The Unconsidered Costs of the SEC's Climate Disclosure Rule

Matthew Winden, Ph.D.[1]

Chair and Associate Professor of Economics
University of Wisconsin - Whitewater

[1] Department of Economics, College of Business and Economics, University of Wisconsin-Whitewater, Hyland Hall 4304C, 800 W. Main St, Whitewater, WI 53190; [redacted] (262) 472-5579.

The Securities Exchange Act of 1934 created the Securities and Exchange Commission and established that its purpose was to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation. To accomplish these missions, the SEC tries to ensure that companies offering securities for sale to the public tell the truth about their business, the securities they are selling, and the risks involved in investing in those securities. One way it does so is by requiring public companies to regularly disclose significant financial and other pertinent business information so that investors can make informed decisions.[2]

These disclosure requirements have historically focused on a company's financial condition, and include operating results, management compensation, and other areas of their business, including management's perceived opportunities or threats to the company's operation. This framework is generally flexible, because it applies to all publicly traded companies. This flexibility allows management to determine the materiality of non-financial information to its business operations that would necessitate disclosure without forcing them to also provide information that might be irrelevant to shareholders and costly to obtain.

However, the SEC recently proposed a fundamental shift in its disclosure rules by specifically requiring companies to outline the impact that climate change will have on business and that they delineate and report this risk specifically. This new disclosure rule will likely lead to substantial economy-wide costs that I believe will exceed the proposed benefits to investors. Although the rule may be well-intentioned, it seems unlikely to pass an appropriate cost-benefit test, resulting in substantial costs and reductions to social welfare without improving investor or environmental outcomes.

The Climate Disclosure Rule

Efforts to create new and distinct reporting requirements for this disclosure began early in the Biden Administration with the creation of a Climate and Environmental, Social and Governance (ESG) Task Force within the SEC, and concomitant announcement that it would pursue creating a new rule requiring public firms disclose their greenhouse gas emissions as well as their economic exposure to climate change. A year later it introduced its proposed rule.

The SEC's proposed rule would require companies to disclose both direct and transition related climate change risks to their business. Direct risks are impacts climate change could have on business operations, as well as consumer preferences. For example, this includes increased risks to company infrastructure from frequency of wildfires, floods and other weather related disasters, as well as changes in consumer purchasing patterns, say toward electric vehicles. Transition risks are impacts to companies as governments around the world adopt policies aimed at regulating

[2] https://www.sec.gov/cj

greenhouse gas emissions. For example, businesses with significant investments in or reliance upon fossil fuels could wind up with stranded assets or higher costs as policies are enacted which price carbon.

A substantial component of the rule is therefore to require reporting of actual carbon emissions of companies, as the size of carbon emissions theoretically embodies both the direct and transition risks companies face. Disclosure of carbon emissions required within the rule are delineated into 3 categories: Scope 1 refers to emissions from direct operations of a company; Scope 2 refers to emissions from purchased electricity and power by the company; and Scope 3 refers to emissions from indirect sources (meaning upstream suppliers to the company and downstream customers of the company's product).

The proposed disclosure rule has coincided with increased interest by both institutional and retail investors in ESG-related portfolios. As such, the SEC's stated rationale for the disclosure is to ensure standardized and comprehensive reporting related to climate change risk to improve investor comparisons across companies. The benefits of this disclosure are therefore that potential climate change risks companies face can more easily be compared, and as a result investment decisions incorporating these risks can be better made by institutional and retail investors.

However, there are reasons to believe the information benefits accruing to investors may be small. Companies which believe they have a competitive advantage in their ESG performance and would like to attract capital on that basis, already voluntarily report and disclose ESG metrics, as well as future plans of action to combat climate change. Around 20% of current public companies are doing this. These companies are therefore sending a "climate-positive" signal to financial markets and investors who, for financial or social motives, can then support these companies. By direct contrast, companies that do not have this information provided are sending either a "climate-neutral" or "climate-negative" signal. Again, investors are able to respond accordingly. As such, these disclosures add little new information to the market and therefore the benefits to investors of the disclosures are likely to be small. This is especially true given that since 2010, companies have already been required to provide information in their annual reports regarding climate change related risk if it is material to the business. If SEC regulators believe that firms are underreporting climate related risks under current disclosure requirements, additional enforcement of existing regulations would be more appropriate than the implementation of new disclosure requirements with substantial associated costs.

