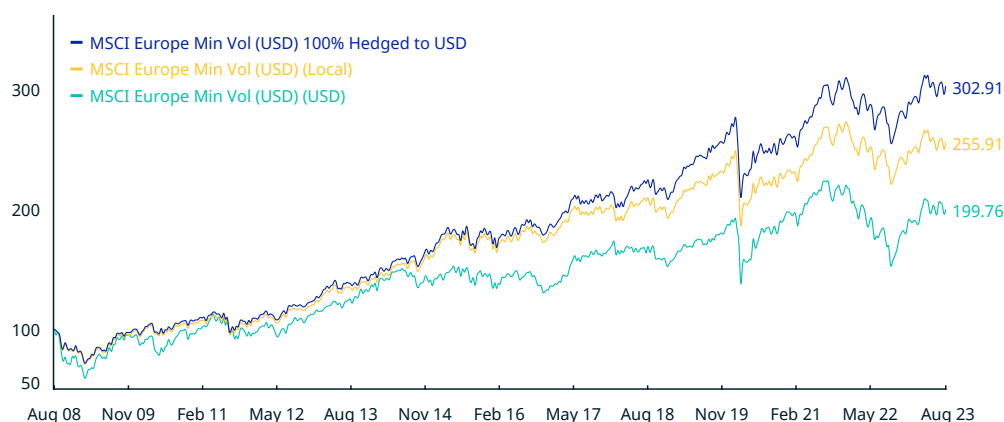


MSCI Europe Minimum Volatility (USD) 100% Hedged to USD Index (USD)

The MSCI Europe Minimum Volatility (USD) 100% Hedged to USD Index represents a close estimation of the performance that can be achieved by hedging the currency exposures of its parent index, the MSCI Europe Minimum Volatility Index, to the USD, the "home" currency for the hedged index. The index is 100% hedged to the USD by selling each foreign currency forward at the one-month Forward rate. The index aims to reflect the performance characteristics of a minimum variance strategy applied to the large and mid cap equity universe across Developed Markets countries* in Europe. The index is calculated by optimizing the 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 Europe Minimum Volatility Index.

CUMULATIVE INDEX PERFORMANCE – NET RETURNS (USD) (AUG 2008 – AUG 2023)



ANNUAL PERFORMANCE (%)

Year	MSCI Europe Min Vol (USD) 100% Hedged to USD	MSCI Europe Min Vol (USD) (Local)	MSCI Europe Min Vol (USD) (USD)
2022	-11.52	-13.55	-19.08
2021	20.26	19.42	13.26
2020	-1.00	-2.55	5.06
2019	25.29	22.11	22.09
2018	-1.03	-3.51	-7.92
2017	13.08	11.22	22.94
2016	2.02	0.77	-6.86
2015	11.39	11.67	4.36
2014	12.84	12.82	1.69
2013	19.56	19.55	22.66
2012	11.67	11.11	14.51
2011	2.73	2.92	1.12
2010	6.96	6.00	2.73
2009	18.11	17.78	24.44

INDEX PERFORMANCE – NET RETURNS (%) (AUG 31, 2023)

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED			
					3 Yr	5 Yr	10 Yr	Since Nov 30, 2001
MSCI Europe Min Vol (USD) 100% Hedged to USD	-1.06	0.82	10.71	9.74	6.91	6.34	8.38	7.29
MSCI Europe Min Vol (USD) (Local)	-1.26	0.20	7.33	7.76	5.03	4.23	6.85	6.72
MSCI Europe Min Vol (USD) (USD)	-2.91	2.46	16.24	10.79	2.63	3.53	5.14	7.53

INDEX RISK AND RETURN CHARACTERISTICS (NOV 30, 2001 – AUG 31, 2023)

	ANNUALIZED STD DEV (%) ¹			SHARPE RATIO ^{1,2}			Since Nov 30, 2001	MAXIMUM DRAWDOWN	
	3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr		(%)	Period YYYY-MM-DD
MSCI Europe Min Vol (USD) 100% Hedged to USD	12.64	12.16	10.46	0.47	0.43	0.71	0.55	46.88	2007-06-01–2009-03-09
MSCI Europe Min Vol (USD) (Local)	12.67	12.22	10.52	0.32	0.26	0.57	0.50	47.00	2007-06-01–2009-03-09
MSCI Europe Min Vol (USD) (USD)	16.99	15.85	13.48	0.14	0.19	0.35	0.46	54.73	2007-10-31–2009-03-09

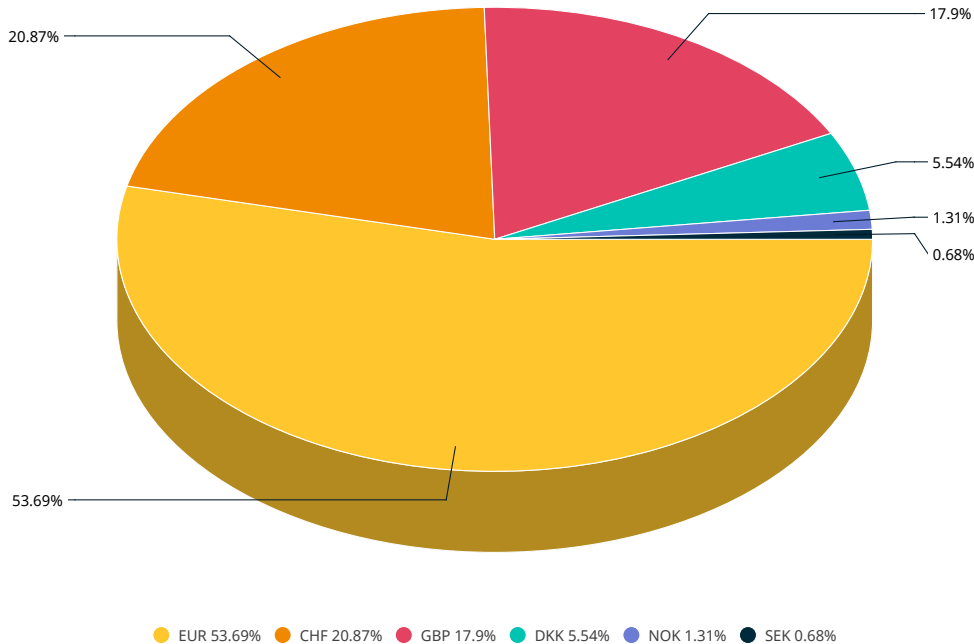
¹ Based on monthly net returns data

² 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) 100% Hedged to USD Index was launched on Aug 25, 2015. 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.

CURRENCY WEIGHTS (AUG 31, 2023)



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.

To hedge the currency risk in the MSCI Minimum Volatility Indexes, each foreign currency in the index is hedged back to a home currency (e.g., EUR) by notionally “selling” each currency forward at the one-month forward rate at the end of each month. To construct investable and replicable indexes, MSCI calculates the performance of Hedged Indexes using foreign currency weights and corresponding foreign currency notional amounts as of two business days before the first calendar day of the following month.

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](#).

ABOUT MSCI

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