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MARKETS

The Former Goldman Quant Taking On Climate Change

Now government adviser, Robert Litterman promotes steps to manage the risk of global warming

Robert Litterman says weeks were wasted countering the coronavirus, and likewise he doesn't want the government to put off dealing with the threat of climate change.

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By Scott Patterson
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When he managed billions of dollars for Goldman Sachs Group Inc., GS 1.26% ▲ Robert Litterman used sophisticated mathematical models to control risk. Now he is advising the government, and he believes it isn't doing enough to avoid serious losses, including taking drastic steps to deal with the coronavirus pandemic.

The coronavirus crisis shows the cost of failing to properly assess risks. "It's a perfect example of when you have a risk-management problem—it's urgent, you don't know how much time you have," Mr. Litterman said. "With coronavirus, we wasted so many weeks."

In his work with federal regulators, Mr. Litterman's main focus is climate change. "We've got to slam on the brakes" on carbon emissions to stop climate change, he said in an interview. "It's way past time."

While he doesn't invest for Goldman anymore, he is betting his personal cash that the world will more rapidly address the risks of climate change.

Mr. Litterman now chairs a group working on the risks of climate change for the Commodity Futures Trading Commission. In March, he testified before a congressional committee looking into the economic impact of global warming.

Mr. Litterman, who left Goldman a decade ago, told Congress that his analysis of the issue, partly based on models he used to manage risk in financial markets, shows failure to act quickly could result in a "tragic and potentially catastrophic mistake." The way to offset that risk, he says, is to rapidly decrease emissions of carbon dioxide, a key greenhouse gas.

Rostin Behnam, the CFTC commissioner who launched the climate-change group, said he chose Mr. Litterman to lead the effort because of his "gravitas on financial markets" and experience in the economics of global warming.

One way to curb fossil-fuel emissions, Mr. Litterman says, is through a carbon-tax proposal named after two former Republican secretaries of state, James Baker and George Shultz. The Baker-Shultz plan envisions a $40 per ton tax that would increase every year by roughly 5%. Money collected would be returned to U.S. citizens at a rate of $500 per person a year.

A goal of the tax—which Mr. Litterman thinks might be too low—is to affect incentives for consumers, business owners and investors, possibly changing their behavior. A higher price for gasoline could prompt people to drive less, and they might purchase an electric car instead of an SUV. Businesses might switch to solar- or wind-generated electricity.

Incentives granted the fossil-fuel industry today, such as state-sponsored subsidies, are wrongheaded, Mr. Litterman said in his congressional testimony. They push investments in directions, he said, "that increase emissions, causing a growing accumulation of greenhouse gases in the atmosphere."

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He concedes that the current economic downturn likely makes a tax on fossil fuels politically unpalatable for the time being. “I don’t expect anything to happen before the [November] election,” he said.

President Trump has long played down the risk of global warming, at one time calling it a Chinese hoax. His administration has rolled back steps taken by President Obama to curb carbon emissions, such as restrictions on coal-fired power plants.

Mr. Litterman is putting his money where his mouth is. After leaving Goldman, he helped found a New York trading firm, Kepos Capital, that is planning a fund that will invest in assets related to a rapid transition to a low-carbon economy. The fund, whose launch has been delayed by the coronavirus outbreak, is based in part on his analysis of the need for action to quickly cut carbon-dioxide emissions.

In his personal account, Mr. Litterman says he owns a derivative constituting a bet that one basket of stocks—coal, tar sands and oil companies—will underperform the broader market. He says the stranded-asset total return swap has gained about 13% this year as oil prices slump world-wide. So-called stranded assets are fossil fuels some expect will be left in the ground as the world shifts toward renewable-energy sources, such as solar and wind.

Mr. Litterman, who is 68 years old, enjoyed a storied career at Goldman, working for a time alongside legendary “quant” economist Fischer Black, with whom he helped design a widely used model for managing assets. As head of a giant quantitative investment team that used mathematical models to buy and sell assets, Mr. Litterman helped manage billions of dollars’ worth of investments for Goldman.

In the late 2000s, near the end of Mr. Litterman’s 23-year stint at the New York firm, a former colleague asked him if he had given much thought to environmental issues such as climate change. The global financial crisis was still raging, and Mr. Litterman said he had other things on his mind.

After leaving Goldman, he began meeting with a variety of people in the environmental community, and joined the board of the World Wildlife Fund. He agreed about the risk of climate change but thought the potential cost wasn't being properly calibrated.

"No one knew where to price the risk," he said. "I took that as a challenge."

He started applying methods he had used to assess risk in his many years of managing assets on Wall Street.

The problem with many conventional models of climate change, including other carbon-tax proposals, is that they factor too much certainty into future outcomes, according to Mr. Litterman. Because of that, they don't apply a high enough price on carbon right now.

Instead, the models should take into account periods of extreme volatility in global circumstances—just like the stock market has seen in recent months. The world needs to do the same with climate change, Mr. Litterman argues.

A twist in Mr. Litterman's model is that over time, as the tax influences behavior and as new carbon-free technologies are implemented, the levy on carbon should decline. But the longer the world waits to curb emissions, the longer it's going to take to tackle the problem—and the outcome is going to be much worse.

"It's just like Covid," Mr. Litterman said. "The parallel is clear."

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