

MSCI EMU INDEX (EUR)

The MSCI EMU Index (European Economic and Monetary Union) captures large and mid cap representation across the 10 Developed Markets countries in the EMU*. With 246 constituents, the index covers approximately 85% of the free float-adjusted market capitalization of the EMU.

CUMULATIVE INDEX PERFORMANCE - GROSS RETURNS (EUR) (DEC 2003 – DEC 2018)



ANNUAL PERFORMANCE (%)

Year	MSCI EMU	MSCI World	MSCI ACWI
2018	-12.01	-3.58	-4.34
2017	13.30	8.10	9.47
2016	5.25	11.39	11.73
2015	10.55	11.03	9.34
2014	5.08	20.14	19.23
2013	24.42	21.86	18.11
2012	20.61	14.75	15.01
2011	-14.08	-1.84	-3.75
2010	3.29	20.14	21.08
2009	28.66	26.72	31.19
2008	-44.35	-37.24	-38.83
2007	8.54	-1.18	1.18
2006	22.79	7.93	8.71
2005	26.27	26.78	28.34

INDEX PERFORMANCE — GROSS RETURNS (%) (DEC 31, 2018)

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED			
					3 Yr	5 Yr	10 Yr	Since Dec 31, 1998
MSCI EMU	-5.87	-12.66	-12.01	-12.01	1.62	4.04	7.64	3.49
MSCI World	-8.45	-11.92	-3.58	-3.58	5.10	9.15	12.46	5.05
MSCI ACWI	-7.89	-11.25	-4.34	-4.34	5.37	8.81	12.22	5.16

FUNDAMENTALS (DEC 31, 2018)

Div Yld (%)	P/E	P/E Fwd	P/BV
3.74	13.48	11.32	1.43
2.76	16.09	13.45	2.15
2.78	15.47	13.02	2.05

INDEX RISK AND RETURN CHARACTERISTICS (DEC 31, 2018)

	Turnover (%) ¹	ANNUALIZED STD DEV (%) ²			SHARPE RATIO ^{2, 3}			Since Dec 31, 1998	MAXIMUM DRAWDOWN	
		3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr		(%)	Period YYYY-MM-DD
MSCI EMU	1.95	11.90	13.35	15.86	0.22	0.38	0.53	0.19	59.70	2007-07-16—2009-03-09
MSCI World	2.02	9.92	11.19	11.42	0.59	0.86	1.07	0.30	57.71	2000-08-31—2009-03-09
MSCI ACWI	2.40	9.55	10.93	11.40	0.64	0.85	1.06	0.30	56.19	2000-08-31—2003-03-12

¹ Last 12 months

² Based on monthly gross returns data

³ Based on ICE LIBOR 1M

* Developed Market countries in the EMU include: Austria, Belgium, Finland, France, Germany, Ireland, Italy, the Netherlands, Portugal and Spain.

The MSCI EMU Index was launched on Apr 30, 1998. 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.

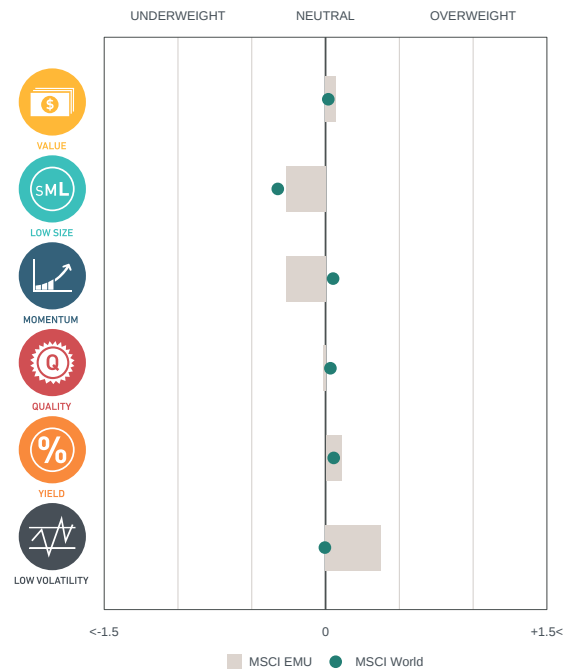
INDEX CHARACTERISTICS

MSCI EMU	
Number of Constituents	246
Mkt Cap (EUR Millions)	
Index	3,456,989.15
Largest	110,734.17
Smallest	1,503.80
Average	14,052.80
Median	7,283.50

