February 13, 2023

Department of Defense (DoD),
General Services Administration (GSA)
National Aeronautics and Space Administration (NASA)

Re: Federal Acquisition Regulation: Disclosure of Greenhouse Gas Emissions and Climate-Related Financial Risk [FAR Case 2021–015]

Submitted via www.regulations.gov

To Whom It May Concern:

I am pleased to provide these comments regarding the "Federal Acquisition Regulation: Disclosure of Greenhouse Gas Emissions and Climate-Related Financial Risk."[1]

The Department of Defense (DoD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA) [collectively, the "proposing agencies"] are proposing to revise the Federal Acquisition Regulation (FAR) to implement section 5(b)(i) of Executive Order 14030 to address "climate-related financial risk."

Introduction

This proposed rule is unlawful and should be withdrawn.

First, the proposed rule purports to exercise authority that Congress has not given to the proposing agencies and is inconsistent with the statutory missions provided to them by law. Agencies do not have plenary power to do whatever they like. They only have that power granted to them by Congress. No Presidential Executive Order can cure this infirmity.

The proposing release itself acknowledges that the proposed rule is an attempt to implement a Presidential Executive Order and does not pretend that it is furthering the proposing agencies' statutory missions.[2] If Congress has not granted the authority to the Executive Branch (to wit, the proposing agencies) by statute, then the Executive Branch (to wit, the President) may not grant the power to itself by Executive Order. As the Supreme Court made clear in *West Virginia vs. Environmental Protection Agency* an agency (or agencies) may not "adopt a regulatory program

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[1] "Federal Acquisition Regulation: Disclosure of Greenhouse Gas Emissions and Climate-Related Financial Risk," Department of Defense, General Services Administration, and National Aeronautics and Space Administration, Proposed Rule, *Federal Register*, Vol. 87, No. 218, November 14, 2022, pp. 68312-68334 https://www.govinfo.gov/content/pkg/FR-2022-11-14/pdf/2022-24569.pdf.

[2] Proposing release at p. 68312. ("DoD, GSA, and NASA are proposing to revise the FAR to implement section 5(b)(i) of Executive Order (E.O.) 14030, Climate-Related Financial Risk, to require major Federal suppliers to publicly disclose greenhouse gas (GHG) emissions and climate-related financial risk and to set science-based reduction targets."). See also proposing release at p. 68324 ("DoD, GSA, and NASA are proposing to amend the FAR to implement section 5(b)(i) of E.O. 14030, Climate-Related Financial Risk. ... The objective of this rule is to implement the E.O. by creating a new FAR subpart at 23.XX, which establishes the requirement for a major Federal supplier to publicly disclose certain climate information.").

that Congress had conspicuously and repeatedly declined to enact itself."[3] Congress has declined to enact the "Green New Deal" or any legislative regime related to climate-related financial risk.[4] It cannot be implemented by regulation.

Second, the proposed rule outsources climate regulation to the Task Force on Climate-related Financial Disclosures (TCFD),[5] an opaque private organization governed by those who have a major financial interest in creating complex climate regulations so they can profit by billions of dollars from the promulgation and implementation of their rules. Michael Bloomberg is the Chairman of the TCFD and it is composed of 31 individuals who work for private organizations.[6] This effective delegation of regulatory authority to an unaccountable, opaque and conflicted private body is a violation of the Supreme Court's private non-delegation doctrine which is grounded in the Fifth Amendment Due Process Clause and the Vesting Clauses.[7]

The proposed rule is also bad policy in that the proposed rule will (1) raise contractor costs dramatically and these costs must be recovered by charging the taxpayer higher prices for goods and services, (2) limit the government's choice of vendors since some – probably many – vendors will simply not seek to supply the federal government if doing so means incurring massive costs, and (3) do virtually nothing to affect the climate. It will, however, enrich thousands of lawyers, accountants and climate consultants by billions of dollars.

Finally, the cost-benefit analysis in the proposing release and the associated Regulatory Impact Analysis,[8] required by Executive Order 12866 and OMB Circular A-4, is seriously inadequate. It substantially underestimates the costs of the proposed rule. It's benefit analysis rests almost entirely on the premise that American businesses contracting with the federal government are managed by simpletons who will only act to reduce their costs if spurred to do so by federal regulation. Scientific or economic analysis is almost entirely non-existent.

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[3] 597 U.S. ___ (2022) https://www.supremecourt.gov/opinions/21pdf/20-1530_n758.pdf at pages 11 and 20.

[4] For example, H. R. 2570 (117th Congress), the Climate Risk Disclosure Act of 2021, was reported out of the House Financial Services Committee but never voted on by the House. The companion bill in the Senate (S.1217) went nowhere.

[5] See, e.g., proposed 8 CFR 23.XX02(1):

> Annual climate disclosure means an entity's set of disclosures that—
>
> (1) Aligns with—
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> (i)The 2017 Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) (see https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf), which cover governance, strategy, risk management, and metrics and targets (see figure 4 of the 2017 recommendations for an outline of disclosures); and
> (ii) The 2021 TCFD Annex: Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, which includes updates to reflect the evolution of disclosure practices, approaches, and user needs (see https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf)

[6] "Task Force Members" https://www.fsb-tcfd.org/members/.

[7] See discussion below under the heading "The Proposed Rule Violates the Private Non-Delegation Doctrine."

[8] "FAR Case 2021-015: Disclosure of Greenhouse Gas Emissions and Climate-Related Financial Risk, Regulatory Impact Analysis https://downloads.regulations.gov/FAR-2021-0015-0004/content.pdf.

The Proposed Rule Is Beyond the Proposing Agencies' Statutory Authority

Congress has given NASA over a dozen missions.[9] None relate to climate change, environmental regulation generally or financial risk.[10]

Congress did, however, provide NASA with a narrow environmental mission related to the degradation of the ozone layer in the upper atmosphere. 51 U.S. Code § 20161 provides:

> 51 U.S. Code § 20161 - Congressional declaration of purpose and policy
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> (a) Purpose.—
> The purpose of this subchapter is to authorize and direct the Administration to develop and carry out a **comprehensive program of research, technology, and monitoring of the phenomena of the upper atmosphere so as to provide for an understanding of and to maintain the chemical and physical integrity of the Earth's upper atmosphere.**
> (b) Policy.—
> Congress declares that it is the policy of the United States to undertake **an immediate and appropriate research, technology, and monitoring program that will provide for understanding the physics and chemistry of the Earth's upper atmosphere.**
>
> (Emphasis added)

The term "upper atmosphere" means that "portion of the Earth's sensible atmosphere above the troposphere."[11]

In short, NASA was charged by Congress with helping the EPA monitor ozone depletion in the upper atmosphere caused by chlorofluorocarbons and hydrochlorofluorocarbons. It was NOT tasked by Congress with reducing greenhouse gas emissions, combatting climate change, mitigating climate-related financial risk or furthering racial justice which is the putative objective of this rulemaking and E.O. 14030.[12] This attempt to expand the proposing agencies' regulatory

[9] 51 U.S. Code §20102.
[10] The proposing release makes it clear that the motivation for the rule is outside the scope of the powers granted to the proposing agencies:

> "The Federal Government has committed to reducing its Scope 1, 2, and 3 GHG emissions, including those associated with Federal procurement activities, to achieve a net zero economy by 2050. As the single largest purchaser in the world, Federal procurement represents both a substantial contribution to climate change emissions and a significant opportunity to reduce them."

