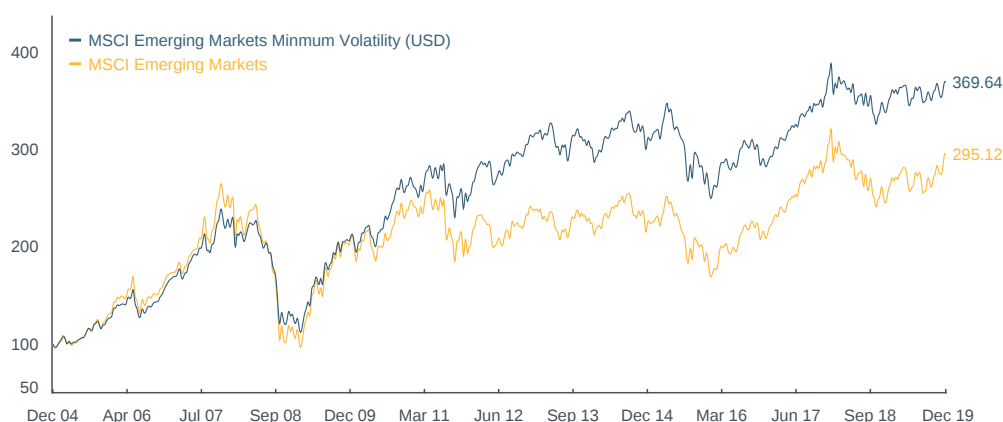


# MSCI EMERGING MARKETS MINIMUM VOLATILITY (USD) INDEX (USD)

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 26 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 - NET RETURNS (USD) (DEC 2004 – DEC 2019)



## ANNUAL PERFORMANCE (%)

Year	MSCI Emerging Markets Minimum Volatility (USD)	MSCI Emerging Markets
2019	8.48	18.42
2018	-5.77	-14.57
2017	26.73	37.28
2016	3.90	11.19
2015	-12.05	-14.92
2014	1.10	-2.19
2013	-0.05	-2.60
2012	22.24	18.22
2011	-6.18	-18.42
2010	28.89	18.88
2009	59.37	78.51
2008	-41.84	-53.33
2007	32.26	39.42
2006	31.76	32.14

## INDEX PERFORMANCE — NET RETURNS (%) (DEC 31, 2019)

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED			
					3 Yr	5 Yr	10 Yr	Since Dec 29, 2000
MSCI Emerging Markets Minimum Volatility (USD)	4.36	4.64	8.48	8.48	9.01	3.43	5.87	11.04
MSCI Emerging Markets	7.46	11.84	18.42	18.42	11.57	5.61	3.68	9.14

## FUNDAMENTALS (DEC 31, 2019)

Div Yld (%)	P/E	P/E Fwd	P/BV
3.15	15.66	13.89	1.76
2.64	15.02	12.79	1.70

## INDEX RISK AND RETURN CHARACTERISTICS (DEC 29, 2000 – DEC 31, 2019)

	Beta	Tracking Error (%)	Turnover (%) <sup>1</sup>	ANNUALIZED STD DEV (%) <sup>2</sup>			SHARPE RATIO <sup>2,3</sup>			Since Dec 29, 2000	MAXIMUM DRAWDOWN (%)	Period YYYY-MM-DD
				3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr			
MSCI Emerging Markets Minimum Volatility (USD)	0.75	6.45	20.14	9.95	11.81	13.20	0.74	0.24	0.44	0.62	53.91	2007-10-29—2008-10-27
MSCI Emerging Markets	1.00	0.00	11.62	14.37	15.79	17.16	0.71	0.35	0.25	0.44	65.25	2007-10-29—2008-10-27

<sup>1</sup> Last 12 months

<sup>2</sup> Based on monthly net returns data

<sup>3</sup> Based on ICE LIBOR 1M

\* EM countries include: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, Saudi Arabia, 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

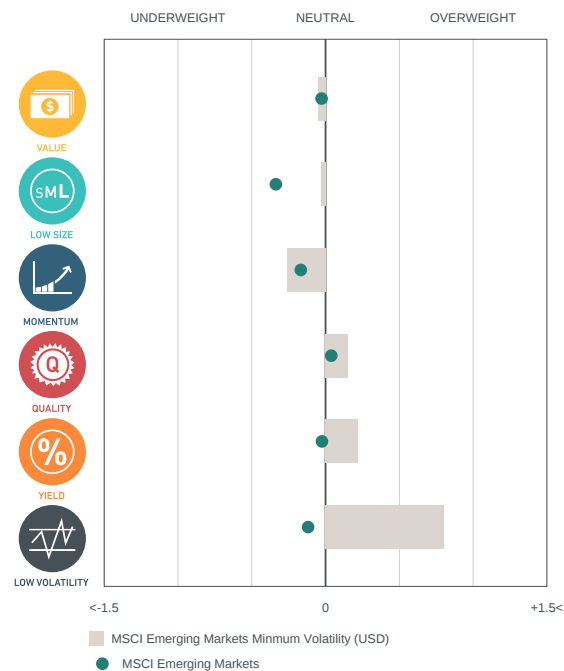
	MSCI Emerging Markets Minimum Volatility (USD)	MSCI Emerging Markets
Number of Constituents	346	1,404
	Weight (%)	
Largest	1.56	5.77
Smallest	0.01	0.00
Average	0.29	0.07
Median	0.18	0.03

