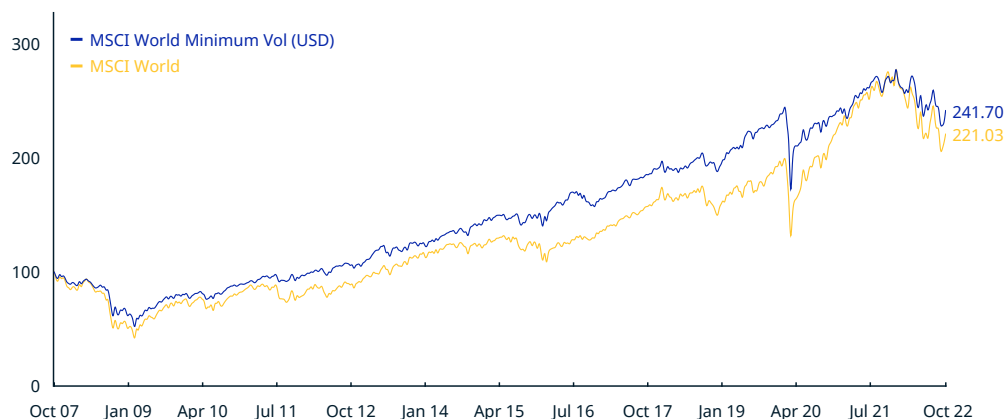


MSCI World Minimum Volatility (USD) Index (USD)

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) (OCT 2007 – OCT 2022)



ANNUAL PERFORMANCE (%)

Year	MSCI World Minimum Vol (USD)	MSCI World
2021	14.84	22.35
2020	3.26	16.50
2019	23.97	28.40
2018	-1.42	-8.20
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

INDEX PERFORMANCE – GROSS RETURNS (%) (OCT 31, 2022)

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED				Since May 31, 1988
					3 Yr	5 Yr	10 Yr	Since May 31, 1988	
MSCI World Minimum Vol (USD)	5.82	-4.29	-9.51	-12.80	1.88	5.43	8.54	8.32	
MSCI World	7.21	-6.74	-18.09	-19.74	6.62	6.92	9.52	7.58	

FUNDAMENTALS (OCT 31, 2022)

Div Yld (%)	P/E	P/E Fwd	P/BV
2.41	18.95	17.07	3.16
2.17	17.39	14.89	2.75

INDEX RISK AND RETURN CHARACTERISTICS (MAY 31, 1988 – OCT 31, 2022)

	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		(%)	Period YYYY-MM-DD
MSCI World Minimum Vol (USD)	0.68	6.79	20.13	14.80	12.79	10.79	0.16	0.38	0.74	0.49	47.73	2007-10-31–2009-03-09
MSCI World	1.00	0.00	2.31	20.27	17.74	14.30	0.39	0.40	0.65	0.35	57.46	2007-10-31–2009-03-09

¹ Last 12 months ² Based on monthly gross returns data ³ Based on NY FED Overnight SOFR from Sep 1 2021 & on ICE LIBOR 1M prior that date

* 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 test (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

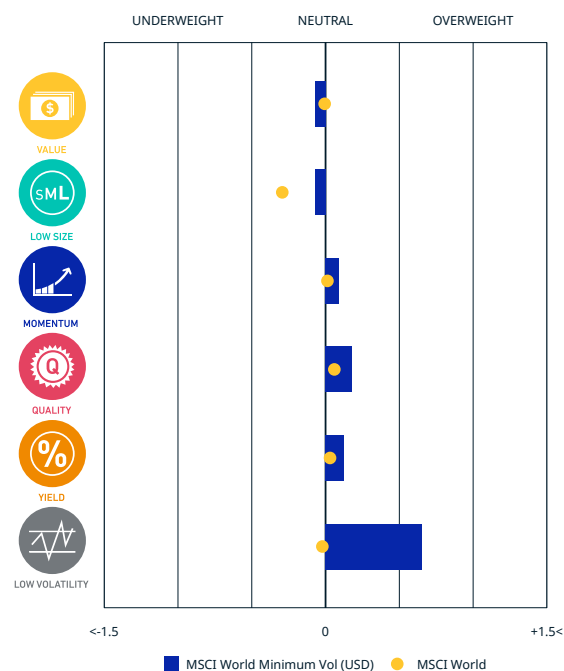
	MSCI World Minimum Vol (USD)	MSCI World
Number of Constituents	286	1,511
Weight (%)		
Largest	1.69	5.07
Smallest	0.04	0.00
Average	0.35	0.07
Median	0.21	0.03

