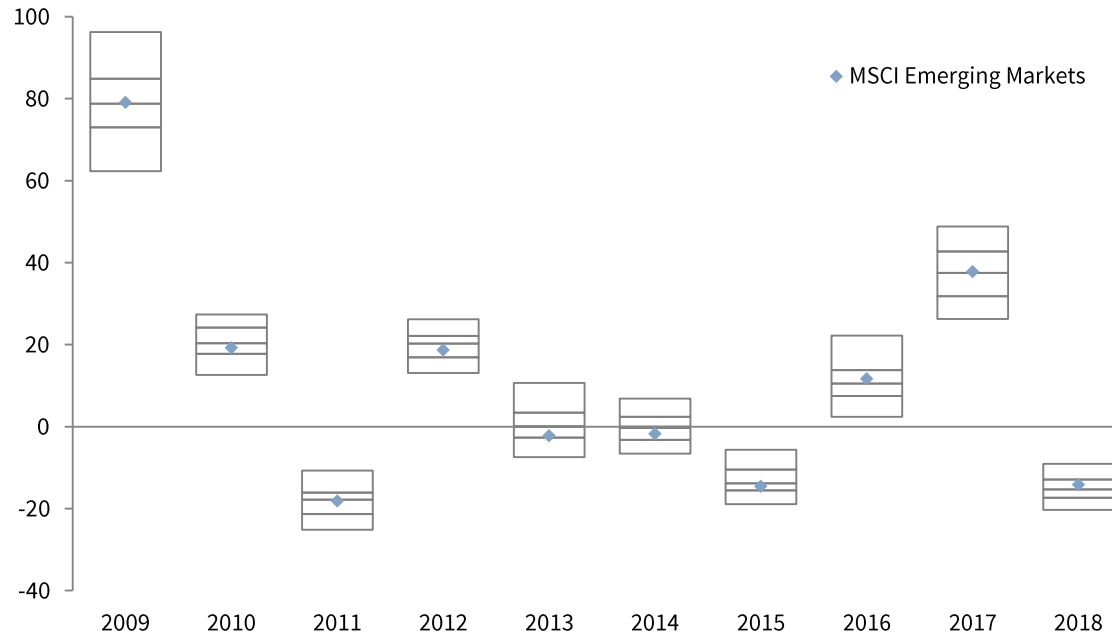
---

- Country bets can also impact relative performance. The median manager held a nearly 600 bps underweight to China, which likely provided some support to manager returns as China underperformed the broader index by 430 bps in 2018. However, the median manager held an underweight to Taiwan, which outperformed the broader index by nearly 600bps. More than 30% of managers had small but notable off-benchmark bets on Argentina, which was one of the worst-performing countries in the world in 2018, with losses in excess of 50%.
- Persistence in manager outperformance is rare, and movement among performance quintiles is fairly common. Nearly half of top quintile-performing managers in the five-year period from 2009 to 2013 subsequently moved into the bottom two quintiles from 2014 to 2018, while 27% of the bottom quintile managers in the initial period subsequently moved into the top quintile.

## More than 63% of managers underperformed the index in 2018

### EMERGING MARKETS EQUITY MANAGERS ANNUAL RETURNS BY QUANTILES

2009-18 • Percent (%)