### TOP 10 CONSTITUENTS

	Country	Index Wt. (%)	Parent Index Wt. (%)	Sector
FIRST FINANCIAL HLDG CO	TW	1.56	0.13	Financials
BANK CENTRAL ASIA	ID	1.52	0.38	Financials
TAIWAN COPR FINL HLDG	TW	1.50	0.10	Financials
CHUNGHWA TELECOM CO	TW	1.45	0.22	Comm Srvcs
TAIWAN MOBILE	TW	1.44	0.10	Comm Srvcs
GUANGDONG INVESTMENT	CN	1.41	0.10	Utilities
CHINA MOBILE	CN	1.34	0.83	Comm Srvcs
FAR EASTONE TELECOM. CO	TW	1.29	0.06	Comm Srvcs
TAIWAN SEMICONDUCTOR MFG	TW	1.19	4.37	Info Tech
PUBLIC BANK	MY	1.14	0.24	Financials
<b>Total</b>		<b>13.84</b>	<b>6.53</b>	

### FACTORS - KEY EXPOSURES THAT DRIVE RISK AND RETURN

#### MSCI FACTOR BOX



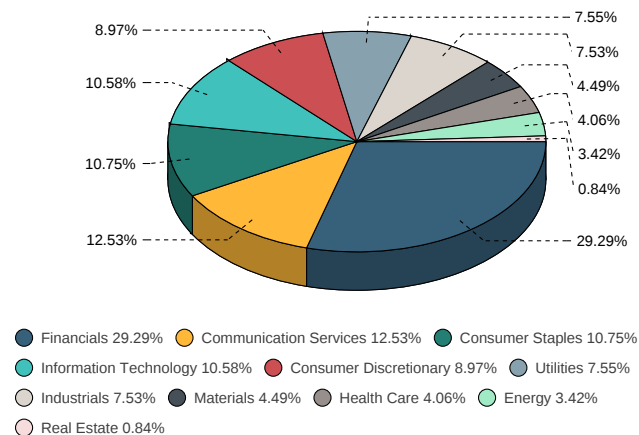
#### MSCI FaCS

- VALUE**  
Relatively Inexpensive Stocks
- LOW SIZE**  
Smaller Companies
- MOMENTUM**  
Rising Stocks
- QUALITY**  
Sound Balance Sheet Stocks
- YIELD**  
Cash Flow Paid Out
- LOW VOLATILITY**  
Lower Risk Stocks

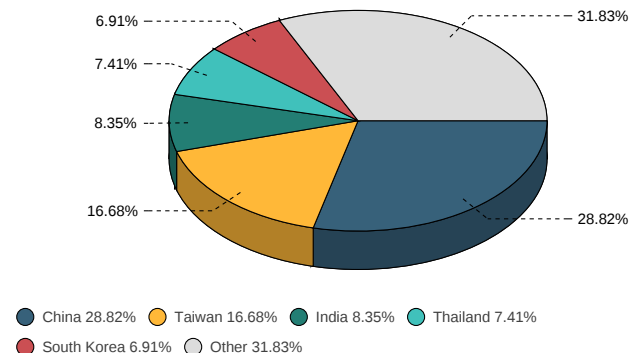
MSCI FaCS provides absolute factor exposures relative to a broad global index - MSCI ACWI IMI.

Neutral factor exposure (FaCS = 0) represents MSCI ACWI IMI.

### 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.

## FACTOR BOX AND FaCS METHODOLOGY

MSCI FaCS is a standard method ([MSCI FaCS Methodology](#)) for evaluating and reporting the Factor characteristics of equity portfolios. MSCI FaCS consists of Factor Groups (e.g. Value, Size, Momentum, Quality, Yield, and Volatility) that have been extensively documented in academic literature and validated by MSCI Research as key drivers of risk and return in equity portfolios. These Factor Groups are constructed by aggregating 16 factors (e.g. Book-to-Price, Earnings/Dividend Yields, LT Reversal, Leverage, Earnings Variability/Quality, Beta) from the latest Barra global equity factor risk model, GEMLT, designed to make fund comparisons transparent and intuitive for use. The MSCI Factor Box, which is powered by MSCI FaCS, provides a visualization designed to easily compare absolute exposures of funds/indexes and their benchmarks along 6 Factor Groups that have historically demonstrated excess market returns over the long run.

## ABOUT MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 45 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process. To learn more, please visit [www.msci.com](http://www.msci.com).

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