Statement Submitted for the Record
Subcommittee on Investor Protection, Entrepreneurship and Capital Markets
Committee on Financial Services
U.S. House of Representatives

Hearing Held February 25, 2021
"Climate Change and Social Responsibility:
Helping Corporate Boards and Investors Make Decisions for a Sustainable World"

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Summary

The Subcommittee on Investor Protection, Entrepreneurship and Capital Markets of the Committee on Financial Services of the U.S. House of Representatives held a hearing on February 25 on "Climate Change and Social Responsibility: Helping Corporate Boards and Investors Make Decisions for a Sustainable World." The majority staff of the Committee prepared a Memorandum in advance of the hearing, outlining its view of the policy dimensions of the "social responsibility" of the business sector in the context of anthropogenic climate change, defined as "Environmental, Social, and Governance" (ESG) investment choices and other resource use by businesses. This Statement submitted for the record focuses in the main upon the arguments and assertions presented in that Memorandum. The central observations offered here can be summarized as follows.

- Under any set of assumptions about the science and evidence underlying the climate policy debate, the argument that ESG investment, disclosures, and other dimensions of a "sustainability" effort by the U.S. business sector would yield a measurable impact upon climate phenomena is deeply dubious. If we apply the Environmental Protection Agency climate model under assumptions consistent with the findings reported in the modern peer-reviewed literature on the effects of reductions in greenhouse gas (GHG) emissions, net-zero emissions by the U.S. would reduce global temperatures by 2100 by 0.104 degrees C, an effect that would be barely detectable given the standard deviation of the surface temperature record. Because a shift toward an ESG investment and resource use stance by the U.S. business sector is so poorly defined, it is difficult to estimate the attendant effects in terms of temperatures and other climate phenomena, but they obviously would be far smaller than those yielded by a net-zero emissions regime.
- Businesses are not charities, and they are not government. The campaign for ESG investment and disclosure is a blatant effort to use private-sector resources for ideological purposes, in the context of the unwillingness of the Congress to enact such policies as an outcome of the legislative bargaining process. The true "socially responsible" course in the context of climate policy is to preserve the proper roles of the private sector and of the government, respectively, as part of the larger

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permanent objectives of maximizing the productivity of resource use under free-market competition, and preserving the political accountability of the policymaking process under the constitutional institutions of democratic decisionmaking.

- Anthropogenic climate change is "real" in the sense that increasing atmospheric concentrations of GHG are creating effects that are measurable. But there is no evidence of a climate "crisis" regardless of how often and how loudly the presence or imminence of a "crisis" is asserted. Similarly, the Memorandum fails to distinguish between natural and anthropogenic climate change and phenomena.
- The uncertainties underlying the "risks" of anthropogenic climate change, and the business "risks" attendant upon them, are enormous, requiring difficult choices among climate models, underlying assumptions, and assumed links between climate phenomena and economic growth in the aggregate and for specific sectors. The theme underlying the Memorandum is that such analysis is straightforward, a stance utterly at odds with the scientific and economic literatures.
- "Sustainability" is poorly defined, so that its objectives are limitless, and the Memorandum fails to tell us how to evaluate the inexorable tradeoffs among them and with the traditional business objective of value maximization.
- The complaint in the Memorandum about environmental conditions afflicting "people [or communities] of color" conflates the issue of greenhouse gases and climate change with that of the familiar criteria and hazardous air pollutants covered explicitly by the Clean Air Act. If current law on such air pollutants is too lax, then the obvious solution is Congressional enactment of a new set of amendments to the Clean Air Act.
- More fundamentally, that complaint actually is little more than the observation that lower-income people disproportionately consume less health in the form of environmental quality than is the case for higher-income people. This argument from the majority staff reduces to an observation that there are poorer people in the U.S., who suffer from a multitude of disadvantages precisely because their incomes are lower. What, precisely, is the point? Would a politicized allocation of capital investment yield salutary effects in this dimension?
- The analyses and materials referenced in the Memorandum in support of the majority staff argument invariably are based upon a GHG scenario (Representative Concentration Pathway 8.5) both extreme and virtually impossible.
- The Memorandum fails to note that aggregate and per capita global GDP in 2100 varies by amounts that are very small and not statistically significant across policy scenarios, as predicted by the central integrated assessment model.
- "Reputation risk" is a wholly politicized and circular construct devoid of analytic content.
- The effort by Blackrock---the largest asset manager in the world---to impose "sustainability" standards on business investment is little more than an effort to impose the political and policy preferences of the Blackrock bureaucrats upon business decisions.
- The net effect of the ESG/sustainability campaign would be a capital stock and investment allocation less productive than otherwise would be the case, not a salutary outcome for the investors that are the supposed beneficiaries of ESG policies and disclosures.

