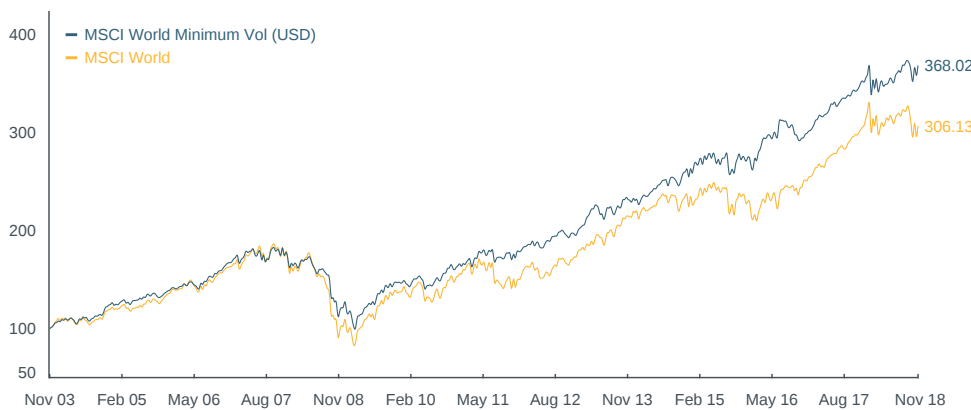


MSCI WORLD MINIMUM VOLATILITY (USD) INDEX (USD)

The MSCI World Minimum Volatility (USD) Index aims to reflect the performance characteristics of a minimum variance strategy applied to the MSCI large and mid cap equity universe across 23 Developed Markets countries*. The index is calculated by optimizing the MSCI World 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 World Index.

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



ANNUAL PERFORMANCE (%)

Year	MSCI World Minimum Vol (USD)	MSCI World
2017	18.04	23.07
2016	8.18	8.15
2015	5.82	-0.32
2014	12.06	5.50
2013	19.41	27.37
2012	8.87	16.54
2011	8.04	-5.02
2010	12.76	12.34
2009	17.18	30.79
2008	-29.23	-40.33
2007	6.13	9.57
2006	21.20	20.65
2005	8.34	10.02
2004	20.76	15.25

INDEX PERFORMANCE — GROSS RETURNS (%) (NOV 30, 2018)

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED			Since May 31, 1988
					3 Yr	5 Yr	10 Yr	
MSCI World Minimum Vol (USD)	2.94	-0.50	4.54	4.32	10.33	9.70	11.57	8.75
MSCI World	1.19	-5.66	0.68	-0.69	9.12	7.27	11.51	7.52

FUNDAMENTALS (NOV 30, 2018)

Div Yld (%)	P/E	P/E Fwd	P/BV
2.56	19.84	17.83	2.80
2.53	17.54	14.48	2.33

INDEX RISK AND RETURN CHARACTERISTICS (MAY 31, 1988 – NOV 30, 2018)

	Beta	Tracking Error (%)	Turnover (%) ¹	ANNUALIZED STD DEV (%) ²			SHARPE RATIO ^{2, 3}			Since May 31, 1988 (%)	MAXIMUM DRAWDOWN	
				3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr			
MSCI World Minimum Vol (USD)	0.68	6.56	19.96	7.73	7.92	10.05	1.17	1.12	1.09	0.51	47.73	2007-10-31—2009-03-09
MSCI World	1.00	0.00	2.19	9.47	10.17	14.15	0.85	0.67	0.81	0.34	57.46	2007-10-31—2009-03-09

¹ Last 12 months ² Based on monthly gross returns data ³ Based on ICE LIBOR 1M

* Developed Markets countries include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the UK and the US.