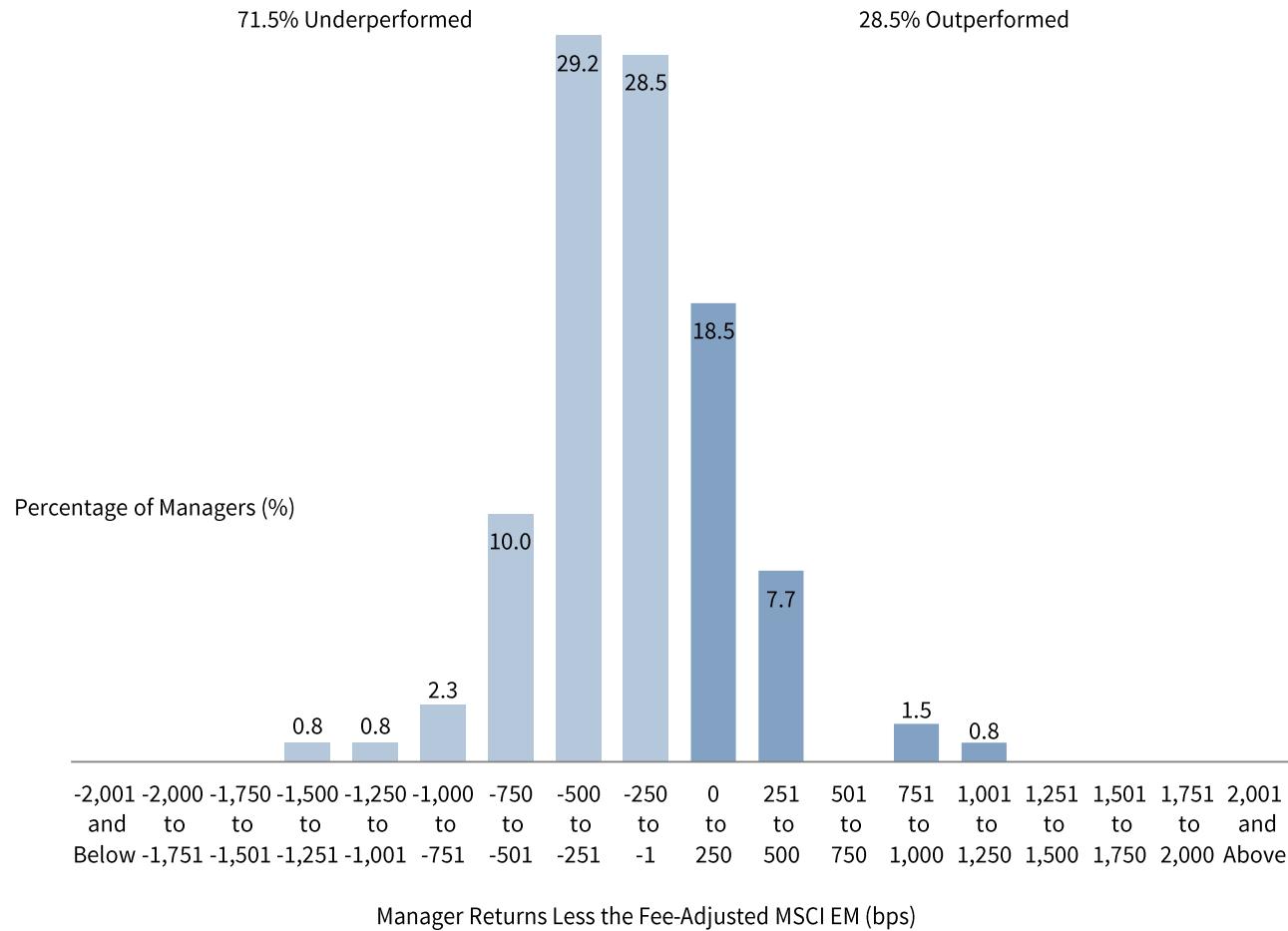
On a median basis, active managers trailed the index for the third straight year after having outperformed in six consecutive years from 2010 to 2015.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
5th Percentile	96.3	27.3	-10.8	26.2	10.6	6.9	-5.7	22.2	48.8	-9.1
25th Percentile	84.9	24.1	-16.1	22.2	3.4	2.4	-10.5	13.8	42.7	-13.0
Median	78.8	20.3	-17.8	20.3	0.0	-0.4	-13.8	10.5	37.5	-15.3
75th Percentile	73.0	17.7	-21.4	16.9	-2.7	-3.2	-15.6	7.5	31.8	-17.4
95th Percentile	62.3	12.6	-25.2	13.1	-7.4	-6.6	-18.9	2.4	26.3	-20.3
MSCI EM	79.0	19.2	-18.2	18.6	-2.3	-1.8	-14.6	11.6	37.8	-14.2
# of Managers	92	101	109	121	142	149	158	162	158	130
% Outperforming	48.9	63.4	52.3	66.9	70.4	65.1	62.0	39.5	48.1	36.9
% Underperforming	51.1	36.6	47.7	33.1	29.6	34.9	38.0	60.5	51.9	63.1