I. Introduction

The Subcommittee on Investor Protection, Entrepreneurship and Capital Markets of the Committee on Financial Services of the U.S. House of Representatives held a hearing on February 25 on "Climate Change and Social Responsibility: Helping Corporate Boards and Investors Make Decisions for a Sustainable World."[1] This hearing in the main served as a forum for arguments in favor and in opposition to "Environmental, Social, and Governance" (ESG) investment choices and other activities by businesses. Support for ESG business decisions and activities is driven by considerations of purported "sustainability" and similar terminology, characterized as private sector activities shaped by assertions of an anthropogenic climate "crisis" generally, and specific business risks asserted to have been engendered by anthropogenic climate phenomena, both currently and prospectively. Among the documents prepared in advance of the hearing is a Memorandum from the majority staff of the Committee.[2]

The arguments in that Memorandum are the central focus of this Statement submitted for the record, as presented in section II. Section III addresses the efforts of the Blackrock asset management firm to force ESG investments by the firms that it manages, as also discussed in the Memorandum. Section IV presents a brief discussion of some ancillary topics, and conclusions and policy implications.

II. The Majority Staff Memorandum

Here I offer observations and a summary critique of several of the assertions presented in the Memorandum. In the Overview, the majority staff argues that:

> Climate change poses a fundamental threat to America's financial ecosystem, its businesses, and to the global economy. That risk is exacerbated when it comes to the health and welfare of America's people and communities of color. Further, not only does climate change present a risk to the stability and sustenance of the economy, but it presents risks to individual American businesses. Environmental, social and governance (ESG) criteria constitutes a measurable way to assess a company's efforts to manage those risks and to hold companies accountable.

Whatever the definition of "America's financial ecosystem"---the majority staff does not offer one---this statement (1) fails to distinguish between natural and anthropogenic climate change, (2) fails to tell us the nature of that "fundamental threat" or to offer even a summary quantification of it, and (3) fails to define, much less quantify,

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[1] See the hearing Repository at https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=111245.

[2] See the Memorandum at https://docs.house.gov/meetings/BA/BA16/20210225/111245/HHRG-117-BA16-20210225-SD002.pdf.

either the "stability and sustenance of the economy" nor the "risks to individual American businesses."

That anthropogenic climate change is "real"—that increasing GHG concentrations are having detectable effects—is incontrovertible, but that does not tell us the magnitude of the observable impacts, which must be measured empirically. Temperatures are rising, but as the Little Ice Age ended no later than 1850, it is not easy to separate natural from anthropogenic effects on temperatures and other climate phenomena.[3] The latest research in the peer-reviewed literature suggests that mankind is responsible for about half a degree of the global temperature increase of about 1.5-1.7 degrees C of global warming observed since 1850.[4] There is no evidence in the Memorandum that the majority staff is familiar with the relevant literature.

Since anthropogenic climate change is a global phenomenon afflicted with massive uncertainties in terms of specific impacts (e.g. sea level rise), particularly on a regional basis, it is not clear how ESG activities by given businesses would serve to "manage" those risks. And with respect to precisely what are companies to be held "accountable?" If it is no longer the case that private-sector firms are accountable largely to the financial interests of their shareholders, what are the tradeoffs in an "accountability" context among that objective and the myriad others that can be imagined? The Memorandum does not tell us.

If such risk management is defined as a reduction in investments that might be threatened by climate phenomena---an example might be investments in coastal areas hypothetically afflicted by an increase in future flooding---which climate models under which sets of assumptions should drive such ESG investment imperatives?

The Memorandum proceeds to argue that:

> The impact of climate change is evidenced by various environmental factors, including increasing sea levels, extreme weather events,

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[3] On the surface (land/ocean) temperature record, see UK Met Office, Hadley Centre/University of East Anglia Climatic Research Unit, "Tim Osborn: HadCRUT4 Global Temperature Graphs," https://crudata.uea.ac.uk/~timo/diag/tempdiag.htm. On the Little Ice Age, see Michael E. Mann, "Little Ice Age," in *Encyclopedia of Global Environmental Change, Volume 1: The Earth System: Physical and Chemical Dimensions of Global Environmental Change*, ed. Michael C. MacCracken, John S. Perry and Ted Munn (Chichester, England: John Wiley & Sons, 2002), http://www.meteo.psu.edu/holocene/public_html/shared/articles/littleiceage.pdf.