Proposing release at p. 68319.
[11] 51 U.S. Code § 20162.
[12] E.O. 14030, section 1:

> It is therefore the policy of my Administration to advance consistent, clear, intelligible, comparable, and accurate disclosure of climate-related financial risk (consistent with Executive Order 13707 of September 15, 2015 (Using Behavioral Science Insights to Better Serve the American People)), including both

power far beyond a narrow statutory remit is precisely analogous to what the EPA was trying to do in the rule set aside by the Supreme Court in *West Virginia v. Environmental Protection Agency*. As the Supreme Court made clear in *West Virginia vs. Environmental Protection Agency* an agency (or agencies) may not "adopt a regulatory program that Congress had conspicuously and repeatedly declined to enact itself."[13]

The purpose of Department of Defense is to defend the United States against foreign enemies. It is NOT tasked by Congress with reducing greenhouse gas emissions, combatting climate change, mitigating climate-related financial risk or furthering racial justice which is the putative objective of this rulemaking and E.O. 14030. Again, there is a minor Congressional directive to create a National Oceanographic Partnership Program by which the Navy can collaborate with other agencies to conduct scientific research.[14] This does not authorize the Department of Defense to regulate the climate or climate-related financial risk by imposing billions of dollars in costs on federal suppliers.

GSA purpose is to manage federal procurement and real estate.[15] Although Congress, has given it broad and important duties, a search for Congressional authorization for it to engage in environmental, climate change or financial risk regulation will be in vain.[16]

In *West Virginia v. EPA*, the Supreme Court held that an agency must act pursuant to clear delegation of authority from Congress. In holding an exercise of regulatory power by the EPA invalid, the court wrote:

> Extraordinary grants of regulatory authority are rarely accomplished through "modest words," "vague terms," or "subtle device[s]." Nor does Congress typically use oblique or elliptical language to empower an agency to make a "radical or fundamental change" to a statutory scheme.[17]

This is an affirmation of a line of cases that the proposing agencies need to heed. They cannot go too far down the climate change, environmental regulation path without considering limits on their statutory authority. Otherwise, the proposed rule will be successfully challenged in court.

In *FDA v. Brown & Williamson Tobacco Corp.*, the Supreme Court, granting *Chevron* deference to the agency, found that the Food and Drug Administration did not have authority to regulate tobacco.

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physical and transition risks; act to mitigate that risk and its drivers, while accounting for and addressing disparate impacts on disadvantaged communities and communities of color (consistent with Executive Order 13985 of January 20, 2021 (Advancing Racial Equity and Support for Underserved Communities Through the Federal Government)) and spurring the creation of well-paying jobs; and achieve our target of a net-zero emissions economy by no later than 2050.

[13] 597 U.S. ___ (2022) https://www.supremecourt.gov/opinions/21pdf/20-1530_n758.pdf at pages 11 and 20.

[14] 10 U.S. Code §8931.

[15] "Mission and Background" https://www.gsa.gov/about-us/mission-and-background.

[16] See Title 40, U.S. Code.

[17] Slip Opinion at p. 18.

> In determining whether Congress has specifically addressed the question at issue, a reviewing court should not confine itself to examining a particular statutory provision in isolation. The meaning - or ambiguity - of certain words or phrases may only become evident when placed in context. It is a "fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme." A court must therefore interpret the statute "as a symmetrical and coherent regulatory scheme," and "fit, if possible, all parts into an harmonious whole." Similarly, the meaning of one statute may be affected by other Acts, particularly where Congress has spoken subsequently and more specifically to the topic at hand. In addition, we must be guided to a degree by common sense as to the manner in which Congress is likely to delegate a policy decision of such economic and political magnitude to an administrative agency.[18] (citations omitted)

If the proposed rule is of "great economic and political magnitude," then it is likely to be ruled invalid since there is no authority for a rule governing climate-related financial risk in any of the statutes. Since it affects a vast array of federal contracts involving vast sums and imposes billion of dollars in costs, it will likely to be found by the court of be great economic and political magnitude.

The *FDA v. Brown & Williamson Tobacco Corp.*, the court also wrote that:

> By no means do we question the seriousness of the problem that the FDA has sought to address. The agency has amply demonstrated that tobacco use, particularly among children and adolescents, poses perhaps the single most significant threat to public health in the United States. Nonetheless, no matter how "important, conspicuous, and controversial" the issue, and regardless of how likely the public is to hold the Executive Branch politically accountable, an administrative agency's power to regulate in the public interest must always be grounded in a valid grant of authority from Congress. And "[i]n our anxiety to effectuate the congressional purpose of protecting the public, we must take care not to extend the scope of the statute beyond the point where Congress indicated it would stop."[19] (citations omitted)

Thus, a court can accept the importance of climate change and even accept the much more questionable proposition that the proposed rule would have meaningful climate change mitigation affects or other benefits that exceed its costs and yet it still must find that the statutes governing the DoD, GSA or NASA do not authorize them to regulate in the proposed manner.

Similarly, in *NAACP v. FPC*, 425 U.S. 662 (1976) the Supreme Court held that the Federal Power Board did not have the authority to prohibit discriminatory employment practices.

> The parties point to nothing in the Acts or their legislative histories to indicate that the elimination of employment discrimination was one of the purposes that

[18] *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 132-133 (2000).
[19] *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 161 (2000).

> Congress had in mind when it enacted this legislation. The use of the words "public interest" in the Gas and Power Acts is not a directive to the Board to seek to eradicate discrimination, but, rather, is a charge to promote the orderly production of plentiful supplies of electric energy and natural gas at just and reasonable rates. … The Federal Power Board is authorized to consider the consequences of discriminatory employment practices on the part of its regulatees only insofar as such consequences are directly related to the Board's establishment of just and reasonable rates in the public interest."[20]

In *NFIB v. OSHA*,[21] the Supreme Court granted a stay enjoining OSHA from imposing vaccine mandates on employees because OSHA does not have the authority to do so under its authorizing statute.

> Why does the major questions doctrine matter? It ensures that the national government's power to make the laws that govern us remains where Article I of the Constitution says it belongs—with the people's elected representatives. If administrative agencies seek to regulate the daily lives and liberties of millions of Americans, the doctrine says, they must at least be able to trace that power to a clear grant of authority from Congress.[22]

There is no such "clear grant of authority from Congress."