The SEC's estimate of the compliance costs of the proposed GHG disclosure rule is substantial, and its estimate appears to be below the true compliance costs. The primary reason for the discrepancy is that the SEC only focused on direct compliance costs of firms and ignored the costs that would accrue economy-wide, including reductions in aggregate economic activity indirectly stemming from compliance, reductions in domestic business competitiveness,

reductions in retail investor returns, and market inefficiency from a resulting misallocation of resources.

Compliance Costs

The SEC estimates companies will incur incremental direct costs of $6.37 billion for compliance with this new rule, a figure fully 165% of current SEC compliance costs of $3.85 billion – this will more than double current SEC regulatory compliance costs (Release Nos. 33-11042; 34-94478; File No. S7-10-22, Pages 459-460, PRA Table 4).[3] Additionally, my analysis suggests the SEC's estimate of compliance costs understates the true, overall compliance costs.

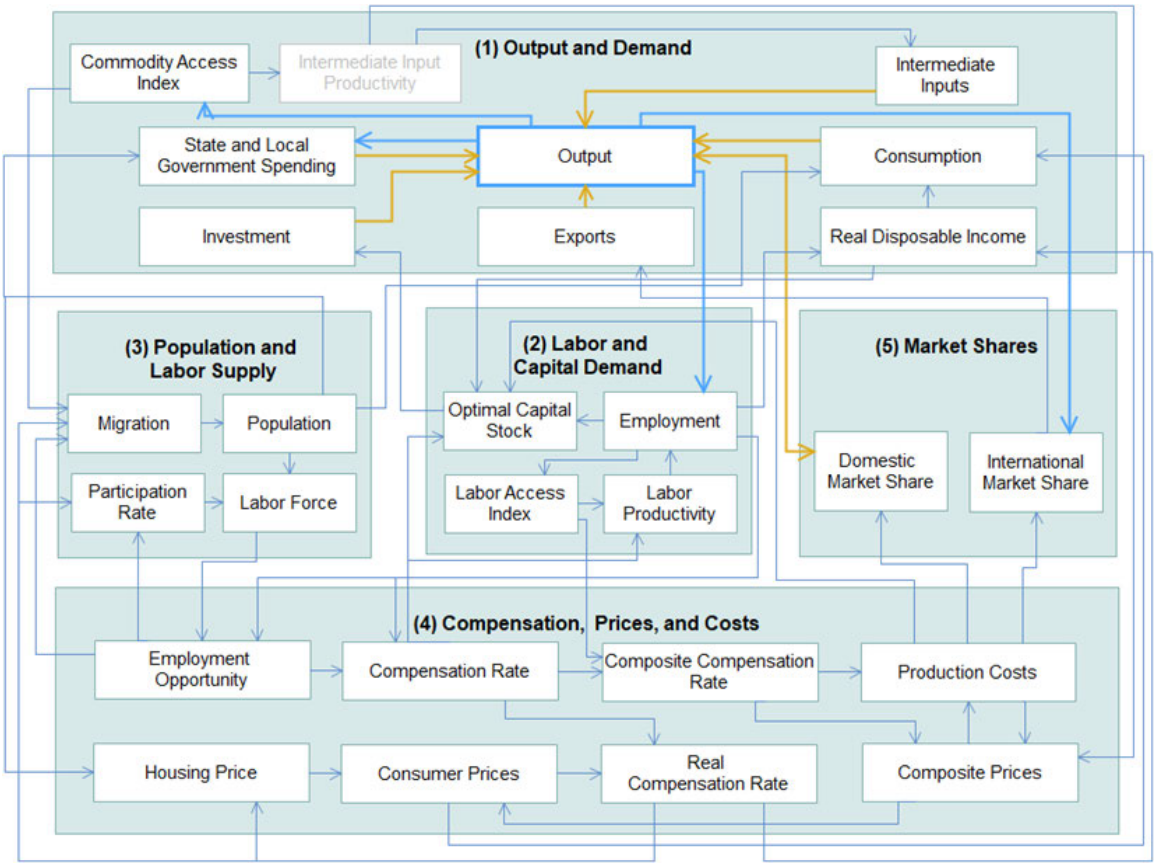
The higher regulatory costs will have a negative impact on the U.S. economy. To determine the potential impacts on U.S. economic activity, the Regional Economic Models, Inc. ("REMI") model of the U.S. economy was employed. REMI is an economic and demographic model in wide use throughout federal agencies, individual states, academic institutions, and consulting firms. REMI is used to model the impact policy changes have on the economy.

