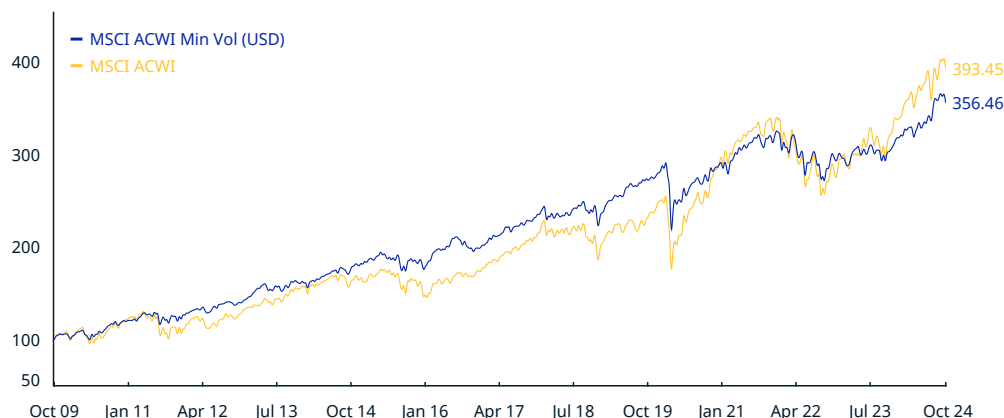


MSCI ACWI Minimum Volatility (USD) Index (USD)

The **MSCI ACWI Minimum Volatility (USD) Index** aims to reflect the performance characteristics of a minimum variance strategy applied to large and mid cap equities across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries*. The index is calculated by optimizing the MSCI ACWI Index, its parent index, in USD 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 ACWI Index.

For a complete description of the index methodology, please see [Index methodology - MSCI](#).

CUMULATIVE INDEX PERFORMANCE – NET RETURNS (USD) (OCT 2009 – OCT 2024)



ANNUAL PERFORMANCE (%)

Year	MSCI ACWI Min Vol (USD)	MSCI ACWI
2023	7.74	22.20
2022	-10.31	-18.36
2021	13.94	18.54
2020	2.69	16.25
2019	21.05	26.60
2018	-1.56	-9.41
2017	17.93	23.97
2016	7.43	7.86
2015	2.76	-2.36
2014	10.95	4.16
2013	16.90	22.80
2012	10.06	16.13
2011	5.34	-7.35
2010	14.32	12.67

INDEX PERFORMANCE – NET RETURNS (%) (OCT 31, 2024)

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED				Since Dec 29, 2000
					3 Yr	5 Yr	10 Yr	Since Dec 29, 2000	
MSCI ACWI Min Vol (USD)	-2.51	2.95	21.88	12.50	4.06	5.32	7.15	7.50	
MSCI ACWI	-2.24	2.57	32.79	16.00	5.51	11.08	9.06	6.51	

FUNDAMENTALS (OCT 31, 2024)

Div Yld (%)	P/E	P/E Fwd	P/BV
2.29	17.79	15.83	2.51
1.86	21.45	17.75	3.16

INDEX RISK AND RETURN CHARACTERISTICS (DEC 29, 2000 – OCT 31, 2024)

	Beta	Tracking Error (%)	Turnover (%) ¹	ANNUALIZED STD DEV (%) ²			SHARPE RATIO ^{2,3}			Since Dec 29, 2000	MAXIMUM DRAWDOWN	
				3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr		(%)	Period YYYY-MM-DD
MSCI ACWI Min Vol (USD)	0.61	7.77	20.44	11.65	12.43	10.54	0.09	0.29	0.54	0.56	43.41	2007-10-31–2009-03-09
MSCI ACWI	1.00	0.00	2.48	16.45	17.42	14.81	0.19	0.56	0.54	0.36	58.38	2007-10-31–2009-03-09

¹ Last 12 months

² Based on monthly net returns data

³ Based on NY FED Overnight SOFR from Sep 1 2021 & on ICE LIBOR 1M prior that date

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

The MSCI ACWI Minimum Volatility (USD) Index was launched on Nov 30, 2009. 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