The real purpose of the proposed rule, as explicitly acknowledged in the proposing release (citations above), is to further the Biden administration climate agenda. This is environmental regulation masquerading as financial or procurement regulation, and everyone knows it. The primary impact of the proposed rule is not to improve the procurement process nor to mitigate climate change, but to enrich the climate-industrial complex – the bevy of lawyers, accountants, consultants and NGOs that live off of climate change complexity.

<u>The Proposed Rule Violates the Private Non-Delegation Doctrine</u>

The proposed rule violates the private non-delegation doctrine which is grounded both in the Fifth Amendment Due Process Clause and the Vesting Clauses.

Discussing the Supreme Court's private non-delegation doctrine in another context, Heritage Foundation Legal Research Fellow Paul Larkin wrote:

> The Fifth Amendment Due Process Clause ensures that the actors in each department cannot evade the Framers' carefully constructed regulatory scheme by delegating their federal lawmaking power to unaccountable private parties, individuals beyond the direct legal and political control of superior federal officials and the electorate. That is, the due process requirement that federal government officials act pursuant to "the law of the land" when the life, liberty, or

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[20] *NAACP v. FPC*, 425 U.S. 662, 670-671 (1976).
[21] *NFIB v. OSHA*, 595 U. S. ____ (2022) https://www.supremecourt.gov/opinions/21pdf/21a244_hgci.pdf.
[22] Op. Cit., p. 4.

> property interests of the public are at stake prohibits the officeholders in any of those branches from delegating lawmaking authority to private parties who are neither legally nor politically accountable to the public or to the individuals whose conduct they may regulate.[23]

In *Carter v. Carter Coal Co.*,[24] the Supreme Court invalidated a law that granted a majority of coal producers and miners in a given region the authority to impose maximum hour and minimum wage standards on all other miners and producers in that region. The Court found that the law was "legislative delegation in its most obnoxious form; for it is not even delegation to an official or an official body, presumptively disinterested, but to private persons whose interests may be and often are adverse to the interests of others in the same business."[25]

That is precisely what the proposing agencies are doing in the proposed rule.[26] The Task Force on Climate-related Financial Disclosures (TCFD) is an opaque private organization governed by those who have a major financial interest in creating complex climate regulations so they can profit by billions of dollars from the promulgation and implementation of their rules. Michael Bloomberg is the Chairman of the TCFD and it is composed of 31 individuals who work for private organizations. Most of these organizations have a financial interest in furthering complex climate change financial disclosure rules. Alternatively, the individual's position depends on the existence of such rules. None of the due process, regulatory process or transparency protections associated with government exist with respect to the TCFD.

The proposing agencies have made an impermissible delegation when the proposed rule requires compliance with TCFD's rules.[27] The proposing agencies cannot eschew the hard work of actually drafting rules by outsourcing them to Michael Bloomberg's TCFD.

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[23] Paul J. Larkin, Jr., "The Dynamic Incorporation of Foreign Law and the Constitutional Regulation of Federal Lawmaking," *Harvard Journal of Law & Public Policy*, Vol. 38, No. 1 (2015), pp. 416-417 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2556440.
[24] 298 U.S. 238 (1936).
[25] 298 U.S. 238, 311 (1936).
[26] See, e.g., proposed 8 CFR 23.XX02(1):

> Annual climate disclosure means an entity's set of disclosures that—
>
> (1) Aligns with—
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> (i)The 2017 Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) (see https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf), which cover governance, strategy, risk management, and metrics and targets (see figure 4 of the 2017 recommendations for an outline of disclosures); and
> (ii) The 2021 TCFD Annex: Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, which includes updates to reflect the evolution of disclosure practices, approaches, and user needs (see https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf)

[27] See proposed 8 CFR 23.XX02(1):

Annual climate disclosure means an entity's set of disclosures that—

(1) Aligns with—

Doing so is not only unconstitutional, but violates the Administrative Procedure Act and other administrative law provisions governing the rule-making process because the proposing agencies cannot evade the APA and other administrative law requirements by outsourcing the rule making to a private entity.[28]

In *Department of Transportation v. Association of American Railroads*,[29] the Court held that Amtrak was a government agency rather than a private corporation, *ergo* the private non-delegation doctrine did not apply. In their concurrences, both Justice Alito and Justice Thomas discussed at length the private non-delegation doctrine and its applicability were Amtrak deemed a private corporation since, in their view, it is.

Justice Alito: The principle that Congress cannot delegate away its vested powers exists to protect liberty.[30] … When it comes to private entities, however, there is not even a fig leaf of constitutional justification. Private entities are not vested with "legislative powers."[31]

Justice Thomas: Although no provision of the Constitution expressly forbids the exercise of governmental power by a private entity, our so-called "private nondelegation doctrine" flows logically from the three Vesting Clauses. Because a private entity is neither Congress, nor the President or one of his agents, nor the Supreme Court or an inferior court established by Congress, the Vesting Clauses would categorically preclude it from exercising the legislative, executive, or judicial powers of the Federal Government. In short, the "private nondelegation doctrine" is merely one application of the provisions of the Constitution that forbid Congress to allocate power to an ineligible entity, whether governmental or private. For this reason, a conclusion that Amtrak is private—that is, not part of the Government at all—would necessarily mean that it cannot exercise these three categories of governmental power.[32]

Since TCFD is a private entity and governed entirely by private persons not government officials, the private non-delegation doctrine clearly applies. The delegation of rule-making power by the proposing agencies to the TCFD is unlawful.

(i)The 2017 Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) (see https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf), which cover governance, strategy, risk management, and metrics and targets (see figure 4 of the 2017 recommendations for an outline of disclosures); and
(ii) The 2021 TCFD Annex: Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, which includes updates to reflect the evolution of disclosure practices, approaches, and user needs (see https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf).

[28] They certainly cannot do so without explicit Congressional authorization such as occurs with certain so-called self-regulatory organizations in a financial regulation context (e.g. the Financial Industry Regulatory Authority). This is explicitly authorized by statute *and* the SRO rules must be approved by a government agency (the SEC in the case of FINRA) in order to take effect. No such Congressional authorization or agency approval process is present here.

[29] 575 U. S. 43, 135 S. Ct. 1225 (2015).

[30] Id. at p. 61.

[31] Id. at p. 62.

[32] Id. at p. 87-88.

Economic Analysis of Climate-Related Financial Risk is Nearly Non-Existent

Serious economic analysis of climate-related financial risk is nearly non-existent. For example, you would think that the Securities and Exchange Commission (SEC), in its proposed rule-making,[33] would have included such an analysis in detail in its proposing release since it is the factual predicate for their rulemaking. There are a few citations to a few studies. But those studies are largely advocacy pieces by those with a political agenda.

The proposing agencies' proposing release is no different. There does not appear to be a citation to a single economic study in support of the proposition that this rule meets any cost-benefit test.

