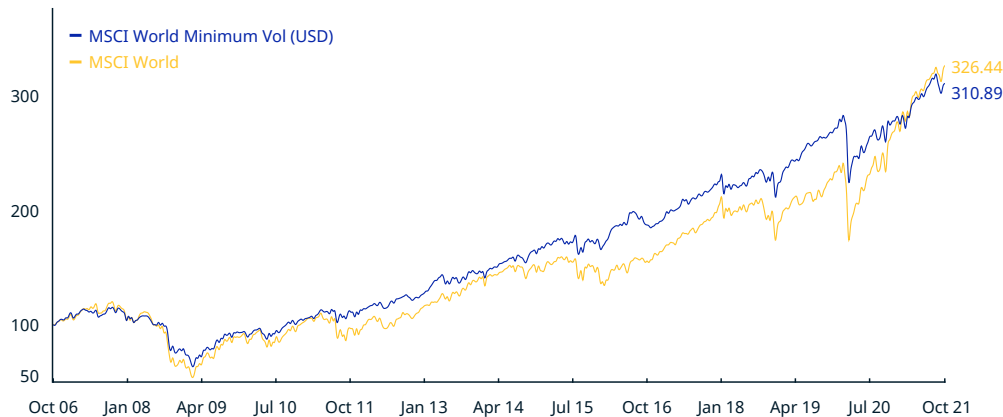


# MSCI World Minimum Volatility (USD) Index (USD)

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 2006 – OCT 2021)



## ANNUAL PERFORMANCE (%)

| Year | MSCI World Minimum Vol (USD) | MSCI World |
|------|------------------------------|------------|
| 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     |
| 2007 | 6.13                         | 9.57       |

## INDEX PERFORMANCE – GROSS RETURNS (%) (OCT 29, 2021)

|                              | 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) | 3.11 | 0.29 | 20.95 | 10.67 | 11.28      | 10.69 | 10.79 | 8.90               |                    |
| MSCI World                   | 5.69 | 3.90 | 41.05 | 19.89 | 18.82      | 16.06 | 12.81 | 8.47               |                    |

## FUNDAMENTALS (OCT 29, 2021)

| Div Yld (%) | P/E   | P/E Fwd | P/BV |
|-------------|-------|---------|------|
| 1.99        | 22.04 | 20.10   | 3.48 |
| 1.65        | 23.82 | 19.54   | 3.37 |

## INDEX RISK AND RETURN CHARACTERISTICS (MAY 31, 1988 – OCT 29, 2021)

|                              | Beta | Tracking Error (%) | Turnover (%) <sup>1</sup> | ANNUALIZED STD DEV (%) <sup>2</sup> |       |       | SHARPE RATIO <sup>2,3</sup> |      |       | 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 | 6.74               | 20.55                     | 12.83                               | 10.80 | 9.77  | 0.81                        | 0.88 | 1.02  | 0.53               | 29.21            | 2020-02-18–2020-03-23 |
| MSCI World                   | 1.00 | 0.00               | 2.65                      | 17.92                               | 14.87 | 13.18 | 0.99                        | 1.00 | 0.93  | 0.41               | 33.99            | 2020-02-12–2020-03-23 |

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

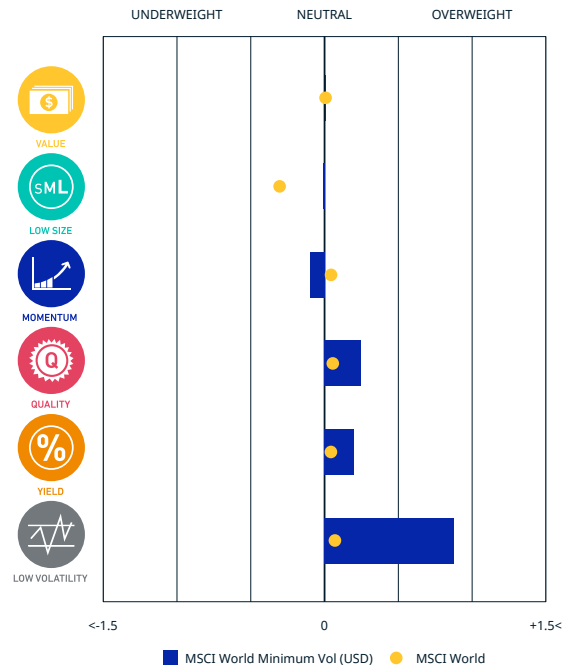
|                               | MSCI World<br>Minimum Vol (USD) | MSCI World |
|-------------------------------|---------------------------------|------------|
| <b>Number of Constituents</b> | 300                             | 1,558      |
| <b>Weight (%)</b>             |                                 |            |
| <b>Largest</b>                | 1.62                            | 4.09       |
| <b>Smallest</b>               | 0.02                            | 0.00       |
| <b>Average</b>                | 0.33                            | 0.06       |
| <b>Median</b>                 | 0.23                            | 0.03       |