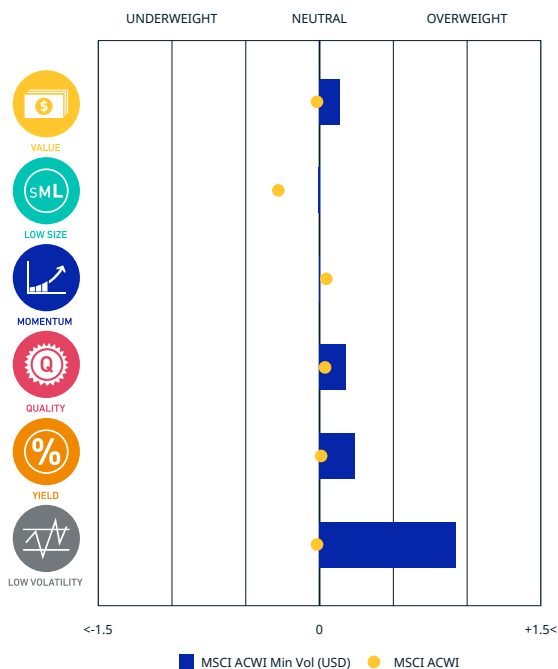
	MSCI ACWI Min Vol (USD)	MSCI ACWI
Number of Constituents	385	2,687
	Weight (%)	
Largest	1.93	4.30
Smallest	0.03	0.00
Average	0.26	0.04
Median	0.14	0.01

TOP 10 CONSTITUENTS

	Index Wt. (%)	Parent Index Wt. (%)	Sector
T-MOBILE US	1.93	0.15	Comm Svcs
WALMART	1.79	0.47	Cons Staples
MOTOROLA SOLUTIONS	1.73	0.10	Info Tech
CISCO SYSTEMS	1.50	0.29	Info Tech
WASTE MANAGEMENT	1.47	0.11	Industrials
ROPER TECHNOLOGIES	1.30	0.08	Info Tech
MCKESSON CORP	1.17	0.08	Health Care
REPUBLIC SERVICES	1.13	0.06	Industrials
VERTEX PHARMACEUTICALS	1.12	0.16	Health Care
JOHNSON & JOHNSON	1.11	0.50	Health Care
Total	14.26	2.01	

FACTORS - KEY EXPOSURES THAT DRIVE RISK AND RETURN

MSCI FACTOR BOX



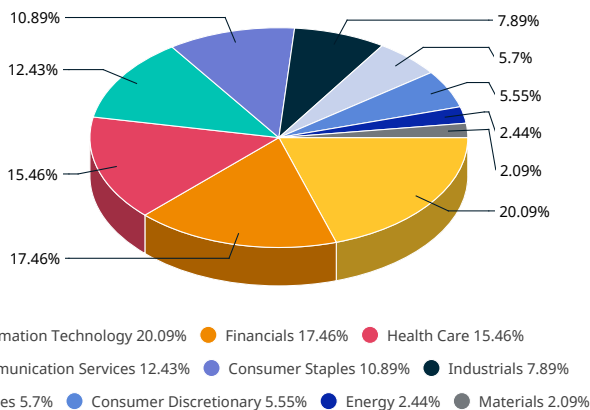
MSCI FaCS

- 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

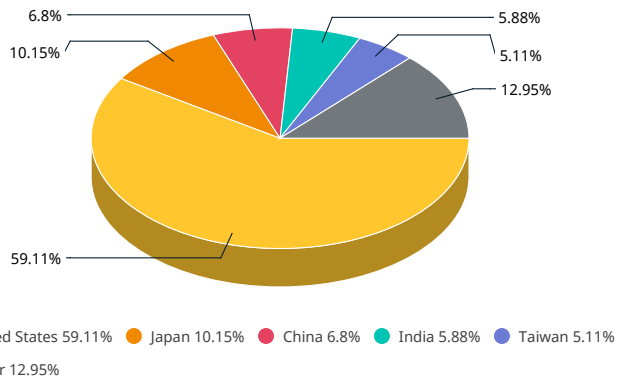
MSCI FaCS provides absolute factor exposures relative to a broad global index - MSCI ACWI IMI.

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

SECTOR WEIGHTS



COUNTRY WEIGHTS



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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