The MSCI World Minimum Volatility (USD) Index was launched on Apr 14, 2008. 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

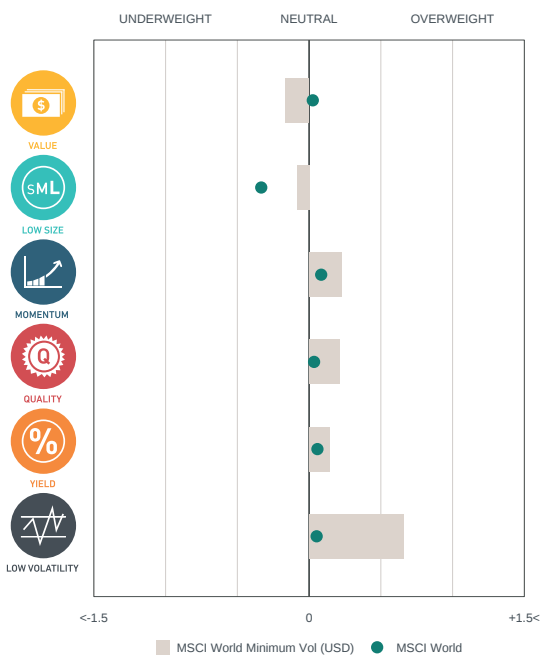
	MSCI World Minimum Vol (USD)	MSCI World
Number of Constituents	336	1,634
Weight (%)		
Largest	1.59	2.26
Smallest	0.04	0.00
Average	0.30	0.06
Median	0.19	0.03

TOP 10 CONSTITUENTS

	Country	Index Wt. (%)	Parent Index Wt. (%)	Sector
JOHNSON & JOHNSON	US	1.59	1.01	Health Care
MCDONALD'S CORP	US	1.39	0.38	Cons Discr
PROCTER & GAMBLE CO	US	1.27	0.61	Cons Staples
PEPSICO	US	1.19	0.45	Cons Staples
CONSOLIDATED EDISON	US	1.16	0.06	Utilities
WASTE MANAGEMENT	US	1.14	0.10	Industrials
VERIZON COMMUNICATIONS	US	1.13	0.64	Telecom Srvc
VISA A	US	1.11	0.65	Info Tech
NESTLE	CH	1.11	0.68	Cons Staples
NTT DOCOMO	JP	1.07	0.08	Telecom Srvc
Total		12.18	4.67	

FACTORS - KEY EXPOSURES THAT DRIVE RISK AND RETURN

MSCI FACTOR BOX

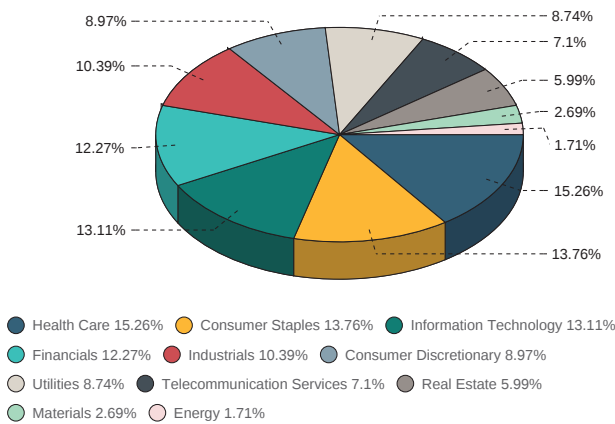


MSCI FaCS

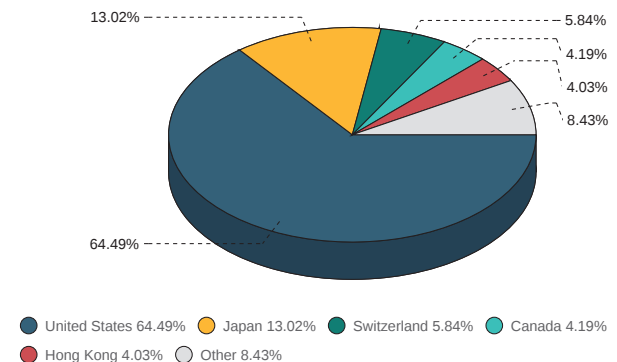
- VALUE**
Relatively Inexpensive Stocks
- LOW SIZE**
Smaller Companies
- MOMENTUM**
Rising Stocks
- QUALITY**
Sound Balance Sheet Stocks
- YIELD**
Cash Flow Paid Out
- LOW VOLATILITY**
Lower Risk Stocks

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

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