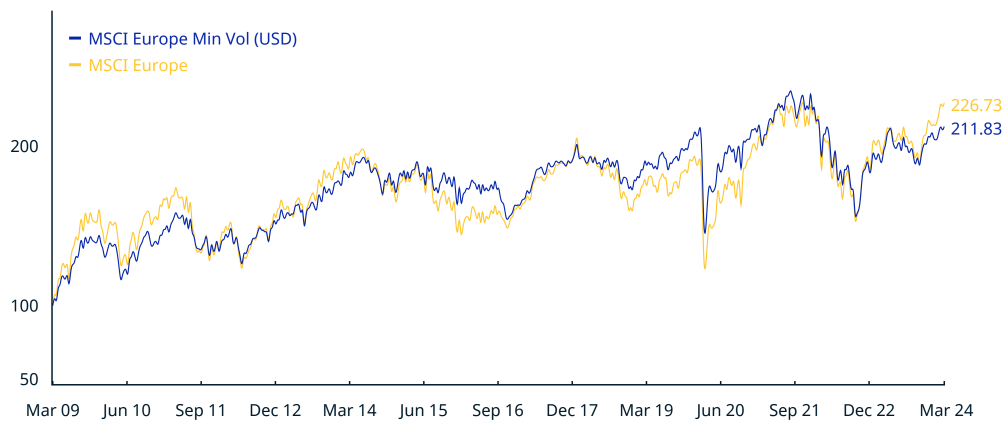
# MSCI Europe Minimum Volatility (USD) Index (USD)

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

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

## CUMULATIVE INDEX PERFORMANCE — PRICE RETURNS (USD) (MAR 2009 – MAR 2024)




## ANNUAL PERFORMANCE (%)

| Year | MSCI Europe Min Vol (USD) | MSCI Europe |
|---|---|---|
| 2023 | 12.81 | 16.68 |
| 2022 | -21.03 | -17.28 |
| 2021 | 10.81 | 13.75 |
| 2020 | 2.37 | 3.14 |
| 2019 | 18.67 | 20.03 |
| 2018 | -10.44 | -17.27 |
| 2017 | 19.63 | 22.13 |
| 2016 | -9.73 | -3.39 |
| 2015 | 1.20 | -5.32 |
| 2014 | -1.51 | -8.59 |
| 2013 | 18.61 | 21.68 |
| 2012 | 10.27 | 15.15 |
| 2011 | -2.49 | -13.82 |
| 2010 | -0.63 | 1.02 |

## INDEX PERFORMANCE — PRICE RETURNS (%) (MAR 29, 2024)

| | | | | | ANNUALIZED | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 Mo | 3 Mo | 1 Yr | YTD | 3 Yr | 5 Yr | 10 Yr | Since Nov 30, 2001 |
| **MSCI Europe Min Vol (USD)** | 2.51 | 2.32 | 5.88 | 2.32 | 0.71 | 2.42 | 1.39 | 4.51 |
| **MSCI Europe** | 3.33 | 4.60 | 11.06 | 4.60 | 3.52 | 5.26 | 1.70 | 3.14 |

## FUNDAMENTALS (MAR 29, 2024)

| | Div Yld (%) | P/E | P/E Fwd | P/BV |
|---|---|---|---|---|
| MSCI Europe Min Vol (USD) | 3.34 | 18.29 | 15.43 | 2.49 |
| MSCI Europe | 3.14 | 15.12 | 13.74 | 2.11 |

## INDEX RISK AND RETURN CHARACTERISTICS (NOV 30, 2001 – MAR 29, 2024)

| | | | | ANNUALIZED STD DEV (%) [2] | | | SHARPE RATIO [2,3] | | | | MAXIMUM DRAWDOWN | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Beta | Tracking Error (%) | Turnover (%) [1] | 3 Yr | 5 Yr | 10 Yr | 3 Yr | 5 Yr | 10 Yr | Since Nov 30, 2001 | (%) | Period YYYY-MM-DD |
| **MSCI Europe Min Vol (USD)** | 0.76 | 6.26 | 20.21 | 16.04 | 15.80 | 13.32 | -0.04 | 0.10 | 0.06 | 0.26 | 56.62 | 2007-10-31—2009-03-09 |
| **MSCI Europe** | 1.00 | 0.00 | 3.30 | 18.31 | 19.52 | 16.37 | 0.14 | 0.26 | 0.10 | 0.17 | 64.47 | 2007-10-31—2009-03-09 |

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

* DM countries in Europe include: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the UK.

