

MSCI WORLD LOW CARBON LEADERS INDEX (USD)

The MSCI World Low Carbon Leaders Index is based on the MSCI World Index, its parent index, and includes large and mid-cap stocks across 23 Developed Markets (DM) countries*. The index addresses two dimensions of carbon exposure – carbon emissions and fossil fuel reserves – providing clients with an effective tool for limiting the exposure of their portfolios to carbon risk. By excluding companies with the highest carbon emissions intensity and the largest owners of carbon reserves per dollar of market capitalization, the index aims to achieve at least 50% reduction in its carbon footprint. The index also aims to maintain wide and consistent market exposure by minimizing the tracking error relative to the MSCI World Index. The MSCI Global Low Carbon Leaders Indexes use MSCI ESG CarbonMetrics data from MSCI ESG Research Inc.

CUMULATIVE INDEX PERFORMANCE - GROSS RETURNS (USD) (NOV 2010 – DEC 2018)



ANNUAL PERFORMANCE (%)

Year	MSCI World Low Carbon Leaders	MSCI World
2018	-8.23	-8.20
2017	23.03	23.07
2016	7.77	8.15
2015	0.61	-0.32
2014	5.27	5.50
2013	28.69	27.37
2012	17.54	16.54
2011	-5.12	-5.02

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

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED			Since Nov 30, 2010
					3 Yr	5 Yr	10 Yr	
MSCI World Low Carbon Leaders	-7.55	-13.55	-8.23	-8.23	6.76	5.20	na	8.87
MSCI World	-7.57	-13.31	-8.20	-8.20	6.91	5.14	na	8.57

FUNDAMENTALS (DEC 31, 2018)

Div Yld (%)	P/E	P/E Fwd	P/BV
2.76	16.01	13.34	2.12
2.76	16.09	13.45	2.15

INDEX RISK AND RETURN CHARACTERISTICS (NOV 30, 2010 – DEC 31, 2018)

	Beta	Tracking Error (%)	Turnover (%) ¹	ANNUALIZED STD DEV (%) ²			SHARPE RATIO ^{2,3}			Since Nov 30, 2010	MAXIMUM DRAWDOWN (%)	Period YYYY-MM-DD
				3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr			
MSCI World Low Carbon Leaders	1.01	0.52	11.05	10.61	10.84	na	0.56	0.45	na	0.71	18.37	2018-01-26—2018-12-25
MSCI World	1.00	0.00	2.02	10.54	10.78	na	0.57	0.45	na	0.69	18.28	2018-01-26—2018-12-25

¹ Last 12 months ² Based on monthly gross returns data ³ Based on ICE LIBOR 1M

* 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.

The MSCI World Low Carbon Leaders Index was launched on Nov 07, 2014. 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.

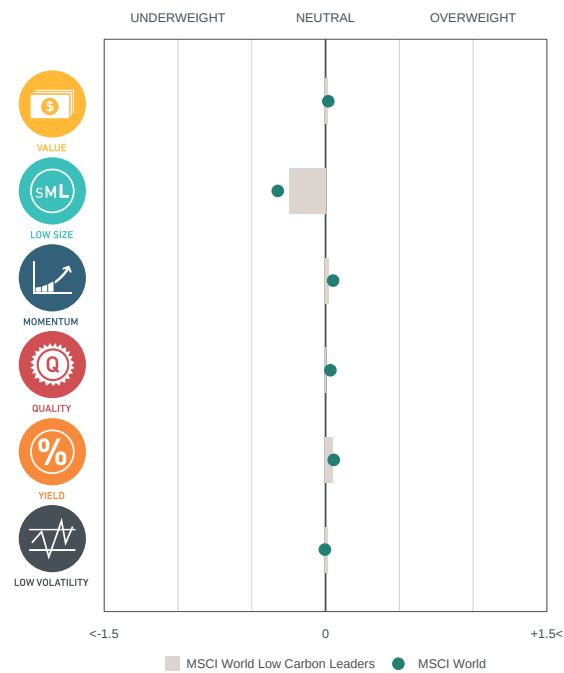
INDEX CHARACTERISTICS

	MSCI World Low Carbon Leaders	MSCI World
Number of Constituents	1,292	1,633
	Weight (%)	
Largest	2.15	2.13
Smallest	0.00	0.00
Average	0.08	0.06
Median	0.04	0.03

TOP 10 CONSTITUENTS

	Index Wt. (%)	Parent Index Wt. (%)	Sector
APPLE	2.15	2.13	Info Tech
MICROSOFT CORP	2.11	2.07	Info Tech
AMAZON.COM	1.76	1.74	Cons Discr
JOHNSON & JOHNSON	1.01	0.97	Health Care
ALPHABET C	0.96	0.91	Communication Services
JPMORGAN CHASE & CO	0.94	0.92	Financials
FACEBOOK A	0.90	0.88	Communication Services
ALPHABET A	0.85	0.87	Communication Services
PFIZER	0.76	0.72	Health Care
UNITEDHEALTH GROUP	0.71	0.67	Health Care
Total	12.14	11.88	

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



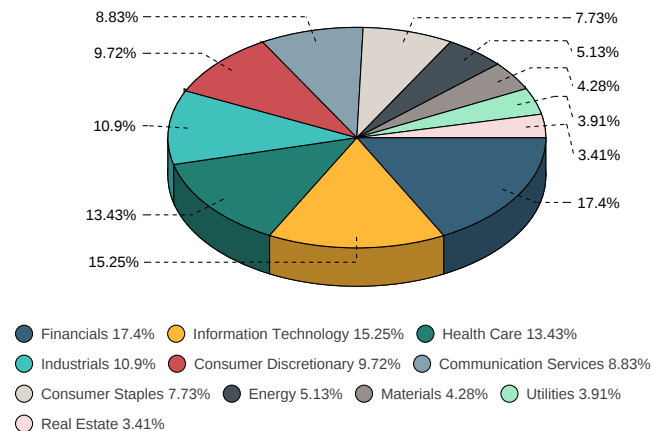
MSCI FaCS

- 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

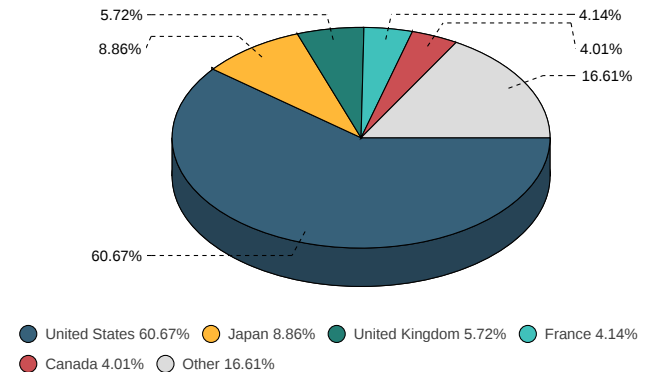
MSCI FaCS provides absolute factor exposures relative to a broad global index - MSCI ACWI IMI.

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

SECTOR WEIGHTS



COUNTRY WEIGHTS



INDEX METHODOLOGY

The methodology excludes the top 20% of companies based on carbon emissions intensity, with a maximum of 30% by weight from any sector. It also excludes the largest owners of reserves per dollar of market capitalization, representing 50% of the reserves in the parent index. The Index is optimized semi-annually to minimize the ex-ante tracking error to the benchmark, subject to the following constraints:

- Turnover: <10% semi-annually;
- Sector: <2% under- or over-weight; and
- Country: <2% under- or over-weight.

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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