



**March 14, 2020**

**SMART CLIMATE AND COVID-19**

Here at Entelligent we are continuing to monitor the evolving COVID-19 Pandemic.

When China first issued travel bans in its areas hardest hit by the coronavirus, oil demand took a beating. As it became clear that the virus would not stay contained to China, other countries closed their borders and halted or tapered air travel, worsening the demand outlook

On March 11<sup>th</sup>, the World Health Organization (WHO) officially declared the COVID-19 situation a “[pandemic](#)”, adding in an opening statement to its Wednesday media briefing that “we are deeply concerned both by the alarming levels of spread and severity, and by the alarming levels of inaction.”

Consumer pullback, disrupted supply chains, and the oil price war between Saudi Arabia and Russia are pushing markets towards recession territory.

While the news is certainly frightening, it is important that investors keep a long-term view while being reflective of the lessons that can be taken away from these events.

At Entelligent, we view this as a natural experiment to test the robustness of the products and financial solutions that are being built to take into account market transitions and expected energy shocks as the economy moves towards climate change targets of 1.5<sup>o</sup>C and 2.0<sup>o</sup>C by 2050.

To understand the severity of this issue it is important to realize the absolute magnitude of the current oil price shock. As of 2017, the US consumed 19.96 million barrels per day of crude oil and petroleum liquids--this accounts for [20% of the world's oil consumption](#), according to the Energy Information Administration (EIA) To compare, China consumed 13.57 million barrels per day in 2017. It is very likely that any travel ban in the US will severely impact oil demand further shocking oil prices.

Entelligent Smart Climate Technology is designed to guide investors about the companies that are least impacted within a sector with such energy and climate disruptions. Entelligent’s scoring system ranks companies on a peer-to-peer basis for how well they are prepared for changes in energy supply and price, economic growth, land use changes, policy shifts, new technologies, and other uncertainties. To robustly test the causality of Entelligent data we used the most current oil price disruptions as a result of the COVID-19 Pandemic.



To date, Entelligent has run two tests. The first was a comparison of one-day movement for 25 large-cap US-listed energy securities (one-day percent change in total returns relative to the S&P500) to movements estimated by Entelligent's energy price dependency model (updated as of Friday 3/6 close of business).

Given the approximate \$11 drop in the price of oil today (WTI and Brent crude) and the 7.5% drop in the SP500 (as of crunching the numbers this afternoon) Entelligent estimated relative price movements on the day.

Entelligent correctly identified 4 of 5 biggest "losers" of the day (tickers OXY, MRO, PBR, EQNR, BP; Entelligent had BP at 11th not 5th). Entelligent correctly identified 4 of 5 biggest "winners" of the day (tickers XEL, AEP, NEE, DUK, DAL; Entelligent had DUK at 8th not 4th).

The second test was to run the index computations on Smart Climate 500 and all world portfolios. The time length is a week from 3/11/20 for the first experiment. The index performance tracked for the past week. However, when Entelligent compared for one-year from 3/11/20 Smart Climate outperforms the benchmark. Entelligent Smart Climate Indexing Solutions clearly are superior for long run passive investing. For more information see Fig- 1 and Fig-2 below.

See below for the detailed experiment results for the impact of last week's market volatility on Smart Climate Low EMTR portfolios:

Fig-1

## SP 500 and Low Energy Mix Transition Risk Entelligent Portfolio

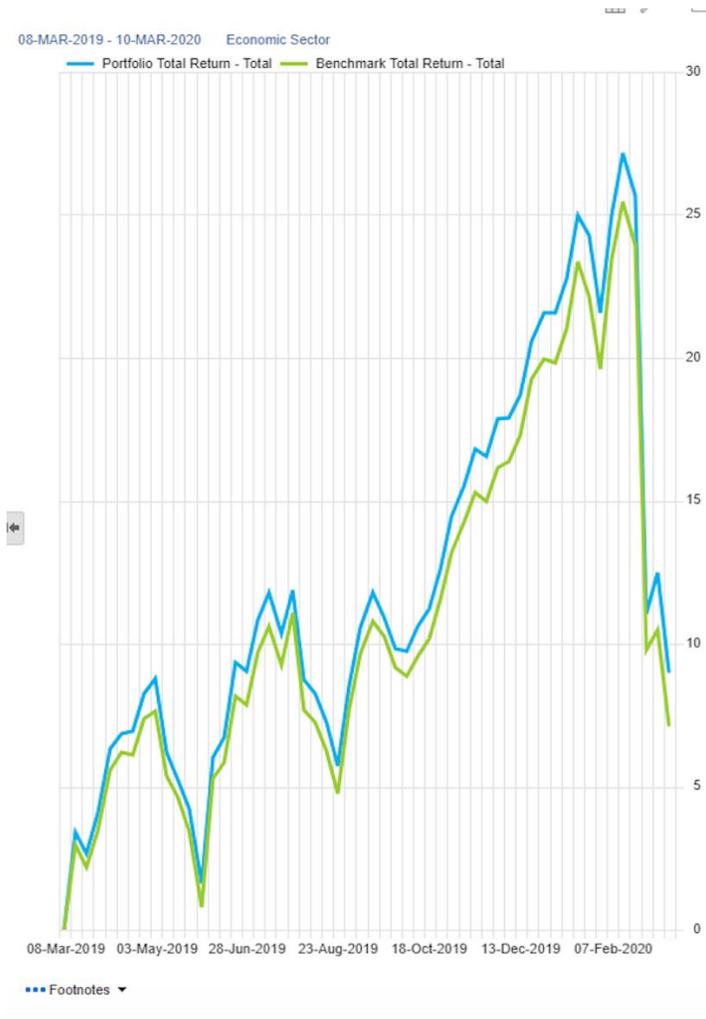


Fig – 1 compares Entelligent low climate transition portfolio that screens 200 companies from S&P 500 constituents that are leaders in managing climate transition risk. The benchmark used for this comparison is SPY (SPYDER S&P 500 ETF Trust) which is the most popular US ETF tracking S&P 500 constituents and performance. The Entelligent portfolio is represented by blue line.

Fig –2

iShares MSCI ACWI and Low Energy Mix Transition Risk Entelligent All World Portfolio

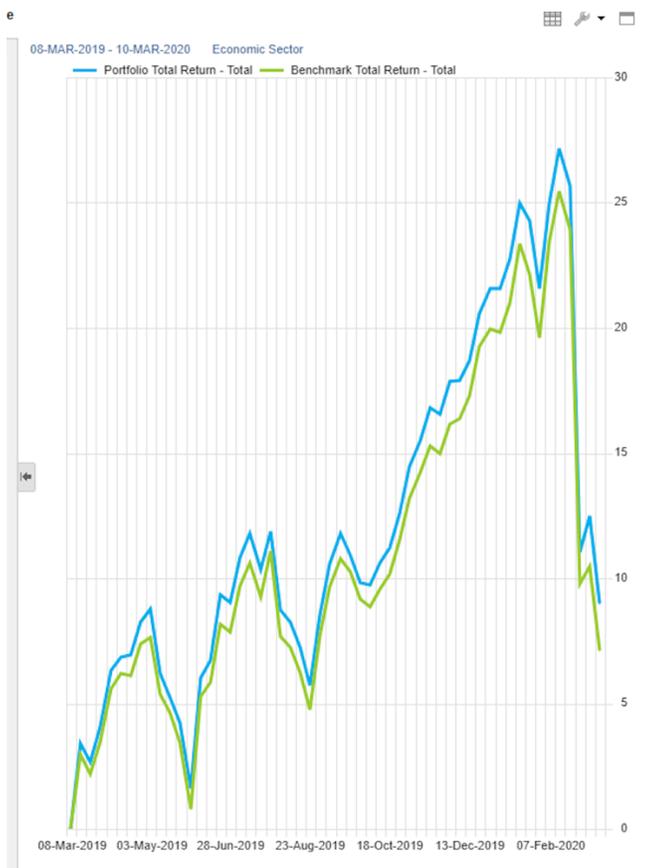


Fig – 2 compares the Entelligent Low Energy Mix Transition Risk Entelligent All World Portfolio that screens companies from MSCI ACWI constituents that are leaders in managing climate transition risk. The benchmark used for this comparison is iShares MSCI ACWI ETF which is the most popular global ETF tracking MSCI ACWI constituents and performance. The Entelligent portfolio is represented by blue line.

Entelligent believes this is a validation of its modeling approach and provides valuable insight to investors looking to manage risk in a volatile market. Entelligent’s proprietary Smart Climate<sup>®</sup> technology platform is now actively used by large banks and pension funds. The recent global events caused Entelligent to test the efficacy of the technology with the current energy global shocks.

# Smart Climate<sup>®</sup>

by entelligent

Climate conditions have [clear linkages](#) to infectious diseases and it can be expected that climate change will [shift established disease patterns](#). Any such changes will impact global demand and supply shocking commodity and energy prices. Entelligent's Smart Climate process is now back tested and is aimed to measure such risks. It is Entelligent's mission to help asset owner's and asset managers with their portfolios and strategies to incorporate the new realities of climate change into their decision-making processes, by lowering the exposure of their holdings to extreme climate change scenarios, beating comparative benchmarks, reducing volatility, as well as boosting social and environmental impacts. Thus, it is important to analyze how Smart Climate products perform under the scenario of the recent pandemic and its connected market response.

If you have any questions about the above analysis or would like to contact Entelligent, please feel free to reach out to [support@entelligent.com](mailto:support@entelligent.com)

Smart Climate Data is available at [FactSet](#) and at [IHS Markit](#).