The proposing agencies opine that "[c]ompanies who are required to publicly disclose their GHG emissions and climate risks may be prompted to thoroughly investigate their operations and supply chains, which may, in turn, reveal opportunities to realize efficiencies and manage risks."[34] They fail to address two central questions. First, since the EPA currently requires GHG reporting and the SEC is about to, why will one more very similar but different reporting requirement accomplish anything constructive? The real-world answer is that the proposed rule adds nothing but costs that will accrue to the benefit of lawyers, accountants and climate consultants that are lobbying for this rule. Second, why would competent management ignore "opportunities to realize efficiencies and manage risks," assuming that those "opportunities" to reduce costs and risks are real. A competent management does not need cumbersome federal rules to tell it to look for ways to reduce costs and risks. To hold otherwise is disingenuous. Bald assertions that simpleton corporate managements will be spurred to save money that they would not think to save in the absence of the proposed rule really do not cut it as serious economic analysis.

At the very least, the reporting requirements in the proposed rule should not apply to any contractor that reports GHG emissions to the EPA or that will soon be required to do so as an issuer once the SEC proposed rule is finalized.

Any estimate of the economic impact of climate change will have to rely on the highly uncertain and divergent climate model results. Economics models are more uncertain because of necessity they are built on top of the climate models. So if the climate models have a band of results plus or minus X percent, the economics models will have a band of results that is greater than plus or minus X percent.

In addition to the high degree of uncertainty in the climate models will be added an entirely new family of economic ambiguity and uncertainty. Any economic estimate of the impact of climate change will also have to choose a discount rate to arrive at the present discounted value of future costs and benefits[35] of climate change and to estimate the future costs and benefits of various

[33] "The Enhancement and Standardization of Climate-Related Disclosures for Investors," Securities and Exchange Commission, Proposed Rule, *Federal Register*, Vol. 87, No. 69, April 11, 2022, pp. 21334-21473 https://www.govinfo.gov/content/pkg/FR-2022-04-11/pdf/2022-06342.pdf. See also the SEC version of the proposing release, March 21, 2022 https://www.sec.gov/rules/proposed/2022/33-11042.pdf (506 pages).
[34] Proposing release at p. 68319.
[35] There are some benefits. For example, large portions of Northern areas such as Canada, Russia and Scandinavia would presumably become suitable for agriculture and growing seasons in the norther United States would lengthen.

regulatory or private initiatives. The choice of discount rate is controversial and important.[36] Estimates will need to be made of the cost of various aspects of climate change (sea level rises, the impact on agriculture, etc). Estimates will need to be made of the cost of various remediation techniques. Guesses will need to be made about the rate of technological change. Guesses will need to be made about the regulatory, tax and other responses of a myriad of governments.[37] Estimates will need to be made using conventional economic techniques regarding the economic impact of those changes which, in turn, will reflect a wide variety of techniques and in many cases a thin or non-existent empirical literature. Guesses will need to be made of market responses to all of these changes since market participants will not stand idly by and do nothing as markets, technology and the regulatory environment change.

The results of any given model will depend on what assumptions or guesses the modeler makes regarding these many highly uncertain issues. The SEC, in its proposed rule, provides literally no guidance on these issues. Nor, for example, does the Federal Reserve in its Notice and Request for Comment.[38] Certainly, the proposed rule as written does not.

<u>The Proposed Rule Will Not Have a Meaningful Impact on Climate Change</u>

The proposed rule would have somewhere between either a vanishingly small or no effect on actual greenhouse gas emissions or climate change. *Entirely eliminating* net U.S. emission would reduce global temperatures by only 0.2 Celsius by 2100.[39] Thus, as a practical matter, the proposed rule would have no measurable impact on global warming. Period. Full stop.

Moreover, lengthy risk scenario analyses full of amorphous, legally scrubbed language based on highly doubtful climate and economics models presented on GSA forms are not going to have a significant impact on emissions. Employing large number of accountants, economists, lawyers and

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Carbon dioxide promotes plant growth. Deaths from cold weather (which are more numerous than those from hot weather) will decline.

[36] See, for example, David Kreutzer, "Discounting Climate Costs," Heritage Foundation Issue Brief No. 4575, June 16, 2016 http://thf-reports.s3.amazonaws.com/2016/IB4575.pdf; Kevin Dayaratna, "An Analysis of the Obama Administration's Social Cost of Carbon," Testimony before Committee on Natural Resources, United States House of Representatives on July 23, 2015 https://www.heritage.org/testimony/analysis-the-obama-administrations-social-cost-carbon.

[37] To get a sense of how daunting a task it is to keep track of the many government policy responses, see "Climate Change Laws of the World," Grantham Research Institute on Climate Change and the Environment at LSE https://climate-laws.org/. Merely keeping track of these many rules is one thing. Accurately predicting how they will change introduces an entirely new level of complexity and uncertainty.

[38] "Principles for Climate-Related Financial Risk Management for Large Financial Institutions," The Board of Governors of the Federal Reserve System, Notice and Request for Comment, *Federal Register*, Vol. 87, No. 235, December 8, 2022, pp. 75267-75271 https://www.govinfo.gov/content/pkg/FR-2022-12-08/pdf/2022-26648.pdf.

[39] Kevin D. Dayaratna, Katie Tubb, and David Kreutzer, "The Unsustainable Costs of President Biden's Climate Agenda," Heritage Foundation Backgrounder No. 3713, June 16, 2022 https://www.heritage.org/sites/default/files/2022-06/BG3713_0.pdf ("eliminating all U.S. emissions would reduce global temperatures by less than 0.2 degrees Celsius by 2100." This result is obtained using a clone of the National Energy Model System 2021 Full Release (NEMS) used by the Energy Information Administration (EIA) in the Department of Energy.). See also Comment Letter of Benjamin Zycher, American Enterprise Institute to the Securities and Exchange Board regarding "The Enhancement and Standardization of Climate-Related Disclosures for Investors," June 17, 2022 https://www.sec.gov/comments/s7-10-22/s71022-20132286-302818.pdf.

consultants to make guesses about the impact of climate change is unlikely to materially affect either the health of businesses, the stability of the financial system or the climate.

The Costs and Adverse Economic Impact on Contractors, Competition and the Economy Must be Seriously Considered

The cost of implementing the proposed rule is likely to be substantially higher than is estimated. For example, the idea that two mid-level managers will spend only 40 hours each, an analyst 20 hours and senior managers will spend a grand total of two hours to gather and review the information in a large firm is simply preposterously low (assuming that the proposing agencies are not going to allow contractors to fabricate data out of whole cloth).[40]

The costs that would be imposed by the SEC's proposed climate change rule, using its own figures, would *triple* the cost of being a public company – an increase of $6.4 billion annually.[41] This figure has since been revised upwards by the SEC staff.[42]

The proposing agencies estimate that the TEN YEAR cost of the proposed rule will be $3.9 billion (discounted at three percent).[43] In short, the original SEC estimate (for a similar rule) is 16 times higher than the estimate conducting by the proposing agencies.[44] Why? The short answer is that the proposing agencies' cost estimates are radically and unrealistically low.