[4] See, for example, Ross McKitrick and John Christy, "A Test of the Tropical 200- to 300 hPa Warming Rate in Climate Models"; Nicholas Lewis and Judith Curry, "The Impact of Recent Forcing and Ocean Heat Uptake Data on Estimates of Climate Sensitivity," *Journal of Climate* 31 (August 2018): 6051–71, https://journals.ametsoc.org/doi/pdf/10.1175/JCLI-D-17-0667.1; and John R. Christy and Richard McNider, "Satellite Bulk Tropospheric Temperatures as a Metric for Climate Sensitivity," *Asia-Pacific Journal of Atmospheric Sciences* 53 (2017): 511–18, https://link.springer.com/article/10.1007/s13143-017-0070-z. For a chart summarizing the recent empirical estimates of equilibrium climate sensitivity as reported in the peer-reviewed literature, see Patrick J. Michaels and Paul C. Knappenberger, "The Collection of Evidence for a Low Climate Sensitivity Continues to Grow," Cato Institute, September 25, 2014, https://www.cato.org/blog/collection-evidence-low-climate-sensitivity-continues-grow.

> increases in land and ocean temperatures, and ice loss at the Earth's poles.
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> … climate change has already affected the health of Black communities, with the most common climate-related health effects being caused by 'injuries from severe storms, floods, and wildfires; worsening of chronic diseases due to air pollution and hotter temperatures; and an increase in allergies due to mold and other exposures.'

Such assertions are devoid of any correlation with the evidence as reported in the peer-reviewed, official, or scientific literature, and the Memorandum fails to offer such evidence. There is little trend in the number of "hot" days for 1895–2017; 11 of the 12 years with the highest number of such days occurred before 1960.[5] The National Oceanic and Atmospheric Administration has maintained since 2005 the U.S. Climate Reference Network, comprising 114 meticulously maintained temperature stations spaced more or less uniformly across the lower 48 states, 21 stations in Alaska, and two stations in Hawaii.[6] They are placed to avoid heat island effects and other such distortions as much as possible; the reported data show no trend over the available 2005–20 reporting period.[7] A reconstruction of global temperatures over the past one million years, using data from ice sheet formations, shows that there is nothing unusual about the current warm period.[8]

Global mean sea level has been increasing for at about 3.3 mm per year since satellite measurements began in 1992. The tidal-gauge data before then show annual increases of about 1.9 mm per year, but that comparison does not show an acceleration because the two datasets are not comparable. The tidal gauges do not measure sea levels per se; they measure the difference between sea levels and "fixed" points on land that might

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[5] For the reconstruction of the NASA data, see John R. Christy, "Average per Station (1114 USHCN Stations) 1895–2017: Number of Days Daily Maximum Temperature Above 100˚F and 105˚F," drroyspencer.com, http://www.drroyspencer.com/wp-content/uploads/US-extreme-high-temperatures-1895-2017.jpg.

[6] For the Climate Reference Network program description, see National Centers for Environmental Information, "U.S. Climate Reference Network," https://www.ncdc.noaa.gov/crn/.

[7] For a visualization of a prototypical station, see Willis Eschenbach, "NOAA's USCRN Revisited—No Significant Warming in the USA in 12 Years," Watts Up with That?, November 8, 2017, https://wattsupwiththat.com/2017/11/08/the-uscrn-revisited/. For the monthly data and charts reported by the National Oceanic and Atmospheric Administration (NOAA), see National Oceanic and Atmospheric Administration, "National Temperature Index," https://www.ncdc.noaa.gov/temp-and-precip/national-temperature-index/time-series?datasets%5B%5D=uscrn&parameter=anom-tavg&time_scale=p12&begyear=2005&endyear=2020&month=8.

[8] See R. Bintanja and R. S. W. van de Wal, "North American Ice-Sheet Dynamics and the Onset of 100,000-Year Glacial Cycles," *Nature* 454, no. 7206 (August 14, 2008): 869–72, https://www.researchgate.net/publication/23171740_Bintanja_R_van_de_Wal_R_S_W_North_American_ice-sheet_dynamics_and_the_onset_of_100000-year_glacial_cycles_Nature_454_869-872. NOAA published the underlying data at R. Bintanja and R. S. W. van de Wal, "Global 3Ma Temperature, Sea Level, and Ice Volume Reconstructions," National Oceanic and Atmospheric Administration, August 14, 2008, https://www.ncdc.noaa.gov/paleo-search/study/11933. For a chart showing the temperature record over one million years, see Institute for Energy Research, "Temperature Fluctuations over the Past Million Years," https://www.instituteforenergyresearch.org/wp-content/uploads/2020/03/temperature-flucturations.png.

not be fixed due to seismic activity, tectonic shifts, land settlement, etc. Accordingly, sea level rise may or may not be accelerating, and any such acceleration might be the result of anthropogenic or natural causes.[9]

The Northern and Southern Hemisphere sea ice changes tell different stories; the arctic sea ice has been declining, while the Antarctic sea ice has been stable or growing.[10] U.S. tornado activity shows either no trend or a downward trend since 1954.[11] Tropical storms, hurricanes, and accumulated cyclone energy show little trend since satellite measurements began in the early 1970s.[12] The number of U.S. wildfires shows no trend since 1985, and global acreage burned has declined over past decades.[13] The Palmer Drought Severity index shows no trend since 1895.[14] U.S. flooding over the past century is uncorrelated with increasing GHG concentrations.[15] The available data do not support

