MSCI ESG GLOBAL LOW CARBON TARGET INDEXES

FROM MSCI ESG RESEARCH INC.

Climate change is one of the greatest challenges of our time according to the United Nations Commission on Sustainable Development[1]. The IPCC, which represents 195 nations, has reiterated the need to limit production of CO_2 and other greenhouse gases to prevent a rise in atmospheric temperatures[2]. As a result, institutional investors may need to consider how climate change may present risks and opportunities and how to manage carbon exposure in their portfolios. The MSCI Global Low Carbon Target Indexes are designed to underweight companies with significant carbon emissions and fossil fuel reserves relative to the broader market.

INDEX OBJECTIVES

The MSCI Global Low Carbon Target Indexes are designed to reflect a lower carbon exposure than that of the broad market by overweighting companies with low carbon emissions (per dollar of sales) and those with low potential carbon emissions (per dollar of market capitalization). The indexes are designed to achieve 0.3% (30 basis points) *ex ante* tracking error target while minimizing the carbon exposure relative to their parent indexes.

The MSCI Global Low Carbon Target Indexes were developed in response to demand for benchmarks designed to help identify potential risks associated with carbon exposure, while representing the performance of the broad equity market. The Indexes are based on the MSCI ACWI Index, the global policy benchmark covering developed and emerging markets, and utilize MSCI ESG CarbonMetrics data from MSCI ESG Research.

KEY BENEFITS

- Designed to reduce carbon footprint compared to the broader benchmark
- Innovative approach designed to reduce carbon exposure with low tracking error by re-weighting securities in the index
- Help investors manage two dimensions of carbon risk:
  - Long term: Underweights the energy-related assets most vulnerable to stranding
  - Short term: Aims to minimize tracking error relative to the parent standard indexes

STRANDED ASSETS:

THE CONCEPT OF STRANDED ASSETS IS BECOMING INCREASINGLY PREVALENT IN INVESTMENT THINKING. THERE IS GROWING REALIZATION OF THE TENSION BETWEEN THE GLOBAL ENERGY INDUSTRY'S FOSSIL FUEL RESERVES AND THE QUANTITY OF CARBON EMISSIONS THAT WILL BRING ABOUT A TRANSFORMATIONAL CHANGE IN OUR CLIMATE. THE GLOBAL ACCORD FROM COPENHAGEN[3] WHICH ASPIRES TO LIMIT THE GLOBAL RISE IN SURFACE TEMPERATURE TO 2 DEGREE CELSIUS WOULD CONSTRAIN FOSSIL FUEL CONSUMPTION TO AROUND HALF OF CURRENT RESERVES. HOWEVER, CONSIDERABLE INVESTMENT IS CURRENTLY FOCUSED ON FINDING ADDITIONAL NEW RESERVES[4]. AS A RESULT, COMPANIES IN THE SECTOR MAY FACE INCREASING HEADWINDS IN THE LONGER TERM[5].

1. United Nations Commission on Sustainable Development, Topic: Climate Change. https://sustainabledevelopment.un.org/index.php?menu=1228
2. Intergovernmental Panel on Climate Change. http://www.ipcc.ch/ipccreports/tar/wg3/index.php?idp=225
3. United Nations Framework Convention on Climate Change (2010). Report of the Conference of the Parties 30 March 2010.
4. Carbon Tracker (2013). Unburnable Carbon 2013: Wasted Capital and Stranded Assets.
5. MSCI ESG Issue Brief: Stranded Assets as Investment Opportunities. September 22, 2014. Linda-Eling Lee and Roger Urwin. http://www.msci.com/resources/research/articles/2014/MSCI_ESG_Research_Issue_Brief-Stranded_Assets_as_Investment_Opportunities.pdf

MSCI

MSCI Global Low Carbon Target Indexes address two dimensions of carbon exposure: emissions and reserves

	DEFINITION	WHY IS IT RELEVANT?
Carbon Emissions	• Direct and Indirect (Scope 1+2) CO_2 emissions	• Identify **long-lived assets** that are most vulnerable to stranding • Measure company's current contribution to climate change
Fossil Fuel Reserves	• Coal: Proven and Probable • Oil & Gas: Proven	• Identify **reserve types** that are most vulnerable to stranding • Forward looking metric is a proxy for potential future contributions to climate change

METHODOLOGY

Objective	• Minimize the carbon exposure (emission intensity and reserves relative to market cap) while constraining the *ex ante* tracking error to the benchmark to a 30bps target
Parent Index	• Any MSCI market cap weighted index
Exclusion	• No Exclusions
Optimization/Weighting	• Minimize the emission intensity, subject to the given constraints • Minimize the reserves relative to market cap, subject to the given constraints • *Ex ante* tracking error (TE) to Benchmark: specified target (default: 30 bps) • Turnover constraint: <10% semi-annual • Sector constraints: < 2% under- or over-weight, no constraint on energy • Country constraints: < 2% under- or over-weight • Model: Barra GEM3

ABOUT MSCI ESG RESEARCH PRODUCTS AND SERVICES

MSCI's ESG products and services are provided by MSCI ESG Research Inc. and are designed to provide in-depth research, ratings and analysis of environmental, social and governance-related business practices to companies worldwide. ESG ratings, data and analysis from MSCI ESG Research are also used in the construction of the MSCI ESG Indexes. MSCI ESG Research is produced by MSCI's indirect wholly-owned subsidiary MSCI ESG Research Inc., a Registered Investment Adviser under the Investment Advisers Act of 1940.

ABOUT MSCI

For more than four decades, MSCI (NYSE: MSCI) has helped global investors build and manage better portfolios. Our research-based tools and services provide our clients with deeper insights into the drivers of risk and performance, broad asset class coverage and innovative ways to bring investment strategies to market. Our offerings include indexes, data, analytical models, regulatory reporting and ESG research. MSCI's clients include the world's 50 largest money managers, as ranked by P&I. For more information, visit us at www.msci.com.