Many contractors, particularly those for whom federal contracting is an ancillary activity, are going to look at these costs and simply stop contracting with the federal government. There will be no profit in it. This will reduce competition and raise costs for the federal government. This impact is nowhere mentioned in the proposing release.

The proposing agencies need to seriously consider the costs it would be imposing on federal contractors, the adverse impact that these costs would have on competition and the costs to taxpayers of increasing costs by billions of dollar. The failure to do so is deeply irresponsible and arbitrary and capricious.

Virtually Any Federal Procurement Rule Would Fail a Cost-Benefit Analysis

Because the impact on climate change will be negligible (and certainly not measurable) and the costs substantial, the proposed rule is likely to fail a serious cost benefit analysis. Even zeroing

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[40] Proposing release at p. 68322 (col. 1).

[41] Comment Letter of David R. Burton, Heritage Foundation to the Securities and Exchange Board regarding "The Enhancement and Standardization of Climate-Related Disclosures for Investors," June 17, 2022 https://www.sec.gov/comments/s7-10-22/s71022-20131980-302443.pdf. See PRA Table 4 in the SEC proposing release for details.

[42] See Commissioner Mar Uyeda, "Remarks at the 2022 Cato Summit on Financial Regulation," November 17, 2022 https://www.sec.gov/news/speech/uyeda-remarks-cato-summit-financial-regulation-111722.

[43] Table 5.2.2 Summary of Estimated Costs, "FAR Case 2021-015: Disclosure of Greenhouse Gas Emissions and Climate-Related Financial Risk, Regulatory Impact Analysis https://downloads.regulations.gov/FAR-2021-0015-0004/content.pdf.

[44] $6.4 billion / [$3.9 billion / 10 years] = $6.4 billion / $0.39 billion = 16. The revised estimate would make the multiple more like 21.

out U.S. net emissions will reduce global temperatures by only 0.2 degrees Celsius over the next 80 years. And no federal procurement rule or practice is going to make a major difference. The analysis of "risk" contemplated by the proposed rules is likely to be arbitrary and largely without factual predicate. Paying consultants to guess based on proprietary models is not going to improve the situation.

The Proposing Agencies Lack the Climate Expertise to Craft and Enforce a Climate Rule

With the exception of NASA, the proposing agencies have no real expertise regarding climate science. Yet the proposition that climate change represents an enormous, extraordinary and special kind of risk that justifies imposing massive costs on federal contractors is the analytical predicate for the proposed rule.

The GSA, in particular, does not have the expertise or administrative ability to assess the veracity, or lack thereof, of any contractor-specific speculation regarding climate-related risk based on highly divergent and uncertain economic models projecting the economic impact of climate change. Climate models show massive variations in projections and show wide divergence in the ability of models to account for past warming and the degree of warming that is anthropogenic. Any procurement rule is going to have to address climate modeling issues and the proposing agencies will have to provide guidance about how to do so.

I am no climate science expert. However, nothing in the proposing release indicates that anyone at the proposing agencies possesses scientific expertise.

I do know a thing or two about modeling in an economics context. Models are typically highly dependent on a few relationships specified in their equations and parameters. A small number of assumptions about relationships and parameters drive results. For example, a model examining the impact of proposed tax policy might adopt a neoclassical view where the impact of the proposed tax changes on the user cost of capital and labor response are central (as specified in the equations) and the empirical parameters (as specified in the elasticities) governing investment and labor are key.[45] Seemingly small adjustments to elasticities (even though within the bounds established in the empirical literature) result is significantly different results. A Keynesian "macroeconomic" approach focusing on aggregate demand would yield dramatically different results, operate on different principles and lead to different policy recommendations. And so on.

Climate modeling is, in principle, no different. A small number of equations and empirical parameters drive results. Even the conventional governmental source -- the Intergovernmental Panel on Climate Change – shows massive variations in projections and shows the wide divergence in the ability of models to account for past warming[46] and the degree of warming that is

[45] Parker Sheppard and David Burton, "How the GOP Tax Bill Will Affect the Economy," *Daily Signal*, November 17, 2017 https://www.dailysignal.com/2017/11/17/gop-tax-bill-will-affect-economy/. In this case, we used the Hall-Jorgenson user cost of capital equation, the Cobb-Douglas production function and conventional price theoretic labor market modeling.
[46] See, for instance, Byron A. Steinman, Michael E. Mann and Sonya K. Miller, "Atlantic and Pacific Multidecadal Oscillations and Northern Hemisphere Temperatures," *Science*, February 27, 2015, Vol. 347, Issue 6225, pp 988-991, https://science.sciencemag.org/content/347/6225/988#aff-1 and Joseph Majkut, "Climbing the Staircase of

anthropogenic.[47] The worst-case concentration pathway, for example, assumes highly unlikely projections of coal use, high population growth, low economic growth and slow technological progress.[48] Using the worst-case scenario of these emissions concentration pathways as the business-as-usual scenario will mislead the private sector, policymakers, regulators and the public on the estimated climate impacts, risks and costs.[49]

Once you broaden your reading to include those that do not have a financial or political interest in climate change alarmism, it becomes clear that the variance and uncertainty in climate modeling is even higher than the IPCC report indicates.[50] It is clear that various models yield dramatically different results. Explaining the details is beyond the scope of this letter and my current competence. It is also beyond the ability of the GSA and the DoD (who will be tasked with administering the bulk of the contracts governed by the proposed rule).

<u>The Proposing Agencies should be as Skeptical of the Climate Lobby as They Would be of any Other Lobby</u>.

Politics should be stripped of its romance. The climate-industrial complex is a big business. Notwithstanding its daily protestations, the climate lobby acts in its own interest not the public

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Global Warming," Niskanen Center, July 27, 2016, https://www.niskanencenter.org/climbing-staircase-global-warming/ .

[47] *Climate Change 2014 Synthesis Report*, Intergovernmental Panel on Climate Change https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf See, for example, "The Representative Concentration Pathways," (p. 57); "Box 2.3, Models and Methods for Estimating Climate Change Risks, Vulnerability and Impacts," (pp. 58-59); "Table 2.1, Projected Change in Global Mean Surface Temperature and Global Mean Sea Level Rise for the Mid- and Late 21st Century, Relative to the 1986–2005 Period," (p. 60); "Cumulative Total Anthropogenic CO2 Emissions from 1870 (GtCO2)," (p. 63); "Table 2.2, "Cumulative Carbon Dioxide (CO2) Emission Consistent with Limiting Warming to Less than Stated Temperature Limits at Different Levels of Probability, Based on Different Lines of Evidence," (p. 64). The updated sixth version of the Synthesis Report is due for release in the Fall of 2022.