REMI is a dynamic, computable general equilibrium (CGE) model of the regional components of the U.S. economy and the U.S. economy overall. REMI represents the relationships driving the U.S. economy through a series of five "blocks" as illustrated in Figure 1. Block 1 describes aggregate demand for consumer goods and services, investment, government, and net international trade. Block 2 describes the labor and capital demand of companies when making decisions about hiring and investment. Block 3 models demographics and labor supply. Block 4 describes the interaction of firms and households on various labor and product markets, and Block 5 models the competitiveness of the U.S. economy relative to other countries.

REMI requires the higher compliance costs to be entered by calendar year, economic sector, and firm size. The SEC provided only limited guidance on these factors for the disclosure rule, so data from the *Wall Street Journal* describing the basic characteristics of firms traded on U.S. public exchanges was used. These included their annual sales, economic sector, and their number of employees. This information was used to distribute the compliance costs across the economy. Because the SEC rule will not take full effect until 2025, the compliance costs are phased in with 25% of the total in 2022, 50% of the total in 2023, 75% of the total in 2024, and 100% in 2025 and subsequent years as firms increase capacity to comply with the rule.

[3] https://www.sec.gov/rules/proposed/2022/33-11042.pdf

Figure 1: The REMI Model



The SEC projects in the years after 2025 that the cost of compliance may decrease when the companies "learn by doing" – that is, they will gain experience with climate-related disclosures, automate more reporting methods, and thereby reduce their costs. At the same time, however, the U.S. economy will continue to grow, and more companies will enter U.S. public exchanges and subject themselves to these regulations. These effects are modeled as offsetting each other and therefore, SEC projected costs of $6.37 billion per year are modeled in 2025 and later years.

The SEC estimate of $6.37 billion per year is used as the economy-wide cost and entered as a "production cost" in REMI. Production cost in the model is a flexible variable used to show the impacts of several categories of higher or lower costs to firms. Examples might include regulatory costs (such as with this analysis), taxes, energy prices, wages and salaries, or other costs of operation. Production costs affect economic sectors differently depending on their relationship with the government, with customers, with workers, with other sectors, and with international markets. Hence, the incidence of these costs can fall on different groups depending on the market power of the companies directly bearing the costs:

- **Suppliers** – Higher production costs could lead businesses to attempt to "squeeze" their intermediate suppliers of goods and services. For instance, a large retailer with market power could attempt to renegotiate its supplier contracts.

- **Customers** – Companies could attempt to pass their higher costs along to customers in the form of higher prices (if they have sufficient influence over market prices). An example of this might include a services firm with high margins occupying a niche with little competition because of a high degree of market segmentation.

- **Employees** – Companies could attempt to reduce the pay (or decrease the pay raises) of employees to help cover the higher costs. The size of this impact should depend on the relative strength of the negotiating leverage for employers and workers.

- **International Markets** – In Block 5, REMI models the effect that higher production costs have on U.S. competitiveness compared to its trading partners. This could include a reduction in U.S. exports when U.S. exporters become less competitive relative to the options in other nations or increased U.S. imports when U.S. producers are no longer as competitive on domestic markets because of their costs – leaving them vulnerable to being undercut by imports. Either one of these situations reduces U.S. economic output because of reduced exports or an increase in imports.

- **Owners** – If a company fails to pass its higher costs onto suppliers, customers, or workers, then firm profitability will be negatively impacted. This has secondary impacts on the economy by reducing the income of firm owners, such as reduced returns for various institutional investors like pension funds eventually filtering their way through to the dividends and interest paid to individual investors and families.

In many REMI-based studies, higher production costs could have some offsetting and positive benefits, such as higher taxes supporting public investments in education or transportation and higher labor costs supporting higher consumer expenditures. One of the main applications of REMI and one of its best practices is seeing how such changes net out over the economy as-a-whole.