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[9] See Judith Curry, "Sea Level and Climate Change," Climate Forecast Applications Network, November 25, 2018, https://curryja.files.wordpress.com/2018/11/special-report-sea-level-rise3.pdf. Curry cites research from Xianyao Chen and colleagues, the central finding of which is that "global mean sea level rise increased from 2.2 ± 0.3 mm/year in 1993 to 3.3 ± 0.3 mm/year in 2014." See Xianyao Chen et al., "The Increasing Rate of Global Mean Sea-Level Rise During 1993–2014," *Nature Climate Change* 7 (June 26, 2017): 492–95, https://www.nature.com/articles/nclimate3325. Whether the trend from a 21-year period can yield important inferences is a topic not to be addressed here. For a different empirical conclusion from the tidal gauge record, see J. R. Houston and R. G. Green, "Sea-Level Acceleration Based on U.S. Tide Gauges and Extensions of Previous Global-Gauge Analyses," *Journal of Coastal Research* 27, no. 3 (May 2011): 409–17, https://meridian.allenpress.com/jcr/article-abstract/27/3/409/28456/Sea-Level-Acceleration-Based-on-U-S-Tide-Gauges?redirectedFrom=fulltext. For an example of temporary rapid sea-level rise in the 18th century, see W. R. Gehrels et al., "A Preindustrial Sea-Level Rise Hotspot Along the Atlantic Coast of North America," *Geophysical Research Letters* 47 (2020), https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2019GL085814. For further reported evidence of an acceleration, see Hans-Otto Pörtner et al., *Special Report on the Ocean and Cryosphere in a Changing Climate*, Intergovernmental Panel on Climate Change, 2019, https://www.ipcc.ch/srocc/.

[10] See Patrick J. Michaels, "Spinning Global Sea Ice," Cato Institute, February 12, 2015, https://www.cato.org/blog/spinning-global-sea-ice. It appears to be the case that the Antarctic eastern ice sheet---about two-thirds of the continent---is growing, while the western ice sheet (and the peninsula) may be shrinking. No agreed explanation for this phenomenon is reported in the literature.

[11] For the historical data reported by the NOAA, see National Ocean and Atmospheric Administration, "Historical Records and Trends," https://www.ncdc.noaa.gov/climate-information/extreme-events/us-tornado-climatology/trends.

[12] For data on global tropical cyclone activity, see Ryan N. Maue, "Global Tropical Cyclone Activity, climatlas.com, July 15, 2020, http://climatlas.com/tropical/.

[13] For US wildfire data reported, see National Interagency Fire Center, "Total Wildland Fires and Acres (1926–2019)," https://www.nifc.gov/fireInfo/fireInfo_stats_totalFires.html. On the decline in global area burned over past decades, see Stefan H. Doerr and Cristina Santin, "Global Trends in Wildfire and Its Impacts: Perceptions Versus Realities in a Changing World," *Philosophical Transactions of the Royal Society of London, Series B, Biological Sciences* 371, no. 1696 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4874420/pdf/rstb20150345.pdf.

[14] See US Environmental Protection Agency, "Climate Change Indicators: Drought," https://www.epa.gov/climate-indicators/climate-change-indicators-drought; and US Department of Commerce, National Climatic Data Center, "Divisional Data Select," https://www7.ncdc.noaa.gov/CDO/CDODivisionalSelect.jsp.

[15] See R. M. Hirsch and K. R. Ryberg, "Has the Magnitude of Floods Across the USA Changed with Global CO_2 Levels?," *Hydrological Sciences Journal* 57, no. 1 (2012): 1–9, https://www.tandfonline.com/doi/full/10.1080/02626667.2011.621895?scroll=top&needAccess=true&.

the ubiquitous assertions about the dire impacts of declining pH levels in the oceans.[16] Global food availability and production have increased more or less monotonically over the past two decades on a per capita basis.[17] The IPCC itself in the *Fifth Assessment Report* was deeply dubious about the various severe effects often asserted to be looming as impacts of anthropogenic warming.[18]

In that section of the Memorandum, the majority staff asserts that "people of color are more likely to die of environmental causes" and that:

> communities of color are also disproportionately located in close proximity to fossil fuel energy plants, exposing them to dangerous air pollutants which, in turn, lead to chronic health conditions such as heart disease, birth defects and respiratory illnesses.

Apart from the fact that the latter argument conflates the issue of greenhouse gases and climate change with that of ordinary criteria and hazardous air pollutants covered explicitly by the Clean Air Act, the majority staff in this section of the Memorandum is complaining, in effect, that lower-income people, who disproportionately are "people of color," consume through location choices less health in the form of environmental quality than is the case for higher-income people. Lower-income individuals and households consume less health in all of its various dimensions---diet, health care, etc.---than is the case for higher-income individuals and households.