[48] Justin Ritchie and Hadi Dowlatabadi, "Why Do Climate Change Scenarios Return to Coal?" *Energy*, December 2017, Vol. 140, Part 1, pp 1276-1291, https://www.sciencedirect.com/science/article/abs/pii/S0360544217314597.

[49] Pielke, Roger and Ritchie, Justin, "Systemic Misuse of Scenarios in Climate Research and Assessment," April 21, 2020, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3581777.

[50] Steven E. Koonin, *Unsettled: What Climate Science Tells Us, What It Doesn't, and Why It Matters*, Chapter 4, "Many Muddled Models," (Dallas, TX: BenBella Books, 2021); Bjorn Lomborg, *False Alarm: How Climate Change Panic Costs Us Trillions, Hurts the Poor, and Fails to Fix the Planet*, (New York: Basic Books, 2020); Pat Michaels and Chip Knappenberger, *Lukewarming: The New Climate Science that Changes Everything*, (Washington: Cato Institute, 2016); Benjamin Zycher, Resident Scholar, American Enterprise Institute, Statement before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, Hearing on the "21st Century Economy: Protecting the Financial System from Risks Associated with Climate Change" March 18, 2021 https://www.banking.senate.gov/imo/media/doc/Zycher%20Testimony%203-18-21.pdf; Kevin Dayaratna, Ross McKitrick and David Kreutzer, "Empirically Constrained Climate Sensitivity and the Social Cost of Carbon," *Climate Change Economics*, Vol. 8, No. 2, 2017, pp. 1-12 https://econpapers.repec.org/article/wsiccexxx/v_3a08_3ay_3a2017_3ai_3a02_3an_3as2010007817500063.htm; Ross McKitrick and John Christy, "A Test of the Tropical 200- to 300-hPa Warming Rate in Climate Models," *Earth and Space Science*, September 2018, https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2018EA000401; Roger Pielke and Justin Ritchie, "How Climate Scenarios Lost Touch With Reality," *Issues in Science and Technology*, Summer 2021, https://issues.org/climate-change-scenarios-lost-touch-reality-pielke-ritchie/; Zeke Hausfather , Kate Marvel , Gavin A. Schmidt , John W. Nielsen-Gammon and Mark Zelinka, "Climate Simulations: Recognize the 'Hot Model' Problem," *Nature* https://www.nature.com/articles/d41586-022-01192-2.

interest. The SEC, for example, in its proposing release, Paperwork Reduction Act Table 4, estimates that $6.4 billion annually will flow to the economists, accountants, attorneys, compliance officers, consultants, "GHG emissions attestation providers" and NGOs that will live off of the SEC's proposed rule.[51] That is a lot of money, particularly from one rule. Once the rules being considered by other financial regulators are considered, and the proposed procurement rule, it will be a large multiple of that amount. European Union rules are a source of still more money. These actors are a potent lobby for adopting climate-related rules because they profit to the tune of billions of dollars from the adoption of these rules. The proposing agencies should be under no illusion about what is going on here. Financial and procurement regulation is a profit center for the climate lobby.

Federal Procurement Laws are a Poor Mechanism to Address Externalities

The economic justification for climate change regulations is that they are designed to address a negative externality. An externality is (1) a cost that is imposed on (negative externality) or (2) a benefit accorded to (positive externality) someone that is not a party to a transaction or not engaged in an action. There are countless positive and negative externalities all around us. Air pollution is a typical example of a negative externality.

There are many ways to address negative externalities. Improved property rights,[52] tort law,[53] regulation,[54] or a tax equal to the cost involuntarily imposed by the economic actor creating the externality on those "external" to the transaction.[55] A tax subsidy for politically favored interests with strong lobbies would be fairly far down the list of efficacious means of addressing the problem of negative externalities but there are many provisions in the Internal Revenue Code with this purpose. To achieve the desired effect, the policy designed to address the externality must be calibrated to accurately internalize the actual cost of the externality. This requires estimating the costs imposed by the externality and imposing costs in an equal and off-setting amount on the economic actor in question. Detailed scientific, cost and market information must be obtained to get this even close to right.[56]

Trying to achieve this result through federal procurement regulations is comparable to trying to score in basketball by bouncing the ball off the floor and then the backboard. It is theoretically possible, but there is a vanishingly small chance that it will achieve the desired result. And any

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[51] See PRA Table 4 at p. 21461 of "The Enhancement and Standardization of Climate-Related Disclosures for Investors," Securities and Exchange Board, Proposed Rule, Federal Register, Vol. 87, No. 69, April 11, 2022, pp. 21334-21473 https://www.govinfo.gov/content/pkg/FR-2022-04-11/pdf/2022-06342.pdf.

[52] In the case of air and water that are usually unowned resources, this is problematic. In other cases, this can be the solution, although transactions costs can impede a private solution. See Ronald H.Coase, "The Problem of Social Cost," *Journal of Law and Economics*, Vol. 3, October, 1960, pp. 1–44.

[53] The common law of nuisance and various more modern environmental torts.

[54] Most notably by the Environmental Protection Agency and state analogs.

[55] This is commonly known as a Pigouvian tax. See Arthur Cecil Pigou, *The Economics of Welfare* (1920 and various later editions); "Pigouvian Taxes," *The Economist*, August 19, 2017 https://www.economist.com/news/economics-brief/21726709-what-do-when-interests-individuals-and-society-do-not-coincide-fourth.

[56] See David R. Burton, "Post Tax Reform Evaluation of Recently Expired Tax Provisions," Testimony before The Committee on Ways and Means, Subcommittee on Tax Policy, United States House of Representatives, March 14, 2018 https://www.heritage.org/testimony/post-tax-reform-evaluation-recently-expired-tax-provisions.

team that tried that on a regular basis would lose. Similarly, federal procurement regulations are not the place to do environmental regulation.

The United States does have an Environmental Protection Agency. Its mission is to police externalities. It already requires GHG emissions reporting.[57] The EPA estimates that the required reporting under their rule covers 85–90% of all GHG emissions from over 8,000 facilities in the United States.[58] Policing externalities directly using an agency that has actual expertise on the subject matter is much more efficacious than the procurement bank shot approach.

Compelled Speech

The Supreme Court has applied strict scrutiny to content-based laws. Compelled speech is generally unconstitutional.[59] While businesses, thankfully,[60] have First Amendment rights,[61] they are more limited than those of natural persons.