**TOP 10 CONSTITUENTS**

|                          | Country | Index Wt. (%) | Parent Index Wt. (%) | Sector       |
|--------------------------|---------|---------------|----------------------|--------------|
| WASTE MANAGEMENT         | US      | 1.62          | 0.11                 | Industrials  |
| ROCHE HOLDING GENUSS     | CH      | 1.55          | 0.45                 | Health Care  |
| NOVO NORDISK B           | DK      | 1.46          | 0.30                 | Health Care  |
| NEXTERA ENERGY           | US      | 1.45          | 0.27                 | Utilities    |
| NESTLE                   | CH      | 1.43          | 0.62                 | Cons Staples |
| PEPSICO                  | US      | 1.31          | 0.37                 | Cons Staples |
| REGENERON PHARMACEUTICAL | US      | 1.22          | 0.11                 | Health Care  |
| JOHNSON & JOHNSON        | US      | 1.22          | 0.70                 | Health Care  |
| VERIZON COMMUNICATIONS   | US      | 1.20          | 0.36                 | Comm Srvcs   |
| LILLY (ELI) & COMPANY    | US      | 1.14          | 0.34                 | Health Care  |
| <b>Total</b>             |         | <b>13.60</b>  | <b>3.63</b>          |              |

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

**MSCI FACTOR BOX**



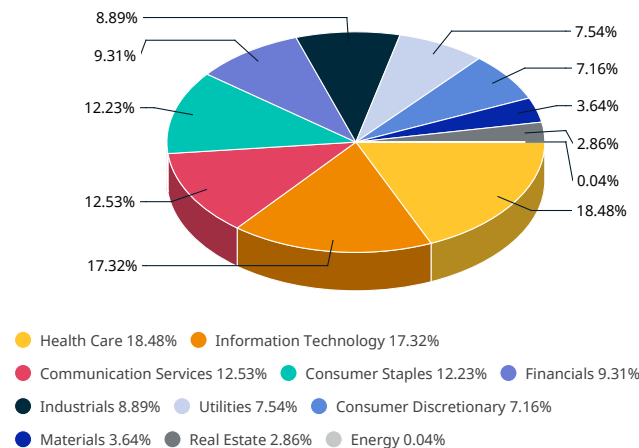
**MSCI FaCS**

- 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

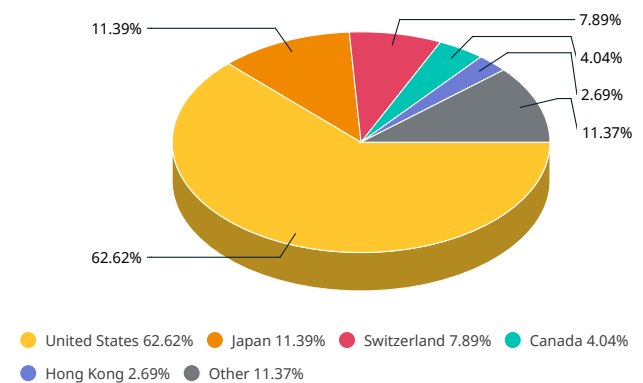
MSCI FaCS provides absolute factor exposures relative to a broad global index - MSCI ACWI IMI.

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

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