Accordingly, this argument from the majority staff is little more than a complaint that there are poorer people in the U.S., who suffer from a multitude of disadvantages precisely because their incomes are lower. What, precisely, is the point? Would a politicized allocation of capital investment yield salutary effects in this dimension? Suppose that none of the people so afflicted in terms of environmental quality were "people of color." Would that reduce the importance of the problem in the viewpoint of the majority staff?

Moreover, if Congress believes that "close proximity to fossil fuel energy plants, exposing [those residents] to dangerous air pollutants" is a problem worthy of policy attention, then the obvious solution would be a new set of amendments to the Clean Air

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[16] See CO_2 Science, "Ocean Acidification Database," http://www.co2science.org/data/acidification/results.php. See also Alan Longhurst, *Doubt and Certainty in Climate Science*, 214–25, https://curryja.files.wordpress.com/2015/09/longhurst-print.pdf.

[17] See Food and Agriculture Organization of the United Nations, *World Food and Agriculture Statistical Pocketbook 2018*, 2018, Charts 28 and 46, http://www.fao.org/3/CA1796EN/ca1796en.pdf. See also Kevin D. Dayaratna, Ross McKitrick, and Patrick J. Michaels, "Climate Sensitivity, Agricultural Productivity and the Social Cost of Carbon in FUND," *Environmental Economics and Policy Studies* 22 (2020): 433–48.

[18] Julie M. Arblaster et al., "Long-Term Climate Change: Projections, Commitments and Irreversibility—Final Draft Underlying Scientific-Technical Assessment," in *Working Group I Contribution to the IPCC Fifth Assessment Report (AR5), Climate Change 2013: The Physical Science Basis*, September 23–26, 2013, 12–78, http://www.climatechange2013.org/images/uploads/WGIAR5_WGI-12Doc2b_FinalDraft_Chapter12.pdf.

Act. Precisely what does this have to do with the "social responsibility" of the private sector?

The Memorandum goes on to argue that:

> [T]he Federal Reserve Bank of San Francisco published an economic letter finding that 'the ongoing trend of climate change—including higher temperatures and more extreme weather—will result in economic and financial losses for many businesses, households, and governments' and that 'such climate-related financial risk may threaten the safety and soundness of individual financial institutions and the stability of the overall financial system.' This stability may be threatened either by financial stress from a single financial institution or stress experienced by a number of small correlated financial institutions. Importantly, the impact of climate change is not limited the U.S. economy. A 2020 Oxford Economics study found that 'more than 20 percent of global gross domestic product will be at risk by 2100' due to the impacts of climate change.

Note that the FRBSF paper cited does not offer a "finding" about the economic effects of its "high-carbon" scenario; instead it discusses the difference between economic conditions under that scenario and an alternative "low-carbon" scenario, at a wholly qualitative level.[19] Both scenarios, therefore, are speculative, so that the description by the majority staff of that discussion as a "finding" is not accurate. More important, the "high-carbon" scenario in the FRBSF note obviously is Representative Concentration Pathway 8.5, under which GHG concentrations rise at about 12 parts per million as an annual average through 2100, a scenario that is virtually impossible given ongoing and likely trends. For 1985-2020, the average was about 2 ppm. RCP8.5 is the most extreme of the four central RCPs used by the intergovernmental Panel on Climate Change, and given ongoing and likely trends, it is virtually impossible.[20]

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[19] See the FRBSF note at https://www.frbsf.org/economic-research/publications/economic-letter/2021/february/climate-change-is-source-of-financial-risk/.

[20] See my discussion of the implications of the four RCPs at https://www.aei.org/wp-content/uploads/2018/09/The-climate-empire-strikes-out-the-perils-of-policy-analysis-in-an-echo-chamber.pdf?x91208. For discussions of the representative concentration pathways (RCP), see Intergovernmental Panel on Climate Change, Data Distribution Centre, "Scenario Process for AR5," https://sedac.ciesin.columbia.edu/ddc/ar5_scenario_process/RCPs.html; G. P. Wayne, "The Beginner's Guide to Representative Concentration Pathways," Skeptical Science, August 2013, https://skepticalscience.com/docs/RCP_Guide.pdf; Judith Curry, "Is RCP8.5 An Impossible Scenario?," Climate Etc., November 24, 2018, https://judithcurry.com/2018/11/24/is-rcp8-5-an-impossible-scenario/; Kevin Murphy, "Reassessing the RCPs," Climate Etc., January 28, 2019, https://judithcurry.com/2019/01/28/reassessing-the-rcps/; Keywan Riahi et al., "RCP8.5—A Scenario of Comparatively High Greenhouse Gas Emissions," *Climatic Change* 109, no. 33 (August 13, 2011), https://link.springer.com/article/10.1007/s10584-011-0149-y; and Zeke Hausfather and Glen P. Peters, "Emissions—The 'Business As Usual' Story Is Misleading," *Nature* 577 (January 30, 2020), https://media.nature.com/original/magazine-assets/d41586-020-00177-3/d41586-020-00177-3.pdf.