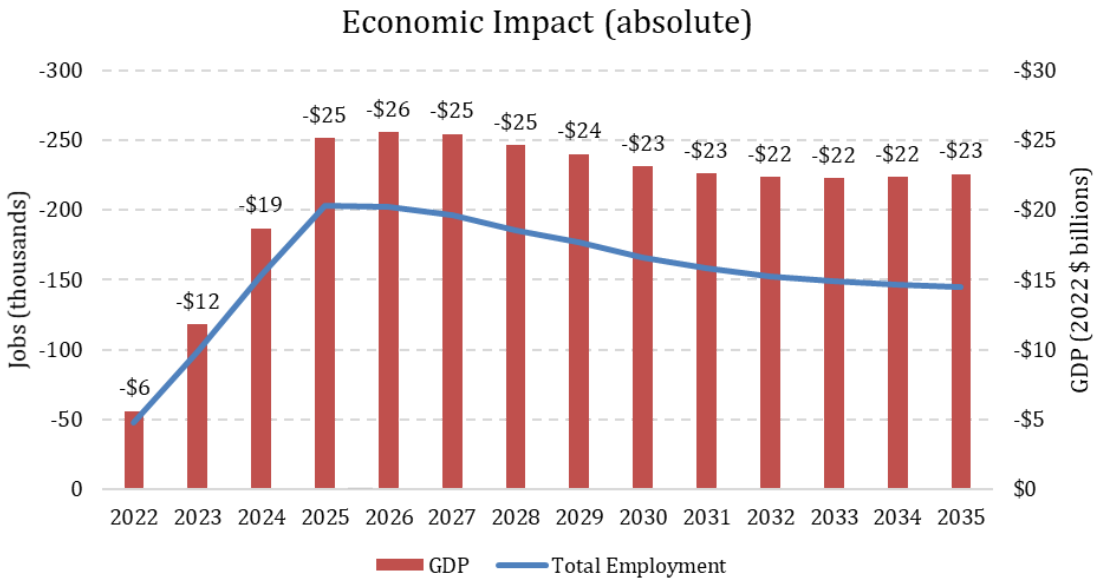
Here, the increased regulatory disclosure effectively acts as a "tax" on companies only without any public revenues to show for it. The tax is socially inefficient because it does not generate revenues, improve capital allocation, improve productivity, increase the supply of factors of production such as land or labor, or reduce a negative externality. In this case, there is likely no offsetting the regulatory costs with other quantifiable economic improvements.

Figures 2-4 show the impact of the SEC's disclosure rule as modeled in REMI. These include the impacts on the U.S. economy as measured by BEA employment and gross domestic product

(GDP) in absolute terms and relative to the size of the U.S. economy overall. This also includes the distribution of the macroeconomic impacts across economic sectors.

Figure 2 shows that, based on the input specifications, the full weight and scope of the impacts will phase in between 2022 and 2025 as companies ramp-up to full compliance. By the late 2020s, the enduring economic impact will be approximately $25 billion in U.S. GDP foregone each year and 200,000 fewer jobs when comparing disclosure rule implementation to the baseline scenario of no new disclosure requirement. For context, the rate of job creation during the long expansion between 2009 and 2020 was approximately 200,000 jobs per month. While the U.S. economy is currently experiencing inflation and other impacts related to the aftereffects of the COVID-19 pandemic, the 200,000 fewer jobs result translates to the U.S. economy missing a month of job creation annually under normal growth.

Figure 2: Estimated GDP and Job Losses (Absolute Values)