TOP 10 CONSTITUENTS

	Country	Index Wt. (%)	Parent Index Wt. (%)	Sector
VERTEX PHARMACEUTICALS	US	1.69	0.16	Health Care
WASTE MANAGEMENT	US	1.61	0.13	Industrials
PEPSICO	US	1.58	0.51	Cons Staples
JOHNSON & JOHNSON	US	1.56	0.93	Health Care
MERCK & CO	US	1.48	0.52	Health Care
ROCHE HOLDING GENUSS	CH	1.45	0.48	Health Care
NESTLE	CH	1.35	0.63	Cons Staples
GILEAD SCIENCES	US	1.32	0.20	Health Care
REGENERON PHARMACEUTICAL	US	1.24	0.17	Health Care
VERIZON COMMUNICATIONS	US	1.18	0.32	Comm Svcs
Total		14.47	4.05	

FACTORS - KEY EXPOSURES THAT DRIVE RISK AND RETURN

MSCI FACTOR BOX



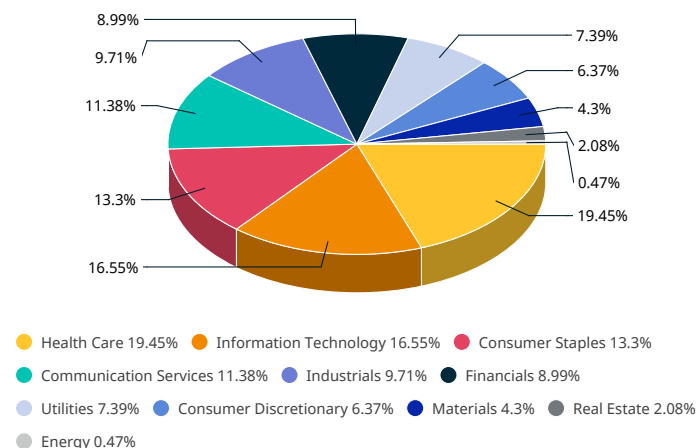
MSCI FaCS

- 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

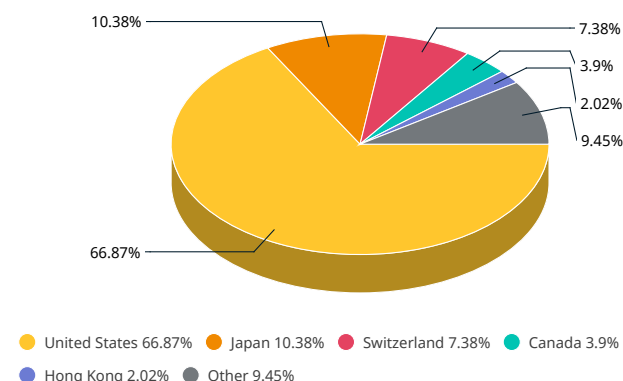
MSCI FaCS provides absolute factor exposures relative to a broad global index - MSCI ACWI IMI.

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

SECTOR WEIGHTS



COUNTRY WEIGHTS



INDEX FRAMEWORK

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.

This summary is provided for illustrative purposes only and does not include all material elements of the index or its methodology. For a complete description of the index methodology, please see [Index methodology - MSCI](#).

MSCI FACTOR BOX AND FaCS FRAMEWORK (Please refer to complete description of the MSCI FaCS methodology [here](#))

MSCI FaCS is a standard method 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.

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