The MSCI Europe 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

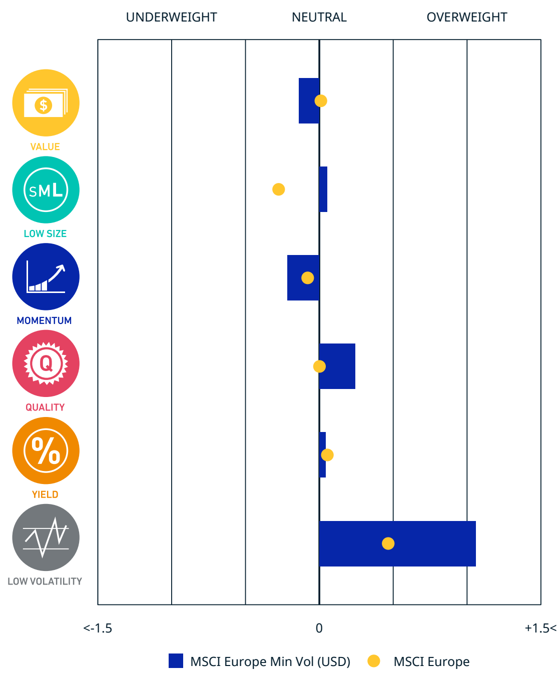
| | MSCI Europe Min Vol (USD) | MSCI Europe |
|---|---|---|
| **Number of Constituents** | 140 | 421 |
| | **Weight** (%) | |
| **Largest** | 1.88 | 3.78 |
| **Smallest** | 0.05 | 0.02 |
| **Average** | 0.71 | 0.24 |
| **Median** | 0.59 | 0.10 |

## TOP 10 CONSTITUENTS

| | Country | Index Wt. (%) | Parent Index Wt. (%) | Sector |
|---|---|---|---|---|
| UCB (GROUPE) | BE | 1.88 | 0.14 | Health Care |
| BAE SYSTEMS | GB | 1.82 | 0.47 | Industrials |
| INDITEX | ES | 1.79 | 0.50 | Cons Discr |
| GSK | GB | 1.73 | 0.81 | Health Care |
| NOVO NORDISK B | DK | 1.72 | 3.78 | Health Care |
| FERRARI (IT) | IT | 1.70 | 0.50 | Cons Discr |
| WOLTERS KLUWER | NL | 1.64 | 0.35 | Industrials |
| RELX (GB) | GB | 1.64 | 0.74 | Industrials |
| AIR LIQUIDE | FR | 1.58 | 0.99 | Materials |
| ZURICH INSURANCE GROUP | CH | 1.55 | 0.72 | Financials |
| Total | | 17.06 | 8.99 | |

## 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**

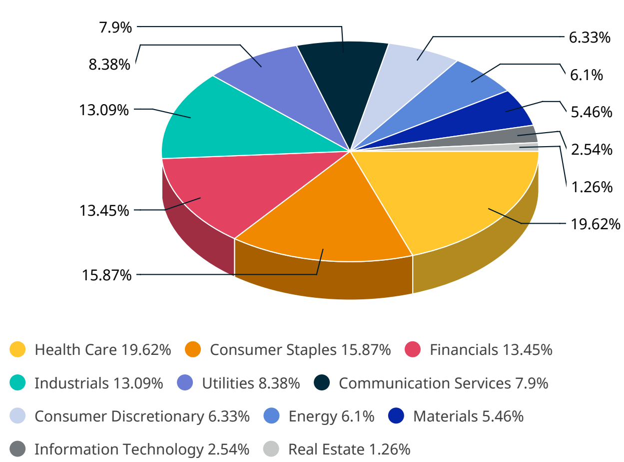
**YIELD**
**Cash Flow Paid Out**

**LOW VOLATILITY**
**Lower Risk Stocks**

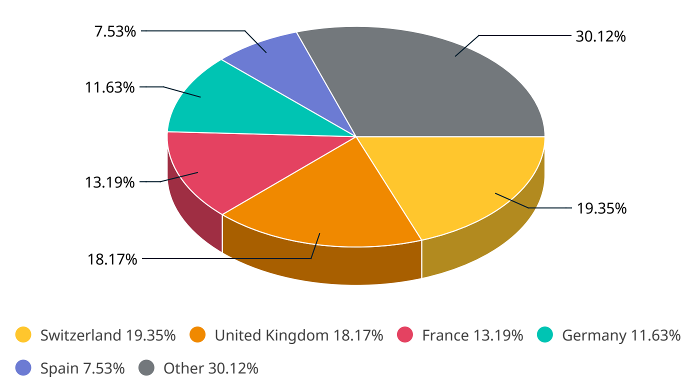
MSCI FaCS provides absolute factor exposures relative to a
broad global index - MSCI ACWI IMI.

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.