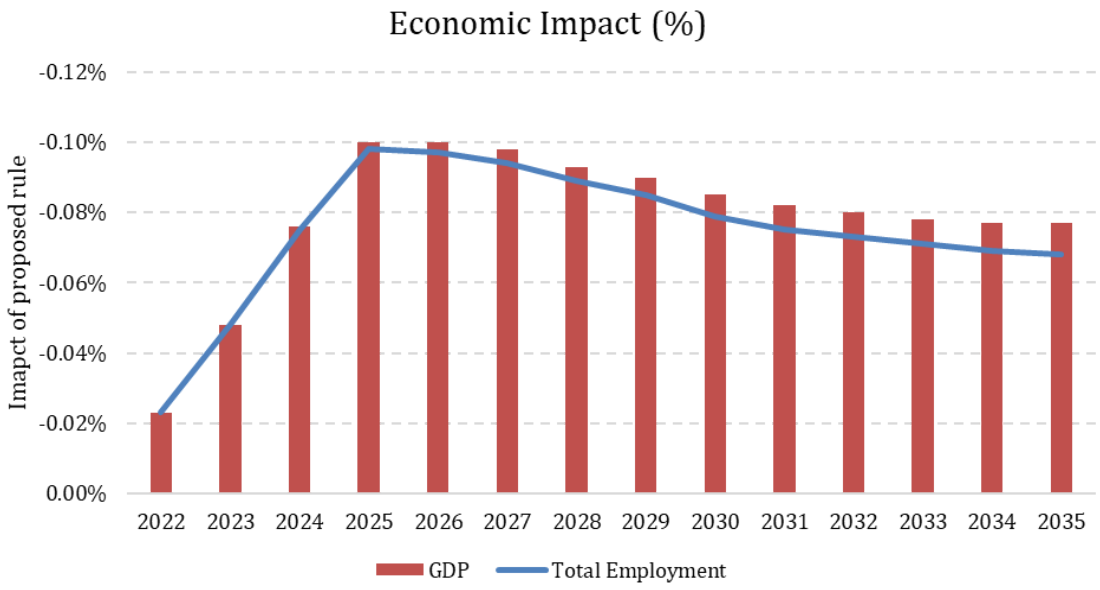


To further demonstrate the impacts, the proportional economic impact – as measured by the absolute economic impact divided by the size of the underlying economy – is shown in Figure 3 and is commensurate with the jobs and GDP impact. By 2025, the impact will be approximately 0.1% of U.S. GDP and U.S. jobs. While this share may appear small, it must be compared to the extensive size of the U.S. economy. GDP is likely to eclipse $24 trillion for the first time in 2022,[4] the U.S. economy employs 151.7 million workers as of May 2022,[5] and the U.S. has

[4] https://fred.stlouisfed.org/series/GDP
[5] https://fred.stlouisfed.org/series/PAYEMS

approximately 332.8 million residents.[6] Against this base, outwardly small-seeming changes are significant, including the SEC disclosure rules under consideration here.

Figure 3: Estimated GDP and Job Losses (Percentage Values)



The final figure describes the impact in terms of the economic sectors most and least affected by the proposed rule. The sectors are aggregations of the North American Industry Classification System (NAICS) codes, which are defined by the U.S. Census Bureau.[7] The list of economic sectors in REMI spans the entire breadth of the U.S. economy and includes agriculture and natural resources, utilities, construction, various types of manufacturers, wholesalers, retailers, transportation and logistics, information, media, finance, insurance, and real estate, professional services, business services, and many types of personal services.

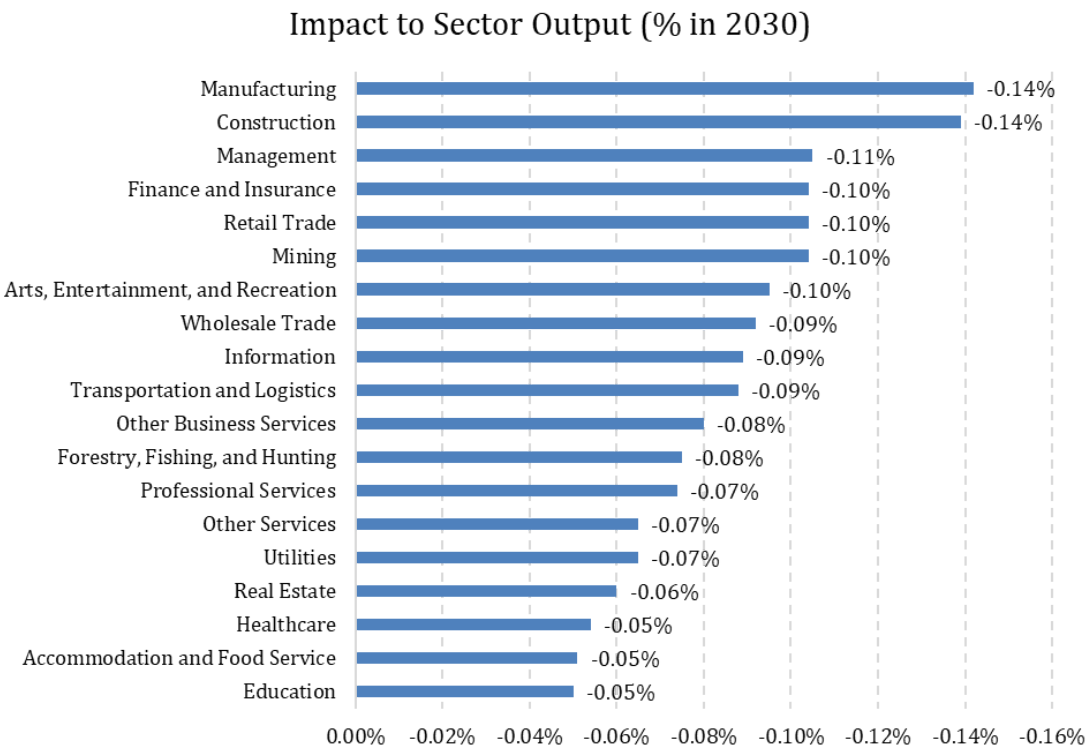
Figure 4 demonstrates how the impacts will be the most severe in capital-intensive sectors (e.g., manufacturers) and sectors with a high relative number of publicly traded companies (e.g., large industrial firms and the finance sector). Some of the other sectors most affected are ones sensitive to economic changes, such as construction and real estate. The construction sector relies on other sectors to make real, tangible, and physical investments in the U.S. economy to thrive, meaning the impact to manufacturing hurts construction, as well.

