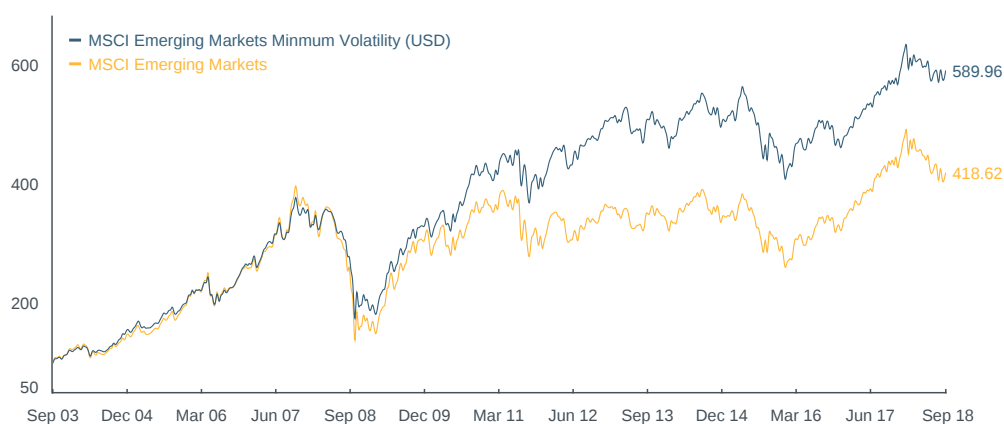


# MSCI EMERGING MARKETS MINIMUM VOLATILITY (USD) INDEX (USD)

The MSCI Emerging Markets (EM) Minimum Volatility (USD) Index aims to reflect the performance characteristics of a minimum variance strategy applied to large and mid cap equities across 24 Emerging Markets countries\*. The index is calculated by optimizing the MSCI Emerging Markets Index, its parent index, for the lowest absolute risk (within a given set of constraints). Historically, the index has shown lower beta and volatility characteristics relative to the MSCI Emerging Markets Index.

## CUMULATIVE INDEX PERFORMANCE - GROSS RETURNS (USD) (SEP 2003 – SEP 2018)



## ANNUAL PERFORMANCE (%)

Year	MSCI Emerging Markets Minimum Volatility (USD)	MSCI Emerging Markets
2017	27.21	37.75
2016	4.36	11.60
2015	-11.67	-14.60
2014	1.54	-1.82
2013	0.36	-2.27
2012	22.73	18.63
2011	-5.82	-18.17
2010	29.43	19.20
2009	59.98	79.02
2008	-41.57	-53.18
2007	32.80	39.82
2006	32.29	32.55
2005	30.00	34.54
2004	33.22	25.95

## INDEX PERFORMANCE — GROSS RETURNS (%) (SEP 28, 2018)

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED			
					3 Yr	5 Yr	10 Yr	Since May 31, 1993
MSCI Emerging Markets Minimum Volatility (USD)	0.08	2.20	5.79	-1.06	9.53	3.38	8.42	9.60
MSCI Emerging Markets	-0.50	-0.95	-0.44	-7.39	12.77	3.99	5.76	7.11

## FUNDAMENTALS (SEP 28, 2018)

Div Yld (%)	P/E	P/E Fwd	P/BV
2.97	15.41	14.08	1.94
2.70	13.32	11.11	1.65

## INDEX RISK AND RETURN CHARACTERISTICS (MAY 31, 1993 – SEP 28, 2018)

	Beta	Tracking Error (%)	Turnover (%) <sup>1</sup>	ANNUALIZED STD DEV (%) <sup>2</sup>			SHARPE RATIO <sup>2,3</sup>			Since May 31, 1993	MAXIMUM DRAWDOWN	
				3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr		(%)	Period YYYY-MM-DD
MSCI Emerging Markets Minimum Volatility (USD)	0.76	7.01	20.03	10.93	11.47	16.60	0.80	0.29	0.54	0.45	53.70	2007-10-29—2008-10-27
MSCI Emerging Markets	1.00	0.00	6.84	14.30	14.66	21.25	0.84	0.29	0.35	0.30	65.14	2007-10-29—2008-10-27

<sup>1</sup> Last 12 months      <sup>2</sup> Based on monthly gross returns data      <sup>3</sup> Based on ICE LIBOR 1M

\* EM countries include: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

The MSCI Emerging Markets Minimum Volatility (USD) Index was launched on Dec 01, 2009. Data prior to the launch date is back-tested data (i.e. calculations of how the index might have 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.