With respect to the cited Oxford Economics study and the assertion that "more than 20 percent of global gross domestic product will be at risk by 2100": The phrase "at risk" is not defined or quantified in that study; it is sufficiently ambiguous as to render it useless analytically. More generally, the study is an exercise in the familiar broken-windows fallacy: Policies driving the use of fossil fuels downward are a free lunch because they would engender large investments in alternative energy sources.[21] In other words, we can make ourselves wealthier by destroying a substantial part of the economic value of the existing energy-producing and -consuming capital stock. No, we cannot.

That the Oxford study is deeply unserious is illustrated by the central integrated assessment models, one of which is the Dynamic Integrated Climate and Economy Model, for which William D. Nordhaus won the Nobel prize in economics in 2018.[22] Under DICE, global gross domestic product (GDP) in 2100 varies by about 3 percent across policy scenarios, including no climate policies at all, a figure that is both very small and almost certainly not statistically significant given the vagaries of economic forecasting and the number of years remaining before the end of this century. (I exclude here Nordhaus' "Stern discounting" policy scenario, as it assumes a discount rate effectively equal to zero, a fundamental analytic error.[23]) Per capita consumption varies only by about 1.3 percent across policy scenarios, also a small number and almost certain not to be statistically significant.

The memorandum then argues that "There is growing evidence that climate change risk, as well as other ESG disclosures, are material to investors, but are not necessarily being disclosed by companies." The specifics of that "growing evidence" are wholly obscure---there is no citation in the Memorandum in support of that assertion---but even if we accept that premise for purposes of discussion, several questions arise. Does the majority staff believe that such projections to be "disclosed" are trivial? Which climate model(s) should businesses use? Which assumptions about future emissions, about policies to be adopted internationally, about the climate effects of those policies, *ad infinitum*, should businesses incorporate into those models? Are business firms---even very large ones---in a position to do such analysis in a credible fashion? If not, whom should they retain to do that analysis for them, and how should they evaluate the differences among the available alternative providers?

Given the poor position of business firms to sort through the huge complexities and uncertainties of climate science, it is reasonable to hypothesize that the market in its atomistic fashion has decided that it is the sum of individual investors' decisions that is the more reliable gauge of the highly uncertain business implications of evolving climate

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[21] The Oxford study is at https://www.sifma.org/wp-content/uploads/2020/12/Climate-Finance-Markets-and-the-Real-Economy.pdf.

[22] See William Nordhaus and Paul Sztorc, "DICE 2013R: Introduction and User's Manual," Yale University, Department of Economics, October 2013, Figure 4 and Table 1, http://www.econ.yale.edu/~nordhaus/homepage/homepage/documents/DICE_Manual_100413r1.pdf.

[23] See Nicholas Stern, *The Economics of Climate Change: The Stern Review* (Cambridge, UK: Cambridge University Press, January 2007), https://www.cambridge.org/us/academic/subjects/earth-and-environmental-science/climatology-and-climate-change/economics-climate-change-stern-review?format=PB.

phenomena. So as to drive the appropriate responses from businesses, it is not necessary that all investors make such difficult judgments; it is necessary only that marginal investors do so, a market reality with respect to which the majority staff seems to be blind.

The reference in the Memorandum to investors' evaluation of "reputational risks" is a wholly politicized and circular construct devoid of analytic content, in that a political campaign attacking certain kinds of investments or industries create the purported "reputational risks" at issue!

The Memorandum continues with the following:

> In October 2019, the Guardian reported that just 20 companies were responsible for 35% of the total carbon emissions word-wide. The top 15 U.S. food and beverage companies, reportedly, emit more greenhouse gases every year than the entire continent of Australia. Also, a 2017 report found that '100 energy companies have been responsible for 71% of all industrial emissions since human-driven climate change was officially recognized.' This underscores the important role that corporate accountability must play in addressing the climate change crisis. ESG criteria constitute a measurable way to assess a company's efforts and to hold the company accountable, not only when it comes to climate change, but in terms of issues such as pay equity, diversity, supply transparency and political spending.

