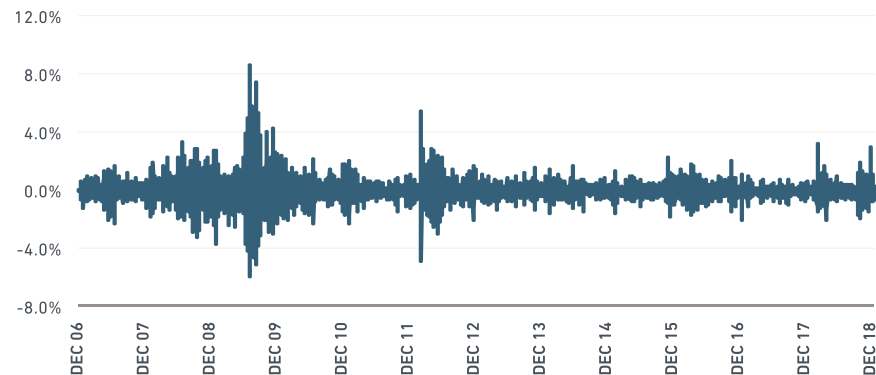


MSCI EMERGING MARKETS INDEX WITH ITG FAIR VALUE MODEL (USD)

MSCI Indexes with ITG Fair Value Model make it easier and simpler for active mutual fund managers, pension plans and consultants to explain artificial tracking error between a fund's fair value adjusted NAV and an MSCI index calculated using closing prices. They are calculated using fair value adjustment factors as of the close of the New York Stock Exchange provided by ITG's Portfolio Fair Value Service.

MSCI EM FAIR VALUE — MSCI EM INDEX RETURNS* (NET, JUNE 2005 – DECEMBER 2018)



ANNUAL PERFORMANCE (%)

Year	MSCI EM Fair Value	MSCI EM
2018	-14.69	-14.57
2017	37.83	37.28
2016	11.17	11.19
2015	-14.92	-14.92
2014	-3.04	-2.19
2013	-2.99	-2.60
2012	19.19	18.22
2011	-18.50	-18.42
2010	19.50	18.88
2009	75.68	78.51
2008	-52.45	-53.33
2007	38.52	39.42
2006	32.25	32.14

INDEX PERFORMANCE - NET RETURNS (%) (DECEMBER 31, 2018)

Index	1 Month	3 Months	1 Year	Year to Date	ANNUALIZED TOTAL RETURN		
					3 Years	5 Years	Since June 30, 2005
MSCI Emerging Markets Index with ITG Fair Value Model	-3.12	-7.55	-14.69	-14.69	9.34	1.52	6.53
MSCI EM	-2.65	-7.46	-14.57	-14.57	9.25	1.65	6.54

INDEX METHODOLOGY

MSCI Indexes with ITG Fair Value Model are computed at a daily frequency. For all constituents of the index, fair value returns are calculated using fair value adjustment factors provided by ITG's Portfolio Fair Value Service ** and 4PM EST WM/Reuters spot exchange rates. The final index level is arrived at by adjusting the index based on closing prices by the weighted average fair value performance of its constituents.

* The difference between the MSCI Emerging Markets Index with ITG Fair Value Model and the MSCI EM Index illustrates the typical artificial tracking error that could be observed between a fund and its benchmark due to valuation differences

** A factor of 1 is used when the adjustment factor is not available from the fair value data provider. The MSCI EM Index with ITG Fair Value Model was launched on June 16, 2015. Data prior to the launch date is back-tested data (i.e. calculations of how the index might have been performed over that time period had the index existed). There are frequently material differences between back-tested performance and actual results. Past performance – whether actual or back-tested – is no indication or guarantee of future performance.

ABOUT MSCI

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