United States Senate

May 14, 2020

Mr. Robert Litterman
Chairman
Climate-Related Market Risk Subcommittee
Commodity Futures Trading Commission
1155 21st Street NW
Washington, DC 20581

Dear Mr. Litterman:

The current failure to price carbon is a source of major economic and financial risks.

The International Monetary Fund (IMF) estimates that total annual direct and indirect subsidies for fossil fuels in the U.S. are north of $600 billion, the vast majority of which stems from the failure to price negative externalities caused by fossil fuel combustion.[1]

The failure to price fossil fuels to reflect their true total costs results in an exceptionally large misallocation of capital. Fossil fuel projects that would not be viable if carbon were accurately priced move forward, while carbon reduction and removal technologies that would be viable with a carbon price suffer from underinvestment.

Numerous financial experts warn that this overinvestment in fossil fuels will lead to stranded fossil fuel assets and a "carbon bubble" that may present systemic risks to the economy. Large-scale continued combustion of fossil fuels will also make climate change worse. Here again, financial experts warn that the physical risks of climate change, in particular rising sea levels, present severe and even systemic risks to the economy.

A carbon price can correct this market defect and help to efficiently allocate capital, reduce the risks of a "carbon bubble" in the financial markets, and drive the needed greenhouse gas (GHG) emissions reductions to avoid the worst effects of climate change.

Transition Risk and Stranded Assets

It is unlikely that fossil fuel companies will be able to produce all of their reserves. One recent economic paper finds that "the magnitude of ... stranded assets of fossil fuel companies (in a 2 degrees C economy) has been estimated to be around 82% of global coal reserves, 49% of global gas reserves, and 33% of global oil reserves."[2]

Stranded fossil fuel assets of this magnitude indicate the presence of a carbon bubble, which will present a systemic risk to the global economy when it bursts.[3] Because the risk is systemic, the carbon bubble shock is likely to spread to other sectors of the economy. A recent report from 34 central bank presidents warned that "estimates of losses […] are large and range from $1 trillion

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[1] https://www.imf.org/en/Publications/WP/Issues/2019/05/02/Global-Fossil-Fuel-Subsidies-Remain-Large-An-Update-Based-on-Country-Level-Estimates-46509
[2] https://www.nature.com/articles/nclimate3255
[3] https://publicpolicy.wharton.upenn.edu/live/news/1807-fossil-fuel-stranded-assets-efficient-market-or

to $4 trillion when considering the energy sector alone, or up to $20 trillion when looking at the economy more broadly."[4] A stress test of European financial institutions revealed that some were alarmingly exposed to fossil fuel assets and could be at risk should these assets decline in value.[5] A recent report on climate risk by the Bank of International Settlements (BIS) states, "[c]limate change could … be the cause of the next systemic financial crisis."[6]

Economists studying stranded assets warn that high-cost producer regions like the U.S. could "lose almost their entire oil and gas industry."[7] And because the risk is systemic, the consequences would extend well beyond the fossil fuel industry, including a greater than five percent decline in U.S. GDP and millions of lost jobs.[8] Critically, the economic consequences to the American economy are predicted to be worse "if it continues to promote fossil fuel production and consumption [rather] than if it moves away from them."[9]

Physical Risk

There are numerous warnings that rising sea levels could trigger a collapse in coastal property values. These warnings have come from a variety of experts, including Freddie Mac,[10] the industry publication *Risk & Insurance*,[11] and the Union of Concerned Scientists.[12] Freddie Mac writes:

> While technical solutions may stave off some of the worst effects of climate change, rising sea levels and spreading flood plains nonetheless appear likely to destroy billions of dollars in property and to displace millions of people. The economic losses and social disruptions may happen gradually, but they are likely to be greater in total than those experienced in the housing crisis and the Great Recession.[13]

In addition to the specific risk of coastal property devaluation, there have been numerous general warnings about the serious damage unchecked climate change will do to the global economy, including from the U.S. government in the Fourth National Climate Assessment,[14] more than two dozen central banks,[15] BIS,[16] Standard & Poors,[17] BlackRock, [18] Citigroup,[19] and many others.

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[4] https://www.banque-france.fr/sites/default/files/media/2019/04/17/ngfs_first_comprehensive_report_-_17042019_0.pdf
[5] https://www.nature.com/articles/nclimate3255
[6] https://www.bis.org/publ/othp31.pdf
[7] https://www.nature.com/articles/s41558-018-0182-1
[8] *Id.*
[9] *Id.*
[10] http://www.freddiemac.com/research/insight/20160426_lifes_a_beach.html
[11] http://riskandinsurance.com/coastal-mortgage-value-collapse/
[12] https://www.ucsusa.org/sites/default/files/attach/2018/06/underwater-analysis-full-report.pdf
[13] http://www.freddiemac.com/research/insight/20160426_lifes_a_beach.html
[14] https://nca2018.globalchange.gov/downloads/
[15] https://www.banque-france.fr/sites/default/files/media/2019/04/17/ngfs_first_comprehensive_report_-_17042019_0.pdf
[16] https://www.bis.org/publ/othp31.pdf
[17] https://www.spglobal.com/en/research-insights/articles/why-it-may-make-economic-sense-to-tackle-global-warming
[18] https://www.blackrock.com/us/individual/insights/blackrock-investment-institute/physical-climate-risks#electric-utilities
[19] https://ir.citi.com/hsq32Jl1m4aIzicMqH8sBkPnbsqfnwy4Jgb1J2kIPYWIw5eM8yD3FY9VbGpK%2Baax

Together, these reports and papers paint a grim picture of massive economic losses from unchecked climate change.

Carbon Pricing

Even a relatively modest carbon price would result in substantial investments in renewable energy and significant reductions in GHG emissions, thereby reducing both the transition and physical risks of climate change.[20] If a carbon price comes closer to reflecting the annual $600+ billion negative externality resulting from fossil fuel combustion, it does even more to improve capital allocation while dramatically reducing GHG emissions.[21]

An increasing number of companies, organizations, investors, and experts are recognizing that carbon pricing is essential to economic efficiency and financial stability. Dozens of major corporations are members of groups that publicly advocate for carbon pricing, such as Ceres,[22] the Climate Leadership Council,[23] and the CEO Climate Dialogue.[24] More than 600 investors with over $37 trillion in assets under management have called for a meaningful price on carbon.[25] A recent report from BIS recommends carbon pricing as an essential tool to help mitigate climate-related risks.[26] And more than two dozen Nobel laureates in economics and four former Federal Reserve chairs signed a statement in support of carbon pricing.[27]

Our current failure to accurately price fossil fuels results in a massive misallocation of capital and fuels climate change, both of which pose severe risks to our financial system and economy. We therefore urge the Climate-Related Market Risk Subcommittee to find that a meaningful federal price on carbon would be prudent policy.

Sincerely,

SHELDON WHITEHOUSE
U.S. Senator

BRIAN SCHATZ
U.S. Senator

[20] https://energypolicy.columbia.edu/research/report/emissions-energy-and-economic-implications-curbelo-carbon-tax-proposal
[21] https://www.brookings.edu/wp-content/uploads/2019/05/ES_20190507_Morris_CarbonPricing.pdf
[22] https://www.ceres.org/networks/ceres-company-network
[23] https://clcouncil.org/founding-members/
[24] https://www.ceoclimatedialogue.org/
[25] https://theinvestoragenda.org/wp-content/uploads/2019/12/191201-GISGCC-FINAL-for-COP25.pdf
[26] https://www.bis.org/publ/othp31.pdf
[27] https://clcouncil.org/economists-statement/