# Relative to the fee-adjusted index, 72% of managers underperformed

## MANAGER RETURNS RELATIVE TO THE FEE-ADJUSTED MSCI EMERGING MARKETS INDEX

Calendar Year 2018 • n = 130

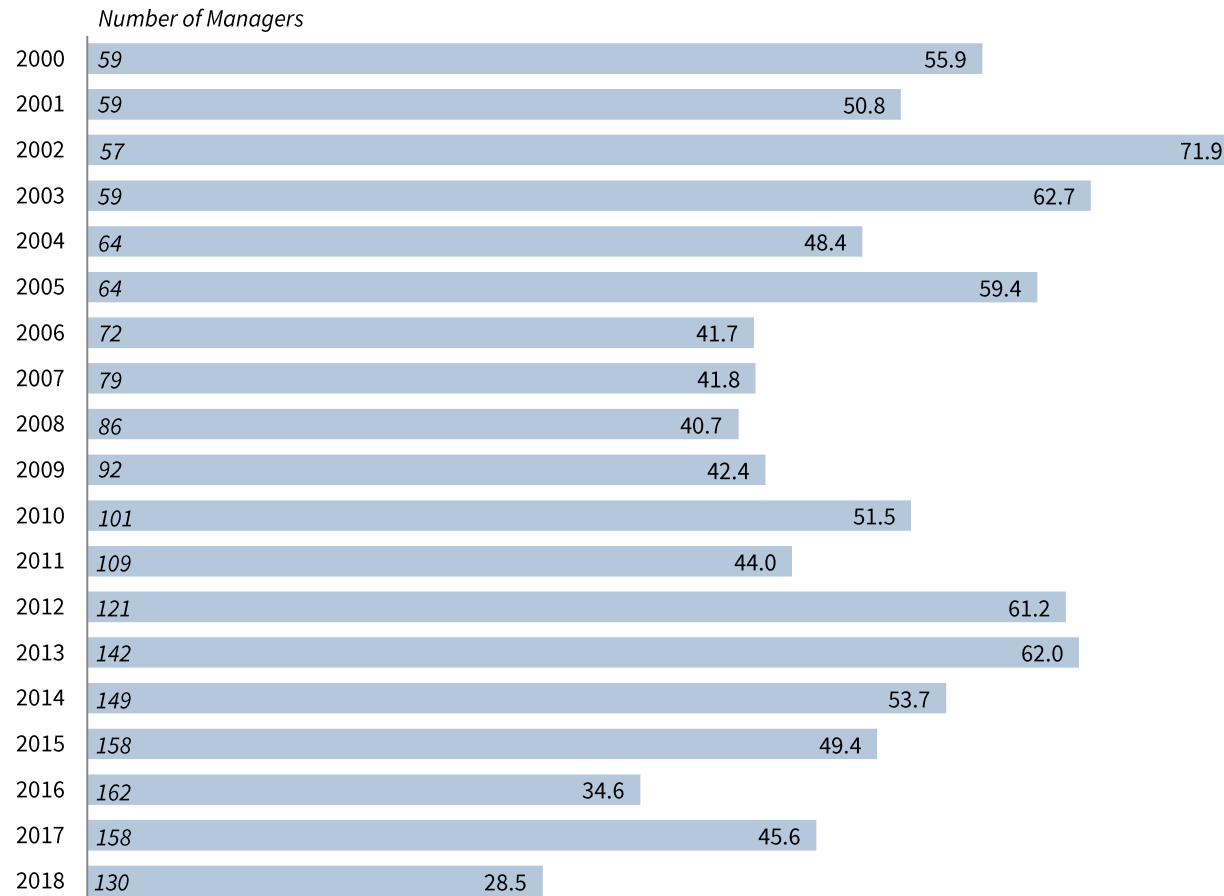


More than 40% of managers lagged the index by 250 bps or more. Conversely, only 10% of managers bested the index by at least 250 bps.

