

# MSCI ACWI LOW CARBON LEADERS INDEX (USD)

The MSCI ACWI Low Carbon Leaders Index is based on the MSCI ACWI Index, its parent index, and includes large and mid-cap stocks across 23 Developed Markets (DM) and 23 Emerging Markets (EM) 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 ACWI Index. The MSCI Global Low Carbon Leaders Indexes use MSCI ESG CarbonMetrics data from MSCI ESG Research Inc.

## CUMULATIVE INDEX PERFORMANCE - NET RETURNS (USD) (NOV 2010 – OCT 2018)



## ANNUAL PERFORMANCE (%)

Year	MSCI ACWI Low Carbon Leaders	MSCI ACWI
2017	23.93	23.97
2016	7.38	7.86
2015	-1.54	-2.36
2014	3.83	4.16
2013	23.83	22.80
2012	16.71	16.13
2011	-7.37	-7.35

## INDEX PERFORMANCE — NET RETURNS (%) (OCT 31, 2018)

	1 Mo	3 Mo	1 Yr	YTD	ANNUALIZED				Since Nov 30, 2010
					3 Yr	5 Yr	10 Yr		
MSCI ACWI Low Carbon Leaders	-7.50	-6.26	-0.42	-3.90	7.68	6.17	na	8.29	
MSCI ACWI	-7.49	-6.36	-0.52	-3.96	7.74	6.15	na	8.09	

## FUNDAMENTALS (OCT 31, 2018)

Div Yld (%)	P/E	P/E Fwd	P/BV
2.58	16.99	13.75	2.19
2.58	17.06	13.76	2.19

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

	Beta	Tracking Error (%)	Turnover (%) <sup>1</sup>	ANNUALIZED STD DEV (%) <sup>2</sup>			SHARPE RATIO <sup>2,3</sup>			Since Nov 30, 2010	MAXIMUM DRAWDOWN (%)	Period YYYY-MM-DD
				3 Yr	5 Yr	10 Yr	3 Yr	5 Yr	10 Yr			
MSCI ACWI Low Carbon Leaders	1.00	0.44	10.36	9.75	10.38	na	0.70	0.56	na	0.67	18.80	2015-05-21—2016-02-11
MSCI ACWI	1.00	0.00	2.61	9.76	10.34	na	0.70	0.56	na	0.66	19.20	2015-05-21—2016-02-11

<sup>1</sup> Last 12 months

<sup>2</sup> Based on monthly net returns data

<sup>3</sup> 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. EM countries include: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

The MSCI ACWI Low Carbon Leaders Index was launched on Sep 16, 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

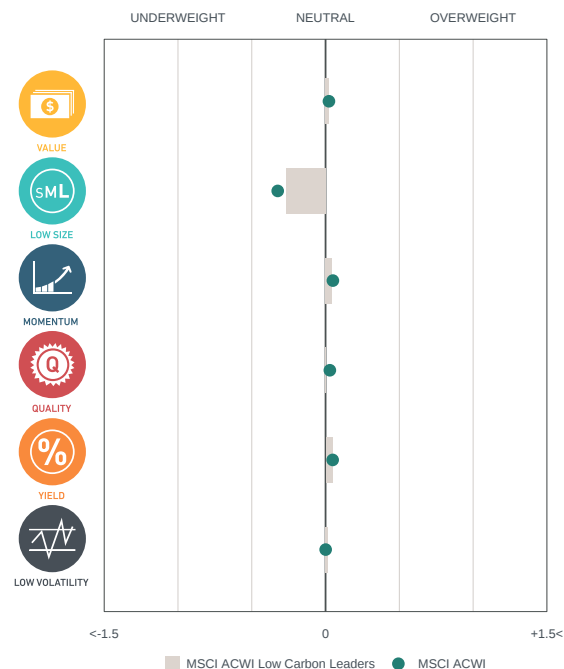
	MSCI ACWI Low Carbon Leaders	MSCI ACWI
Number of Constituents	2,078	2,787
	Weight (%)	
Largest	2.59	2.49
Smallest	0.00	0.00
Average	0.05	0.04
Median	0.02	0.01

### TOP 10 CONSTITUENTS

	Country	Index Wt. (%)	Parent Index Wt. (%)	Sector
APPLE	US	2.59	2.49	Info Tech
MICROSOFT CORP	US	1.84	1.80	Info Tech
AMAZON.COM	US	1.53	1.52	Cons Discr
JOHNSON & JOHNSON	US	0.90	0.87	Health Care
JPMORGAN CHASE & CO	US	0.88	0.86	Financials
FACEBOOK A	US	0.85	0.84	Telecom Srvc
ALPHABET C	US	0.82	0.78	Telecom Srvc
ALPHABET A	US	0.74	0.75	Telecom Srvc
NESTLE	CH	0.65	0.61	Cons Staples
BANK OF AMERICA CORP	US	0.63	0.61	Financials
<b>Total</b>		<b>11.44</b>	<b>11.13</b>	

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

#### MSCI FACTOR BOX



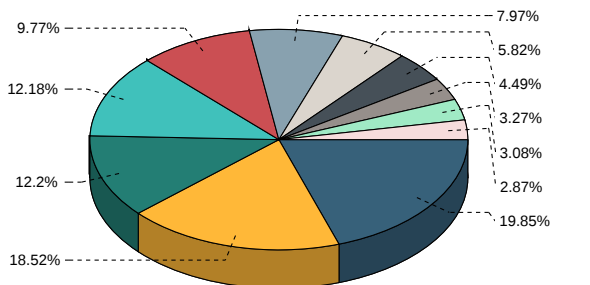
#### MSCI FaCS

- 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.

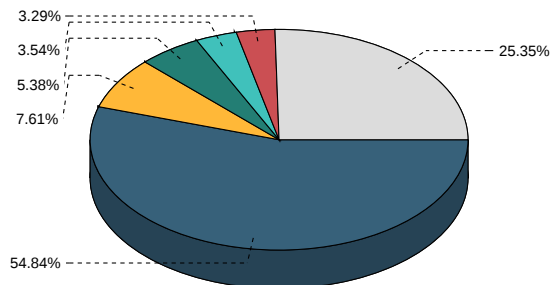
Neutral factor exposure (FaCS = 0) represents MSCI ACWI IMI.

### SECTOR WEIGHTS



- Information Technology 19.85%
- Financials 18.52%
- Consumer Discretionary 12.2%
- Health Care 12.18%
- Industrials 9.77%
- Consumer Staples 7.97%
- Energy 5.82%
- Materials 4.49%
- Utilities 3.27%
- Telecommunication Services 3.08%
- Real Estate 2.87%

### COUNTRY WEIGHTS



- United States 54.84%
- Japan 7.61%
- United Kingdom 5.38%
- France 3.54%
- China 3.29%
- Other 25.35%

## 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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