## Bob Litterman, Kepos Capital comments

The weather has changed. It's warmer on average, of course—but more significantly, the likelihood of extreme weather events has increased dramatically in recent years. We now often hear expressions such as, "This was a 100-year flood," or "This is the worst drought in 1,200 years."

While such expressions seem to refer to frequencies of occurrence, they are today best understood as descriptions of the magnitude of an event. Moreover, there's something special about rare events which were expected to happen less than once in a lifetime. We are not prepared for them. These natural disasters often are catastrophic because homes, infrastructure, cities, and regions are just not built to withstand events of this magnitude—yet the climate models that reflect the physics of climate change show that these devastating climate-related events already have been occurring much more frequently. Historical statistics are no longer sufficient. Extreme storms, severe hurricanes, hailstorms, extreme wind, heat and cold, drought and floods, wildfires, and storm surge made worse by sea level rise all are increasing in magnitude because of the impacts of climate change. Losses from climate-related events are increasing rapidly as the energy in the climatic system increases.

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BOB LITTERMAN, KEPOS CAPITAL

Clearly, legal contracts containing payments that may be affected by extreme weather perils must be revised. For example, the risks of wildfires destroying homes in many parts of California, where I live, are much greater today than they were even in the recent past. Because the risks are higher, financial markets must reflect this reality. In addition to increased insurance rates, credit ratings of municipal bonds in exposed locations will need to account for the increased likelihood that the loans will default because the tax base will be destroyed. This increased likelihood of loan defaults is true as well for corporate borrowers that are exposed to climate-related risks.

An entire industry is rapidly developing to estimate these physical risks of climate change and to provide guidance for mitigation and requirements for resilient infrastructure. In that context, the SEC recently issued a proposed rule for the disclosure of climate-related risks by corporations. This rule clearly is necessary, as climate-related risks have become, in many cases, a material risk to a lender or equity holder.

I had the honor of chairing a climate-related market risk subcommittee of the Commodity Futures Trading Commission Market Risk Advisory Committee, which in 2020 published a road map called "<u>Managing Climate-Related Risks</u> in the US Financial System." The report was not controversial. The 34 members of the subcommittee, along with the institutions they represented, unanimously endorsed its recommendations. These stakeholders include many corporations, insurers, investors, asset owners, academics, and environmental organizations.

Ours were high-level recommendations, and the SEC proposal on disclosure goes into much more detail—but on all the key issues, they are consistent. For example, one of the more difficult areas that required compromise within the subcommittee of the Commodity Futures Trading Commission relates to the disclosure of Scope 3 emissions, those indirect upstream and downstream emissions created across the value chain. We agreed that, "As reliable transition risk metrics and consistent methodologies for Scope 3 emissions are developed, financial regulators should require their disclosure, to the extent that they are material." While more specific, the SEC proposal includes a similar compromise. Corporations will be required to disclose Scope 3 emissions if such emissions are material to investors or if the company had made a commitment that included reference to Scope 3 emissions—but this type of disclosure is phased in, safe harbor provisions apply to the disclosures, and smaller companies are exempt.

This is significant progress.

Note, however, that time is running out. The first and most urgent recommendation of the Commodity Futures Trading Commission subcommittee has not yet been fulfilled. Our subcommittee unanimously agreed: "It is essential that the United States establish a price on carbon. This is the single most important step to manage climate risk."

It has to happen soon. It's time to slam on the brakes.