Why does it matter whether that "35% of the total carbon emissions word-wide" are emitted by 20, 200, or 2000 companies? If the answer is that it is easier to pressure a smaller number of firms, does the majority staff believe the 20 companies should shut down? (Clearly, many of those large firms are government entities; Aramco is an obvious example.) Is a reduction of 35 percent in global GHG emissions even remotely feasible as a political matter? Note that GHG emissions in 2020 fell by about 6.4 percent as a result of the COVID-19 economic downturn.[24] If we apply the Environmental Protection Agency climate model, under assumptions that exaggerate the effects of reduced emissions, a 35 percent reduction implemented immediately and maintained strictly would reduce global temperatures in 2100 by about half a degree.[25] The entire Paris agreement: about 0.17 degrees C. Net-zero GHG emissions by the U.S.: about 0.104 degrees C, which would be barely detectable given the standard deviation (about 0.11 degrees C) of the surface temperature record.[26] Australia emits 1.3 percent of global GHG; elimination of those emissions would have an effect on global temperatures that would not be detectable.[27] If the pursuit of "corporate accountability" for the (asserted) "climate change crisis"---as noted above, there is no evidence of such a "crisis," and so the majority staff does not

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[24] See https://www.nature.com/articles/d41586-021-00090-3.
[25] Author computations using MAGICC 5.3. The MAGICC model can be found at http://www.magicc.org/.
[26] See https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/1999JD900835.
[27] See the national GHG emissions data at https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-co2-emissions.pdf.

attempt to provide it---is appropriate, then it is appropriate to review as well the "corporate accountability" for the human benefits flowing from the production and consumption activities that yield GHG emissions. And precisely what is the relevance of such extraneous issues as "pay equity, diversity, supply transparency and political spending?"

III. The Blackrock ESG Effort

The Memorandum notes that:

> In a 2015 report, Blackrock Investment explained that "[c]ompanies that score high on ESG measures tend to quickly adapt to changing environmental and social trends, use resources efficiently, have engaged (and, therefore, productive) employees, and face lower risks of regulatory fines or reputational damage."

"Explained" is a curious term. Since the ESG imperative is rather new in the history of investing and in the context of business cycles and structural economic shifts affecting different sectors differently, it cannot be the case---and it decidedly is not the case---that Blackrock has demonstrated those arguments to be consistent with a body of evidence. Those arguments are mere assertions that should be examined in light of evidence as it is forthcoming over time. Blackrock is one of the leading proponents of ESG investment imperatives for the private sector, and so a few observations are in order.

Blackrock---the largest asset manager in the world---has announced in the form of a public letter from its CEO Larry Fink to corporate managements that henceforth "Sustainability [will serve] as Blackrock's New Standard for Investing."[28] Nowhere in the various materials issued by Blackrock in support of this new mission is there to be found an actual definition of "sustainability." Instead, Blackrock informs us that

> Sustainability in the investment context means understanding and incorporating environmental, social and governance (ESG) factors into investment analysis and decision-making.

That "definition" is worse than useless, as it quite obviously allows Fink and the Blackrock bureaucrats below him to impose their own political and policy preferences ("ESG factors") upon the business decisions of the firms in which Blackrock is invested heavily, while shunting aside the obvious conflicts and tradeoffs among the myriad ESG objectives that can be imagined.

In that letter, Blackrock notes its fiduciary responsibility to "promote long-term value" for those whose assets it is managing. But the inconsistency between promotion of "long-term value" and ESG objectives---the combination of "long-term value" objectives with political motivations--- predictably brings hypocrisy, an outcome obvious in the Blackrock ESG campaign. Notwithstanding Fink's rhetoric, he must understand the adverse implications for investor returns attendant upon the ESG diversion. After all, the

[28] See https://www.blackrock.com/us/individual/larry-fink-ceo-letter.

imposition of a prior constraint---investments in those evil fossil fuels are to be avoided---cannot be consistent with value maximization.

So it is not too surprising that Blackrock has agreed to political deals to avoid those very same ESG mandates in its own operations while striving to impose them on others. Blackrock received in late 2019 a demand from Boston Trust Walden and Mercy Investment Services that it align its shareholder votes with its statements on climate matters.[29] The demand was later withdrawn, and The Interfaith Center on Corporate Responsibility, a co-sponsor of the resolution, issued a press release confirming that the withdrawal was the direct result of Blackrock's

> new position and the implications for votes on shareholder resolutions in the 2020 proxy season. This lead *(sic)* to an agreement to continue a dialogue including a summer discussion focusing on 2020 votes on climate and an opportunity to provide feedback to the company. Based on our agreement, we withdrew the shareholder resolution for this year. We are hopeful that Blackrock's voting and engagements will be an effective catalyst stimulating positive company changes on climate. Clearly investors and clients globally will be closely monitoring BlackRock's proxy voting performance on climate to ensure their statements are translated into action.[30]

Mercy Investment Services confirmed the same arrangement: It withdrew its demands to Blackrock as a result of the more concrete commitments included in Fink's open letter, to be imposed upon the firms controlled by Blackrock.[31]

"Sustainability" is a term ubiquitous in the public discussion of climate and related issues, but which allows for no easy definition. It is that definitional problem that guarantees that Blackrock's "sustainability" campaign inexorably would become wholly *ad hoc*: Fink has made a commitment that in its actively managed portfolios Blackrock will divest holdings of firms that generate "more than 25 percent of their revenues from thermal coal production," and will initiate "new ESG-oriented investment products, as well as those that [do not include] fossil fuels." Precisely how does the "sustainability" goal yield those imperatives?