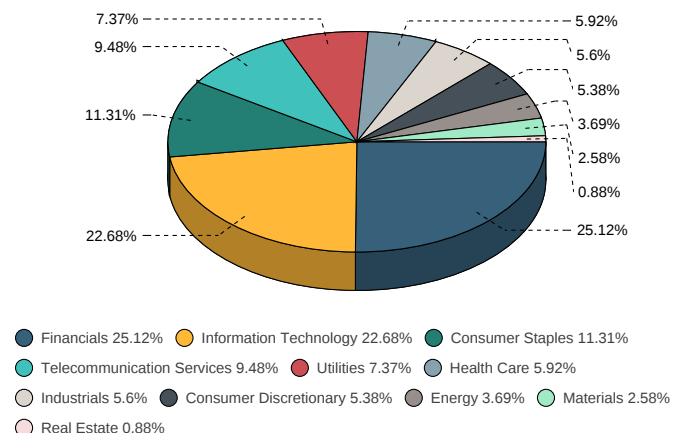
### INDEX CHARACTERISTICS

	MSCI Emerging Markets Minimum Volatility (USD)	MSCI Emerging Markets
Number of Constituents	299	1,151
<b>Weight (%)</b>		
Largest	1.65	4.54
Smallest	0.02	0.00
Average	0.33	0.09
Median	0.19	0.04

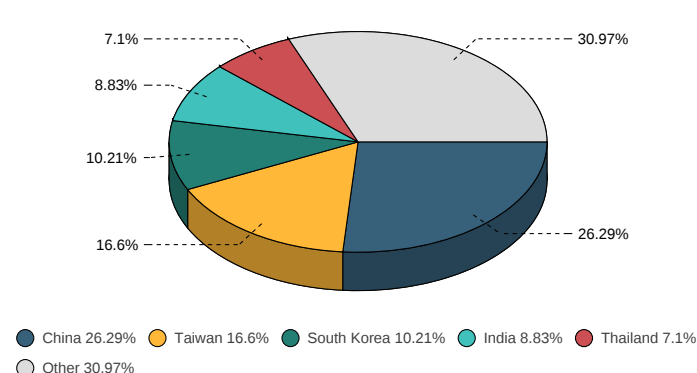
### TOP 10 CONSTITUENTS

	Country	Index Wt. (%)	Parent Index Wt. (%)	Sector
TAIWAN SEMICONDUCTOR MFG	TW	1.65	4.09	Info Tech
BANK CENTRAL ASIA	ID	1.58	0.31	Financials
TAIWAN COPR FINL HLDG	TW	1.52	0.10	Financials
INFOSYS	IN	1.50	0.68	Info Tech
CHINA MOBILE	CN	1.50	1.17	Telecom Srvc
PUBLIC BANK	MY	1.48	0.34	Financials
BANCO DE CHILE	CL	1.43	0.07	Financials
CHUNGHWA TELECOM CO	TW	1.42	0.26	Telecom Srvc
GUANGDONG INVESTMENT	CN	1.31	0.10	Utilities
TATA CONSULTANCY	IN	1.28	0.53	Info Tech
<b>Total</b>		<b>14.67</b>	<b>7.66</b>	

### SECTOR WEIGHTS



### COUNTRY WEIGHTS



### INDEX METHODOLOGY

The MSCI Minimum Volatility Indexes are designed to provide the lowest return variance for a given covariance matrix of stock returns. Each MSCI Minimum Volatility Index is calculated using Barra Optimizer to optimize a given MSCI parent index for the lowest absolute volatility with a certain set of constraints. These constraints help maintain index replicability and investability and include index turnover limits, for example, along with minimum and maximum constituent, sector and/or country weights relative to the parent index. Each Minimum Volatility Index is rebalanced (or is re-optimized) semi-annually in May and November. Indexes may also be optimized for various currencies.

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