The Supreme Court noted in *National Institute of Family and Life Advocates v. Becerra* (2018)[62] that it

> … has afforded less protection for professional speech in two circumstances—neither of which turned on the fact that professionals were speaking. First, our precedents have applied more deferential review to some laws that require professionals to disclose ***factual, noncontroversial information*** in their "commercial speech. Second, under our precedents, States may regulate professional conduct, even though that conduct incidentally involves speech. (emphasis added) (citations omitted) [63]

The court continued:

> Outside of the two contexts discussed above — disclosures under Zauderer and professional conduct — this Court's precedents have long protected the First

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[57] Greenhouse Gas Reporting Program (GHGRP) https://www.epa.gov/ghgreporting/ghgrp-reported-data.
[58] Proposing release at p. 21414.
[59] *West Virginia State Board of Education v. Barnette*, 319 U.S. 624 (1943) ("If there is any fixed star in our constitutional constellation, it is that no official, high or petty, can prescribe what shall be orthodox in politics, nationalism, religion, or other matters of opinion, or force citizens to confess by word or act their faith therein. If there are any circumstances which permit an exception, they do not now occur to us. We think the action of the local authorities in compelling the flag salute and pledge transcends constitutional limitations on their power, and invades the sphere of intellect and spirit which it is the purpose of the First Amendment to our Constitution to reserve from all official control.") 319 U. S. 624, 642 (1943).
[60] Since most of media are corporately owned, holding otherwise would eviscerate the First Amendment.
[61] See, e.g., *Citizens United v. Federal Election Board*, 558 U.S. 310 (2010) ("The Court has recognized that First Amendment protection extends to corporations."). See also the many cases cited therein.
[62] *National Institute of Family and Life Advocates v. Becerra*, 585 U.S. ___ (2018), 138 S. Ct. 2361; 201 L. Ed. 2d 835. See slip opinion at pp. 8-9 https://www.supremecourt.gov/opinions/17pdf/16-1140_5368.pdf.
[63] Citations omitted to *Zauderer v. Office of Disciplinary Counsel of Supreme Court of Ohio*, 471 U. S. 626, 651 (1985); *Milavetz, Gallop & Milavetz, P. A. v. United States*, 559 U. S. 229, 250 (2010); *Ohralik v. Ohio State Bar Assn*., 436 U. S. 447, 455–456 (1978), *id*., at 456; *Planned Parenthood of Southeastern Pa. v. Casey*, 505 U. S. 833, 884 (1992) (opinion of O'Connor, KENNEDY, and Souter, JJ.)."

> Amendment rights of professionals. … Professionals might have a host of good-faith disagreements, both with each other and with the government, on many topics in their respective fields.[64]

For example, the DC Court of Appeals recently explicated what the term "controversial" means in the context of ruling the SEC conflict minerals rule unconstitutional. That analysis is on point and, in fact, directly mentions the question of global warming disclosures.

> One clue is that "uncontroversial," as a legal test, must mean something different than "purely factual." Hence, the statement in AMI we just quoted, describing "controversial in the sense that [the compelled speech] communicates a message that is controversial for some reason other than [a] dispute about simple factual accuracy." AMI, 760 F.3d at 27. Perhaps the distinction is between fact and opinion. But that line is often blurred, and it is far from clear that all opinions are controversial. Is Einstein's General Theory of Relativity fact or opinion, and should it be regarded as controversial? If the government required labels on all internal combustion engines stating that "USE OF THIS PRODUCT CONTRIBUTES TO GLOBAL WARMING" would that be fact or opinion? It is easy to convert many statements of opinion into assertions of fact simply by removing the words "in my opinion" or removing "in the opinion of many scientists" or removing "in the opinion of many experts."[65] (Capital letter emphasis in original)
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> It [the conflict minerals rule] requires an issuer to tell consumers that its products are ethically tainted, even if they only indirectly finance armed groups. An issuer, including an issuer who condemns the atrocities of the Congo war in the strongest terms, may disagree with that assessment of its moral responsibility. And it may convey that `message' through `silence.' See Hurley, 515 U.S. at 573, 115 S.Ct. 2338. By compelling an issuer to confess blood on its hands, the statute interferes with that exercise of the freedom of speech under the First Amendment.[66]

The proposing agencies must avoid imposing requirements that constitute impermissible compelled speech. The compelled climate disclosures under the rule may well be held to do so.

<u>Energy Independence</u>

The Biden administration has taken a series of steps to impede conventional fuel production in the United States. We should be removing regulatory impediments to energy independence not creating them. To the extent that the proposed rule may make domestic energy production and distribution less attractive and more expensive by discouraging involvement in conventional energy, it would be contrary to the interests of the American people.

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[64] *National Institute of Family and Life Advocates v. Becerra*, 585 U.S. ___ (2018). See slip opinion at pp. 11-12, 13 https://www.supremecourt.gov/opinions/17pdf/16-1140_5368.pdf.
[65] *National Association of Manufacturers v. S.E.C.*, 800 F.3d 518, 528 (D.C. Cir., 2015).
[66] Ibid. at p. 529.

The Social Costs of ESG

The broader social costs associated with ESG requirements (including climate change disclosure requirements, risk analysis, capital allocation requirements and so on) can, in principle, be quantified. This section provides an analytical framework that may be useful in analyzing the social welfare costs of ESG requirements.

To the extent ESG objectives are not pursued by businesses for the purpose of making a profit, $R > R_{ESG/CSR}$, where R is the rate of return on investment in the absence of ESG, CSR, sustainability requirements, diversity requirements, or stakeholder theory implementation, and $R_{ESG/CSR}$ is the rate of return after implementation of those requirements. The difference, $R - R_{ESG/CSR}$, is economically analogous to a tax. It is a reduction in return due to the pursuit of ESG objectives. Thus, $R - R_{ESG/CSR} = Tax_{ESG/CSR}$. This means that various techniques used in public finance to analyze the social welfare impact of taxes may be used to quantitatively analyze the social welfare cost of these provisions (i.e., $Tax_{ESG/CSR}$).

A tax has an excess burden or deadweight loss that can be calculated.[67] By introducing a wedge ($Tax_{ESG/CSR}$) between, in this case, the gross return and the net return, ESG/CSR reduces the size of the capital market and therefore output and employment. In a well-functioning market, the price of a capital asset should be equal to the present value of the expected future income stream generated by the asset net of taxes and depreciation.[68] Introducing a new tax (in this case $Tax_{ESG/CSR}$) would reduce the expected future income stream, and therefore, the price of the asset. It would also cause investment to flow out of the affected sector or jurisdiction.

Who bears the actual economic burden of the corporate income tax is an open question.[69] The analysis of who bears the burden of $Tax_{ESG/CSR}$ would be the same. One thing is certain: It cannot be corporations. A corporation is a legal fiction, and legal fictions do not pay taxes—people pay taxes. The corporate tax could be borne by corporate shareholders in the form of lower returns;[70]

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[67] Arnold C. Harberger, "The Incidence of the Corporation Income Tax," *Journal of Political Economy* (June 1962), pp. 215–240; Alan J. Auerbach and James R. Hines, "Taxation and Economic Efficiency," in Martin Feldstein and A. J. Auerbach, eds., *Handbook of Public Economics* (Amsterdam: North Holland, 2002); and John Creedy, "The Excess Burden of Taxation and Why It (Approximately) Quadruples When the Tax Rate Doubles," New Zealand Treasury *Working Paper* No. 03/29, December 2003, https://treasury.govt.nz/sites/default/files/2007-10/twp03-29.pdf. See also, for example, N. Gregory Mankiw, *Principles of Economics*, 4th ed. (Boston: Cengage Learning, 2006), chapter 8 (or many other textbooks on price theory, microeconomics, or principles of economics).