## Active manager outperformance is cyclical

### PERCENTAGE OF EMERGING MARKETS EQUITY MANAGERS OUTPERFORMING THE FEE-ADJUSTED MSCI EMERGING MARKETS INDEX

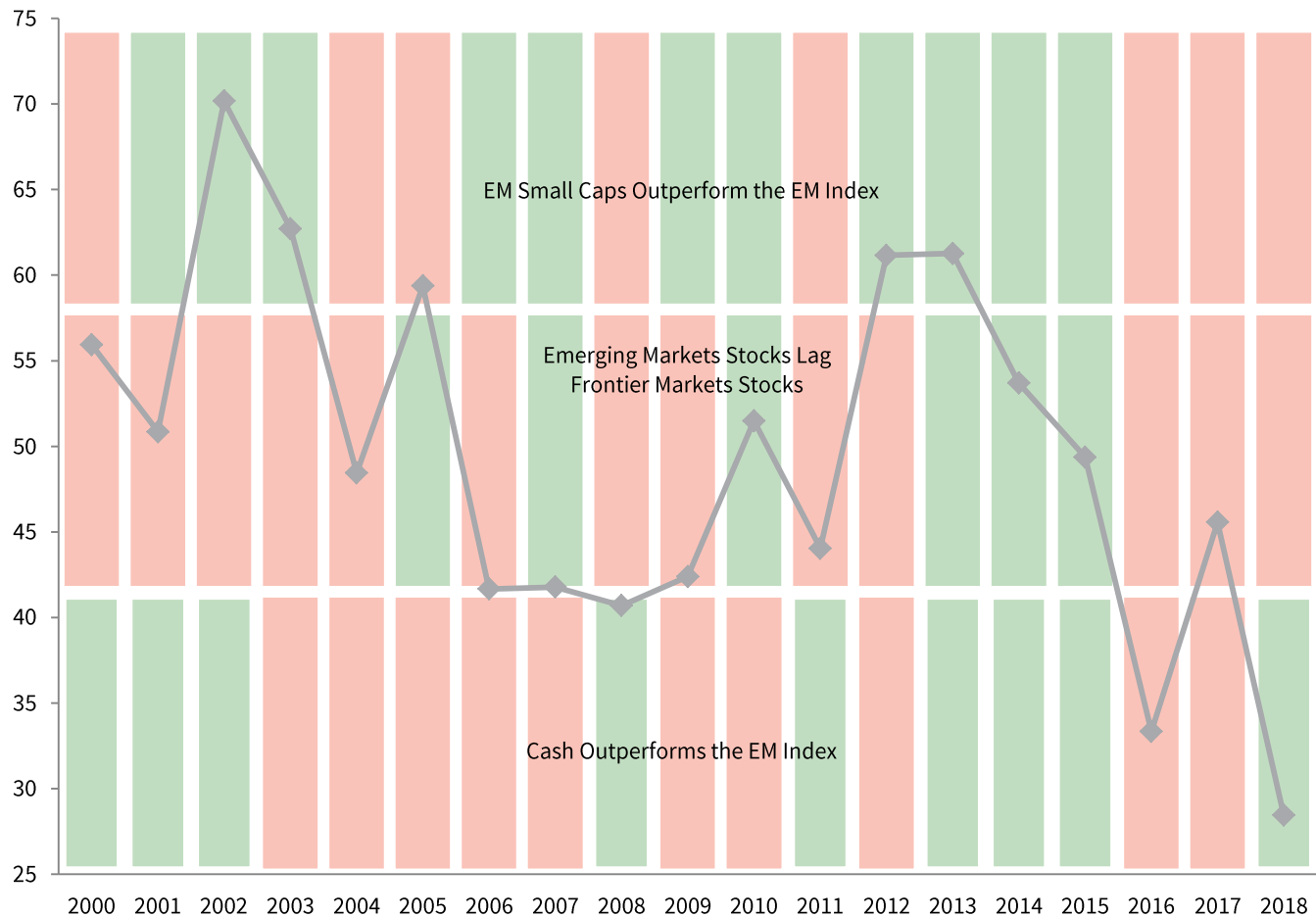
2000-18



In 2018, just 28% of managers outperformed the fee-adjusted index, the lowest percentage since data begin in 2000. In the 19-year history, the median manager has underperformed in ten years and outperformed in nine years.

## Cash outperformance in 2018 alone was not enough to help a majority of active managers outperform

**PERCENTAGE OF MANAGERS OUTPERFORMING FEE-ADJUSTED MSCI EMERGING MARKETS INDEX**  
2000–18 • Highlighted grid indicates presence of up to three factors contributing to a more favorable environment for active management



Many factors contribute to active manager outperformance, but the presence of three key factors can create a more favorable environment for active management in general. Only one (cash outperformance of the EM Index) was present in 2018.

## Managers' different sector allocations can affect relative performance

### EMERGING MARKETS EQUITY MANAGERS' MEDIAN SECTOR ALLOCATIONS VERSUS INDEX WEIGHT

As of December 31, 2018 • Percent (%) • n = 123

	Manager Median Underweight/Overweight vs Index (bps)		12/31/2017 Index Weight (%)	CY 2018 Index Returns	Net Allocation Effect (+/-)
	Underweight vs Index	Overweight vs Index			
Cons Disc		149	10.2	-32.5	-
Cons Staples	-46		6.6	-13.7	-
Energy	-47		6.8	4.7	-
Financials		60	23.5	-8.7	+
Healthcare	-22		2.7	-20.9	+
Industrials		91	5.2	-12.6	+
IT	-180		27.7	-19.3	+
Materials	-82		7.4	-11.6	-
Real Estate	-112		2.8	-17.2	+
Telecomm*	-86		4.8	-14.9	+
Utilities	-57		2.4	-3.8	-
			MSCI EM	-14.6	

On a median basis, managers started the year with a substantial overweight position to consumer discretionary, which was the worst-performing sector in 2018. While the sector holds just one-tenth of the weight in the index, it accounted for more than one-fifth of the index's ~15% loss for the year.