TOP 10 CONSTITUENTS

	Country	Float Adj Mkt Cap (EUR Billions)	Index Wt. (%)	Sector
TOTAL	FR	110.73	3.20	Energy
SAP	DE	85.44	2.47	Info Tech
SANOFI	FR	85.22	2.47	Health Care
ALLIANZ	DE	75.29	2.18	Financials
SIEMENS	DE	74.50	2.15	Industrials
UNILEVER NV (NL) CERT	NL	73.18	2.12	Cons Staples
LVMH MOET HENNESSY	FR	71.72	2.07	Cons Discr
BANCO SANTANDER	ES	64.63	1.87	Financials
BAYER	DE	56.48	1.63	Health Care
ASML HLDG	NL	56.22	1.63	Info Tech
Total		753.40	21.79	

FACTORS - KEY EXPOSURES THAT DRIVE RISK AND RETURN MSCI FACTOR BOX



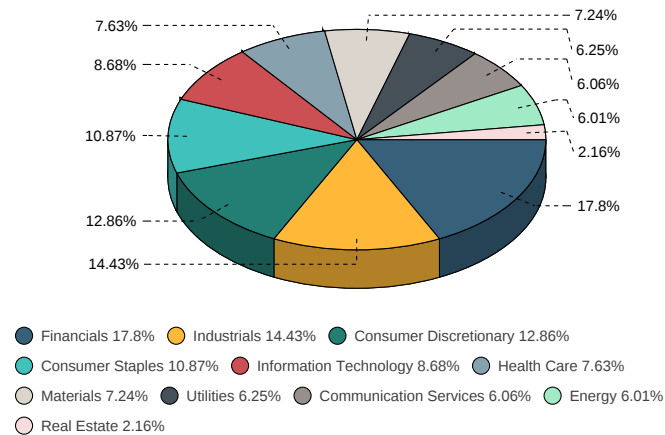
MSCI FaCS

- 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

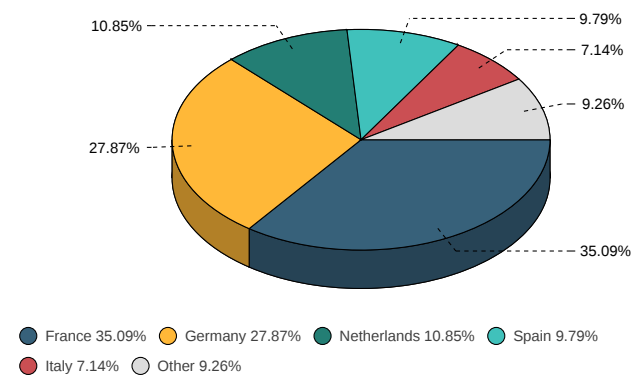
MSCI FaCS provides absolute factor exposures relative to a broad global index - MSCI ACWI IMI.

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

SECTOR WEIGHTS



COUNTRY WEIGHTS



INDEX METHODOLOGY

The index is based on the [MSCI Global Investable Market Indexes \(GIMI\) Methodology](#) —a comprehensive and consistent approach to index construction that allows for meaningful global views and cross regional comparisons across all market capitalization size, sector and style segments and combinations. This methodology aims to provide exhaustive coverage of the relevant investment opportunity set with a strong emphasis on index liquidity, investability and replicability. The index is reviewed quarterly—in February, May, August and November—with the objective of reflecting change in the underlying equity markets in a timely manner, while limiting undue index turnover. During the May and November semi-annual index reviews, the index is rebalanced and the large and mid capitalization cutoff points are recalculated.

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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