[68] See Robert E. Hall and Dale Jorgenson, "Tax Policy and Investment Behavior," *American Economic Review*, Vol. 57, No. 3 (June 1967), pp. 391–414. This section covers the basic user cost of capital analysis with taxes. See also Dale W. Jorgenson, *Investment: Capital Theory and Investment Behavior* (Cambridge, MA: MIT Press, 1996), and John Creedy and Norman Gemmell, "Taxation and the User Cost of Capital: An Introduction," New Zealand Treasury *Working Paper* No. 04/2015, March 2015, https://www.wgtn.ac.nz/cpf/publications/pdfs/2015-pubs/WP04_2015_Taxation-and-User-Cost.pdf.

[69] In the economics literature, this question is usually phrased as, "What is the incidence of the corporate income tax?"

[70] Government estimators are among the few who cling to the view that shareholders bear most of the burden. Joint Committee on Taxation, "Modeling the Distribution of Taxes on Business Income," JCX–14–13, October 16, 2013, https://www.jct.gov/publications.html?func=download&id=4528&chk=4528&no_html=1 (25 percent labor), and Julie Anne Cronin et al., "Distributing the Corporate Income Tax: Revised U.S. Treasury Methodology," *National Tax Journal*, March 2013, https://www.ntanet.org/NTJ/66/1/ntj-v66n01p239-62-distributing-corporate-income-tax.pdf (18 percent labor).

owners of all capital (again in the form of lower returns);[71] corporate customers in the form of higher prices;[72] or employees (in the form of lower wages).[73] It is, almost certainly, some combination of these.[74] The economics profession has changed its thinking on this issue several times over the past four decades, but the latest —and highly plausible —consensus is that workers probably bear *more than half* of the burden of the corporate income tax because capital is highly mobile.[75] Labor's share of the corporate tax burden is potentially as high as three-quarters.[76] Shareholders (investors) probably bear most of the remainder.[77] Initially (i.e., in the short run), the impact on shareholder returns would be greater. Adjustments take time. In the long run, ESG requirements ($Tax_{ESG/CSR}$) would have a disproportionately negative impact on labor due to capital factor mobility.

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[71]The non-corporate sector can be affected because competition will eventually cause wages, prices, and after-tax returns in the corporate *and* non-corporate sectors to be the same. For a more detailed explanation, see Arnold C. Harberger, "The Incidence of the Corporation Income Tax," *Journal of Political Economy*, Vol. 70, No. 3 (June 1962), pp. 215–240.

[72]The focus of the economics profession to date has been almost exclusively the impact on capital and labor rather than customers.

[73]Arnold C. Harberger, "The ABCs of Corporation Tax Incidence: Insights into the Open-Economy Case," in *Tax Policy and Economic Growth* (Washington, DC: American Council for Capital Formation, 1995); Arnold C. Harberger, "The Incidence of the Corporation Income Tax Revisited," *National Tax Journal*, Vol. 61, No. 2 (June 2008), pp. 303–312, http://www.ntanet.org/NTJ/61/2/ntj-v61n02p303-12-incidence-corporation-income-tax.pdf; Matthew H. Jensen and Aparna Mathur, "Corporate Tax Burden on Labor: Theory and Empirical Evidence," *Tax Notes*, June 6, 2011, https://www.aei.org/wp-content/uploads/2011/06/Tax-Notes-Mathur-Jensen-June-2011.pdf; Kevin A. Hassett and Aparna Mathur, "A Spatial Model of Corporate Tax Incidence," American Enterprise Institute, December 1, 2010, https://www.aei.org/wp-content/uploads/2011/10/-a-spatial-model-of-corporate-tax-incidence_105326418078.pdf; Robert Carroll, "The Corporate Income Tax and Workers' Wages: New Evidence from the 50 States," Tax Foundation *Special Report* No. 169, August 3, 2009, https://taxfoundation.org/corporate-income-tax-and-workers-wages-new-evidence-50-states/; Desai Mihir, Fritz Foley, and James Hines, "Labor and Capital Shares of the Corporate Tax Burden: International Evidence," December 2007, http://piketty.pse.ens.fr/files/Desaietal2007.pdf; and "Why Do Workers Bear a Significant Share of the Corporate Income Tax?" in Jason J. Fichtner and Jacob M. Feldman, "The Hidden Cost of Federal Tax Policy," 2015, https://www.mercatus.org/system/files/Fichtner-Hidden-Cost-ch4-web.pdf. For a contrary view, see Kimberly A. Clausing, "In Search of Corporate Tax Incidence," *Tax Law Review*, Vol. 65, No. 3 (2012), pp. 433–472, http://ssrn.com/abstract=1974217.

[74]It requires extreme, implausible assumptions about elasticities of demand for, or supply of, factors for this not to be the case. Alan J. Auerbach, "Who Bears the Corporate Tax? A Review of What We Know," National Bureau of Economic Research *Working Paper* No. 11686, October 2005, http://www.nber.org/papers/w11686.pdf; William M. Gentry, "A Review of the Evidence on the Incidence of the Corporate Income Tax," Department of the Treasury, Office of Tax Analysis, *OTA Paper* No. 101, December 2007, https://www.treasury.gov/resource-center/tax-policy/tax-analysis/Documents/WP-101.pdf; and Stephen J. Entin, "Tax Incidence, Tax Burden, and Tax Shifting: Who Really Pays The Tax?" Heritage Foundation *Center for Data Analysis Report* No. 04–12, November 5, 2004, http://s3.amazonaws.com/thf_media/2004/pdf/cda04-12.pdf.

[75]In a competitive market, capital will flow from jurisdictions with a relatively low expected after-tax return to jurisdictions with a relatively high expected after-tax return until the expected after-tax returns are equal. Social and legal barriers reduce labor mobility relative to capital mobility. Gentry, "A Review of the Evidence on the Incidence of the Corporate Income Tax"; William C. Randolph, "International Burdens of the Corporate Income Tax," Congressional Budget Office *Working Paper* 2006–09, August 2006, https://cbo.gov/sites/default/files/cbofiles/ftpdocs/75xx/doc7503/2006-09.pdf; and R. Alison Felix, "Passing the Burden: Corporate Tax Incidence in Open Economies," Federal Reserve Bank of Kansas City, October 2007, https://www.kansascityfed.org/Publicat/RegionalRWP/RRWP07-01.pdf.

[76]Ibid.

[77]As opposed to non-corporate capital and customers.

Sincerely,

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