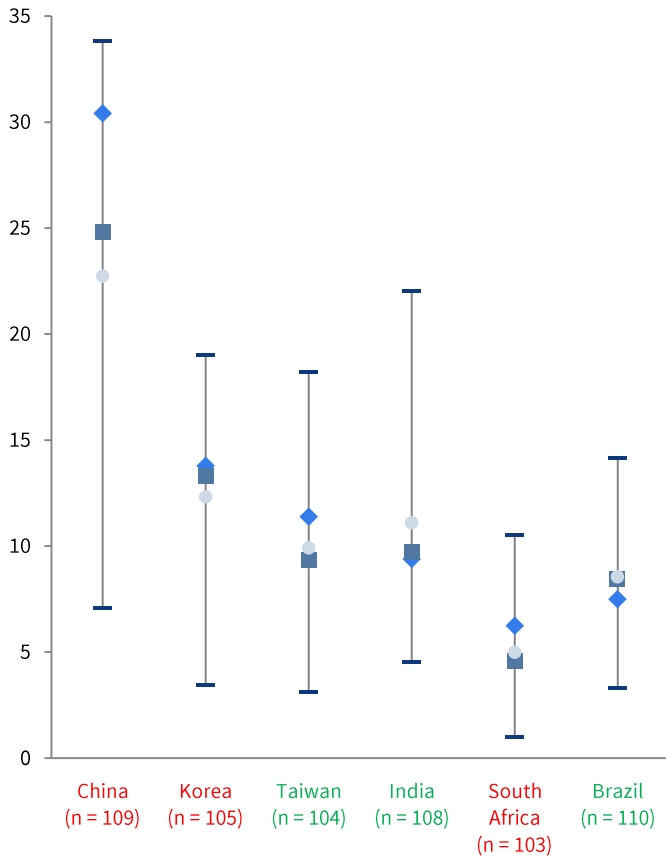


# Country bets can significantly affect relative performance

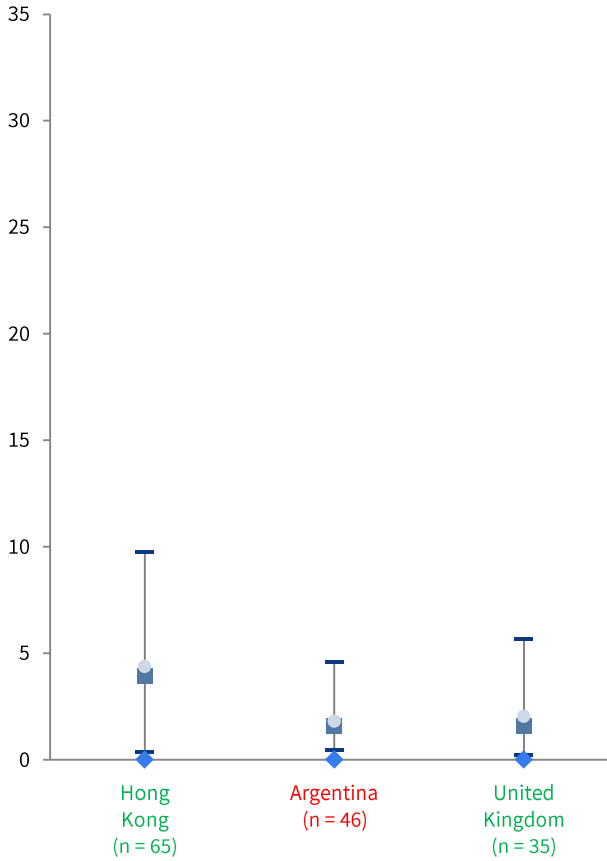
## EMERGING MARKETS EQUITY MANAGERS' COUNTRY ALLOCATIONS VS THE MSCI EM INDEX

As of December 31, 2018 • n = 129

### Manager Allocations to 6 MSCI EM Countries with > 5% Weight



### Off-Benchmark Countries Where > 30% Managers Have Allocations



— 95th Percentile    ◆ EM Index    ■ Median    ● Average    — 5th Percentile

The median manager's underweight to China was a tailwind in 2018, as the country underperformed the EM index by more than 400 bps. However, the median manager held an underweight to Taiwan, which outperformed the broader index by nearly 600bps.