The central argument offered by Blackrock and by the majority staff is that the market does not understand the risks posed by increasing atmospheric concentrations of greenhouse gases---or the business risks posed by potential climate policies attempting to reduce GHG emissions---but that the majority staff and Blackrock and its bureaucrats do, and that corporate managements are in a position to evaluate the science and politics of such future outcomes. That no one has offered a rigorous definition of the "sustainability"

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[29] See https://www.bloomberg.com/news/articles/2019-12-13/blackrock-vanguard-face-shareholder-rebuke-over-climate-votes.
[30] See https://www.iccr.org/statement-withdrawal-resolution-blackrock-proxy-voting-climate-change.
[31] See https://www.mercyinvestmentservices.org/article-details.aspx?article=8064.

concept underlying the ESG imperative does not inspire confidence.[32] Are fossil fuels "unsustainable" because they are finite? The answer is "no": Market forces are perfectly capable of allocating a depletable resource over time.[33] Do the proponents understand the implications of the failure of the mainstream climate models to predict the past or ongoing climate record?[34] The evaluation of climate "risks" and the business risks attendant upon them is a vastly more complex challenge than the proponents would have us believe.

Disinvestment in fossil fuels is inconsistent with the diversification imperatives consistent with the long term interests of investors.[35] Moreover, the direct relationships among individual incomes, energy consumption, and life expectancies are large.[36] If fossil fuels are evil, then so are activities that increase the demand for them; prominent among the latter are investments in education, health, and other sources of human capital. Accordingly, the ideological campaign against fossil fuels is fundamentally anti-human in that it implies directly a disinvestment in people. In short, the climate movement views ordinary people as only mouths to feed wreaking environmental destruction, rather than as individuals with moral value and as the ultimate resource yielding ingenuity and inventiveness driving a dynamic process of finding solutions to problems.[37]

IV. Conclusions

However the "social responsibility" of the business sector is defined, it is incontrovertible that businesses have fiduciary responsibilities to their owners, and the law is clear that disclosures made by businesses to the investment community must be "material."[38] An expansion of the "social responsibility" of businesses beyond value maximization must reduce the fulfillment of those fiduciary responsibilities by imposing artificial constraints upon investment choices and other business decisions.

More fundamentally, an ESG requirement based upon the risks of anthropogenic climate change, and a resulting disclosure requirement for business risks, would be deeply speculative, and the level of detail and the scientific sophistication that would be needed to insulate firms from future shareholder lawsuits is far from clear. One could easily imagine that such self-protective "disclosures" might run thousands of pages, with references to thousands more, and the idea that this "disclosure" requirement would facilitate improved decision making by investors is difficult to take seriously.

That is only the first of many operational problems that would be created by an ESG disclosure requirement. What information would be deemed "material" for the protection of investors' interests? Moreover, gathering, evaluating, organizing, and disclosing material information is hardly costless, a reality that will induce some firms that

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[32] See https://www.finance.senate.gov/imo/media/doc/14jun2016Zycher.pdf.
[33] See https://www.aei.org/wp-content/uploads/2016/06/World-Oil-Prices.pdf.
[34] See https://pcmdi.llnl.gov/mips/cmip5/.
[35] See http://divestmentfacts.com/pdf/Fischel_Report.pdf.
[36] See https://www.aei.org/wp-content/uploads/2019/04/RPT-The-Green-New-Deal-5.5x8.5-FINAL.pdf.
[37] See https://www.amazon.com/Ultimate-Resource-Julian-Lincoln-Simon/dp/0691003815.
[38] See https://www.sec.gov/news/press-release/2020-192.

otherwise would opt to acquire capital in public markets not to do so, substituting such alternatives as venture capital. Under such circumstances the aggregate allocation of capital will be made less productive, not a salutary outcome for the investors that are the supposed beneficiaries of ESG disclosures. And at what point would the provision of ever-more information yield "overload" for investors, thus actually reducing the protections that ostensibly are the central objective?

Businesses are not charities, and they are not government. The campaign for ESG investment and disclosure is a blatant effort to use private-sector resources for ideological purposes, in the context of the unwillingness of the Congress to enact such policies as an outcome of the legislative bargaining process. The true "socially responsible" course in the context of climate policy is to preserve the proper roles of the private sector and of the government, respectively, as part of the larger permanent objectives of maximizing the productivity of resource use under free-market competition, and preserving the political accountability of the policymaking process under the institutions of democratic decisionmaking as constrained by the constitution.