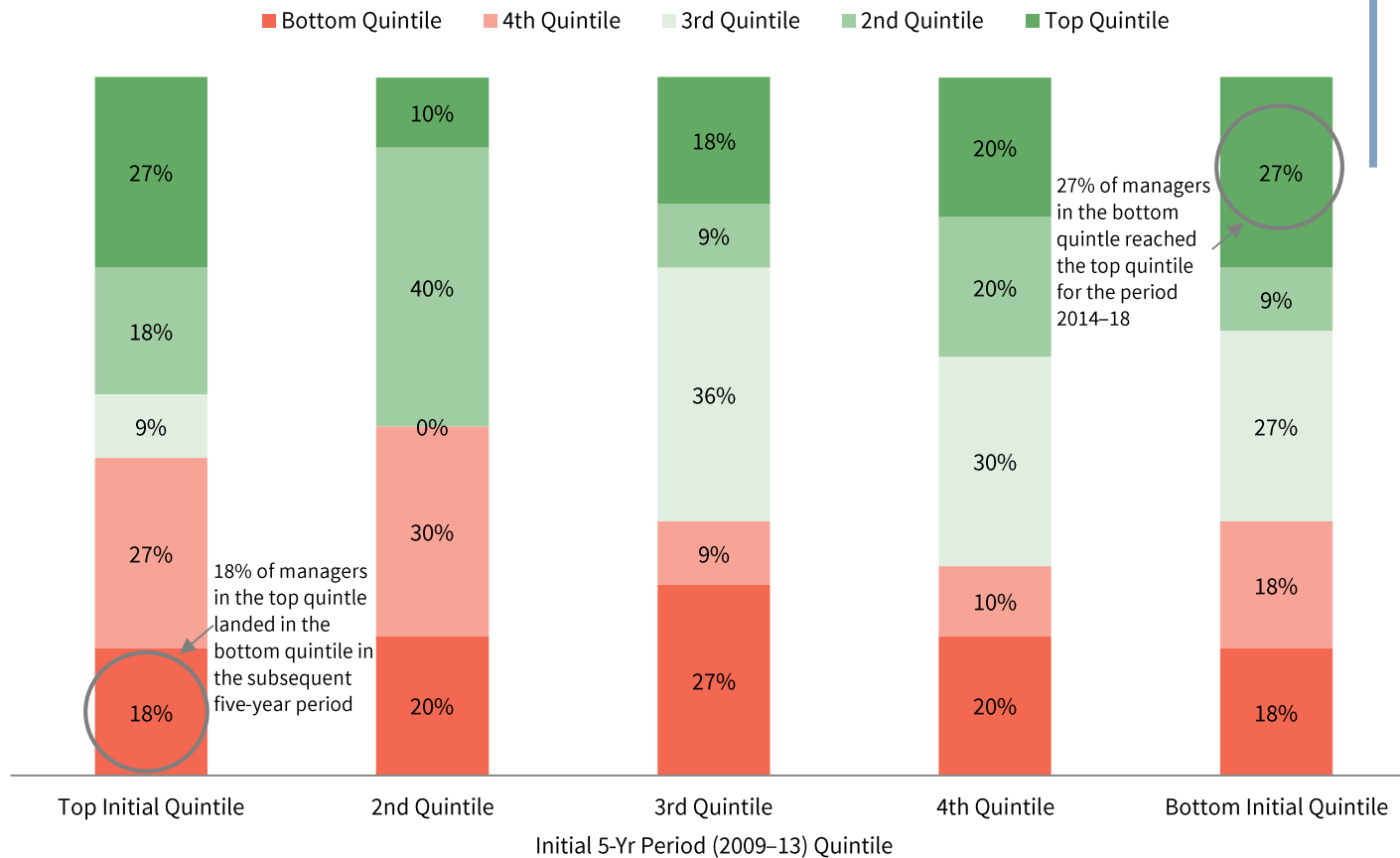
Sources: Cambridge Associates LLC, MSCI Inc., and Thomson Reuters Datastream. MSCI data provided "as is" without any express or implied warranties. Notes: A country name in red indicates that the country underperformed the MSCI EAFE Index, while green country names indicate outperformance. Only includes data for 129 managers that provided geographic allocation as of year-end 2018. Index weights represent year-end geographic allocations of the MSCI Emerging Markets Index. The n provided for each country represents the total number of products exposed to a given country as of year-end 2018, and percentile, median, and average figures are calculated only from products with exposure to the country shown. Cambridge Associates LLC's (CA) manager universe statistics are derived from CA's proprietary Investment Manager Database. Manager that do not report in US dollars, exclude cash reserves from reported total returns, or have less than \$50 million in product assets are excluded. Manager-reported exposures may not accurately reflect true country weights; for example, stated exposures to Hong Kong and United Kingdom may include listings of EM companies.

## Movement between top and bottom quintiles is fairly common

### ANALYSIS OF EMERGING MARKETS EQUITY MANAGER RETURNS BY QUINTILE OVER FIVE-YEAR PERIODS

2009–18 • n = 53

#### Percent of Managers in Subsequent 5-Yr Period (2014–18) Quintile



More than a quarter of managers in the bottom-performing initial quintile over the 2009–13 period climbed to the top-performing quintile over the 2014–18 period.

# APPENDIX: YEAR-BY-YEAR ANALYSIS OF KEY FACTORS CONTRIBUTING TO A MORE OR LESS FAVORABLE ENVIRONMENT FOR ACTIVE MANAGEMENT



## Small company outperformance has consistently been a tailwind for active managers

In 2018, small-cap underperformance was likely a headwind, as the MSCI EM Index bested the MSCI EM Small Cap Index by 406 bps.

### ASSESSING THE IMPACT OF CAPITALIZATION BIAS IN ACTIVE MANAGER PORTFOLIOS

2000-18

Active Managers Have Outperformed the MSCI EM Index 50% of the Time When the Index Has Beaten the MSCI EM Small Cap Index ...

Year	Total Return (%)				MSCI EM Minus MSCI EM SC (ppts)	Mgr Value Added vs MSCI EM (ppts)
	MSCI EM	MSCI EM SC	Median EM Equity Manager	<i>n</i>		
2016	11.6	2.6	10.3	182	9.0	-1.3
2011	-18.2	-27.0	-18.0	115	8.8	0.2
2008	-53.2	-58.1	-53.9	91	4.9	-0.7
2000	-30.6	-35.1	-28.5	59	4.5	2.1
<b>2018</b>	<b>-14.2</b>	<b>-18.3</b>	<b>-15.6</b>	<b>149</b>	<b>4.1</b>	<b>-1.4</b>
2005	34.5	31.0	36.2	66	3.6	1.6
2017	37.8	34.2	37.6	180	3.5	-0.2
2004	26.0	24.7	26.1	65	1.3	0.2
<b>Mean</b>	<b>-0.8</b>	<b>-5.8</b>	<b>-0.7</b>		<b>5.0</b>	<b>0.1</b>

... and Outperformed the MSCI EM Index Every Year When the Index Lagged the MSCI EM Small Cap Index

Year	Total Return (%)				MSCI EM Minus MSCI EM SC (ppts)	Mgr Value Added vs MSCI EM (ppts)
	MSCI EM	MSCI EM SC	Median EM Equity Manager	<i>n</i>		
2006	32.6	33.1	33.1	75	-0.5	0.5
2007	39.8	42.3	39.8	82	-2.5	0.0
2001	-2.4	0.4	-1.3	59	-2.8	1.1
2014	-1.8	1.3	-0.2	164	-3.2	1.7
2013	-2.3	1.3	0.3	154	-3.6	2.5
2003	56.3	60.2	58.3	59	-3.9	2.0
2002	-6.0	-2.1	-3.3	57	-3.9	2.7
2012	18.6	22.6	20.5	128	-4.0	1.9
2015	-14.6	-6.6	-13.2	174	-8.0	1.4
2010	19.2	27.5	20.4	106	-8.3	1.2
2009	79.0	114.3	79.5	97	-35.3	0.5
<b>Mean</b>	<b>19.9</b>	<b>26.8</b>	<b>21.3</b>		<b>-6.9</b>	<b>1.4</b>

## Off-benchmark holdings can benefit managers

The median manager has consistently outperformed when frontier equities outperform emerging markets. In 2018, frontier slightly underperformed, and active managers lagged the index.

### ASSESSING THE IMPACT OF FRONTIER MARKETS EQUITIES ON ACTIVE MANAGER PERFORMANCE

2003-18

#### Active Managers Have Outperformed the MSCI EM Index 50% of the Time When the Index Has Beaten the MSCI Frontier Index ...

Year	Total Return (%)				MSCI EM Minus MSCI FM (ppts)	Mgr Value Added vs MSCI EM (ppts)
	MSCI EM	MSCI Frontier	Median EM Equity Manager	<i>n</i>		
2009	79.0	25.8	79.5	97	53.2	0.5
2006	32.6	11.2	33.1	75	21.4	0.5
2017	37.8	27.2	37.6	180	10.6	-0.2
2016	11.6	5.4	10.3	182	6.2	-1.3
2015	-14.6	-18.0	-13.2	174	3.4	1.4
2008	-53.2	-55.6	-53.9	91	2.4	-0.7
2004	26.0	25.1	26.1	65	0.8	0.2
<b>2018</b>	<b>-14.2</b>	<b>-14.4</b>	<b>-15.6</b>	<b>149</b>	<b>0.1</b>	<b>-1.4</b>

Mean 13.1 0.9 13.0 12.3 **-0.1**

#### ... and Outperformed the MSCI EM Index Every Year When the Index Lagged the MSCI Frontier Index

Year	Total Return (%)				MSCI EM Minus MSCI FM (ppts)	Mgr Value Added vs MSCI EM (ppts)
	MSCI EM	MSCI Frontier	Median EM Equity Manager	<i>n</i>		
2011	-18.2	-17.3	-18.0	115	-0.9	0.2
2012	18.6	21.2	20.5	128	-2.6	1.9
2013	-2.3	4.6	0.3	154	-6.9	2.5
2007	39.8	46.8	39.8	82	-7.0	0.0
2014	-1.8	7.5	-0.2	164	-9.3	1.7
2010	19.2	29.1	20.4	106	-9.9	1.2
2005	34.5	49.5	36.2	66	-15.0	1.6
2003	56.3	78.8	58.3	59	-22.5	2.0

Mean 18.3 27.5 19.7 -9.3 **1.4**

## Years of cash outperformance have generally been good for active managers

Active managers lagged the MSCI EM Index in 2018, marking the first relative underperformance in eight years where equities have lagged the 91-Day T-Bill.

### ASSESSING THE IMPACT OF CASH DRAG ON ACTIVE MANAGER PERFORMANCE

2000-18

Active Managers Have Beaten the MSCI Emerging Markets Index 70% of the Time When the Index Has Beaten the 91-Day T-Bill . . .

Year	Total Return (%)				MSCI EM Minus T-Bill (ppts)	Mgr Value Added vs MSCI EM (ppts)
	MSCI EM	91-Day T-Bill	Median EM Equity Manager	<i>n</i>		
2009	79.0	0.2	78.8	92	78.8	-0.2
2003	56.3	1.1	58.3	59	55.1	2.0
2017	37.8	0.9	37.5	158	36.9	-0.3
2007	39.8	5.0	39.8	79	34.8	0.0
2005	34.5	3.1	36.4	64	31.5	1.9
2006	32.6	4.8	32.9	72	27.7	0.4
2004	26.0	1.3	26.1	64	24.6	0.2
2010	19.2	0.1	20.3	101	19.1	1.1
2012	18.6	0.1	20.3	121	18.5	1.7
2016	11.6	0.3	10.5	162	11.3	-1.1

Mean 35.5 1.7 36.1 33.8 **0.6**

. . . And Beaten the MSCI Emerging Markets Index in All But One Year When the Index Has Lagged the 91-Day T-Bill

Year	Total Return (%)				MSCI EM Minus T-Bill (ppts)	Mgr Value Added vs MSCI EM (ppts)
	MSCI EM	91-Day T-Bill	Median EM Equity Manager	<i>n</i>		
2014	-1.8	0.0	-0.4	149	-1.9	1.5
2013	-2.3	0.1	0.0	142	-2.3	2.3
2001	-2.4	4.4	-1.3	59	-6.8	1.1
2002	-6.0	1.8	-3.3	57	-7.8	2.7
2015	-14.6	0.1	-13.8	158	-14.7	0.8
<b>2018</b>	<b>-14.2</b>	<b>1.9</b>	<b>-15.3</b>	<b>129</b>	<b>-16.1</b>	<b>-1.1</b>
2011	-18.2	0.1	-17.8	109	-18.3	0.3
2000	-30.6	6.2	-28.5	59	-36.8	2.1

Mean -11.3 1.8 -10.1 -13.1 **1.2**



Contributors to this report include Sean Duffin, Melanie Blum, Morgen Ellis, and Greg Gonsalves.

Copyright © 2018 by Cambridge Associates LLC. All rights reserved.

This report may not be displayed, reproduced, distributed, transmitted, or used to create derivative works in any form, in whole or in portion, by any means, without written permission from Cambridge Associates LLC ("CA"). Copying of this publication is a violation of US and global copyright laws (e.g., 17 U.S.C.101 et seq.). Violators of this copyright may be subject to liability for substantial monetary damages.

This report is provided for informational purposes only. The information does not represent investment advice or recommendations, nor does it constitute an offer to sell or a solicitation of an offer to buy any securities. Any references to specific investments are for illustrative purposes only. The information herein does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. Information in this report or on which the information is based may be based on publicly available data. CA considers such data reliable but does not represent it as accurate, complete, or independently verified, and it should not be relied on as such. Nothing contained in this report should be construed as the provision of tax, accounting, or legal advice. Past performance is not indicative of future performance. Broad-based securities indexes are unmanaged and are not subject to fees and expenses typically associated with managed accounts or investment funds. Investments cannot be made directly in an index. Any information or opinions provided in this report are as of the date of the report, and CA is under no obligation to update the information or communicate that any updates have been made. Information contained herein may have been provided by third parties, including investment firms providing information on returns and assets under management, and may not have been independently verified.

The terms "CA" or "Cambridge Associates" may refer to any one or more CA entity including: Cambridge Associates, LLC (a registered investment adviser with the US Securities and Exchange Commission, a Commodity Trading Adviser registered with the US Commodity Futures Trading Commission and National Futures Association, and a Massachusetts limited liability company with offices in Arlington, VA; Boston, MA; Dallas, TX; Menlo Park, CA, New York, NY; and San Francisco, CA), Cambridge Associates Limited (a registered limited company in England and Wales, No. 06135829, that is authorised and regulated by the UK Financial Conduct Authority in the conduct of Investment Business, reference number: 474331); Cambridge Associates Limited, LLC (a registered investment adviser with the US Securities and Exchange Commission, an Exempt Market Dealer and Portfolio Manager in the Canadian provinces of Alberta, British Columbia, Manitoba, Newfoundland and Labrador, Nova Scotia, Ontario, Québec, and Saskatchewan, and a Massachusetts limited liability company with a branch office in Sydney, Australia, ARBN 109 366 654), Cambridge Associates Investment Consultancy (Beijing) Ltd (a wholly owned subsidiary of Cambridge Associates, LLC which is registered with the Beijing Administration for Industry and Commerce, registration No. 110000450174972), and Cambridge Associates Asia Pte Ltd (a Singapore corporation, registration No. 200101063G, which holds a Capital Market Services License to conduct Fund Management for Accredited and/or Institutional Investors only by the Monetary Authority of Singapore).