While all sectors will be affected, some will be affected less than others. The sectors with the most isolation from the SEC rule include the ones most dependent on consumer spending (e.g.,

[6] https://www.census.gov/popclock/
[7] https://www.census.gov/naics/

other services, real estate, healthcare, and accommodation and food services) and/or from the expenditures of the federal government or state/local governments to operate (e.g., healthcare and education). This will somewhat insulate them from the impacts.

Figure 4: Sectoral Impacts Across the US Economy



Overall, the proposed SEC rule will be contractionary for the U.S. economy. It will cost the U.S. roughly a month's worth of normal job growth between now and 2024, continuing annually from 2025 onward in perpetuity, and will mostly affect the high-productivity sectors most needed to compete in the global economy.

Business Anti-Competitiveness

The imposition of the increased compliance costs, as well as their associated ripple effects throughout the supply chain, also raises the cost of doing business for US firms. As a result of the disclosure requirement and the recommendations provided in it by the SEC, firms may seek to avoid and mitigate carbon intensive activities, further raising domestic costs beyond just those

of compliance. Ostensibly this would be a good thing and help to combat climate change by lowering domestic greenhouse gas emissions; however, without a corresponding decline in the *demand* for carbon intensive products or activities, satisfaction of that demand will simply shift. Carbon intensive products will still be produced either privately or internationally and then imported to the US. Under private provision, domestic emissions reductions won't happen. If supplied by foreign firms, carbon emissions will simply be displaced internationally. This creates a competitive disadvantage for public domestic producers, because they face higher costs stemming from the disclosure requirement while private and international firms' cost structures are unchanged. Because there isn't a corresponding change in consumers' preferences for carbon intensive products or activities, as well as implementation of a corresponding border adjustment tax applied to foreign firms who import carbon intensive products, private or foreign companies will simply fill the gap and supply carbon intensive products at cheaper prices than public domestic producers. Worse, there will likely be little to no net-change in emissions (and therefore environmental improvement) globally as carbon intensive production shifts overseas. Given that greenhouse gas emissions are a global pollutant, simply shifting their emission from the U.S. internationally ultimately doesn't lead to improvements in climate change outcomes. It does however lead to reductions in production and employment domestically.

In order to be effective, demand for carbon intensive products and activities would also need to be impacted. This cannot be done through an SEC disclosure rule and would require comprehensive legislation regulating or pricing carbon emissions. This would then apply to not only domestic public companies, but also domestic private companies (applying equally to all domestic firms would not create any additional incentive for public firms to simply go private to avoid disclosure or climate change action/scrutiny). In order to prevent simply shifting carbon intensive activities overseas, part of that comprehensive legislation would require a border tax on products being imported into the US based on the embodied carbon content. Such a border tax would protect domestic industries engaged in carbon reduction (which as stated above would likely raise their costs of production), by ensuring they were competing on a level playing field with foreign firms still engaged in carbon intensive production practices which are cheaper because those firms had not yet internalized climate change damages in their cost structure. The border adjustment tax would raise the price of foreign goods and therefore disincentivize simply moving carbon intensive production overseas.

Retail Investor Losses

Compliance actions raise costs on firms and these cost increases incentivize firms to either stay private (if they are already private) or to go private (if they are currently public). The reason for this is that privately held firms are not subject to the same disclosure requirements as public firms and therefore the compliance costs can be avoided. Increasing firm disclosure costs by a

projected 165% will cause a substantial impact on most firms. For many companies, avoiding these disclosure costs may lead them to seek capital in alternative, non-public markets.

Unfortunately, this incentive then contravenes part of the benefits which the rule aims to impart to investors by driving otherwise profitable and financially sound firms out of the public markets. Investors are hurt by this because this reduces investment options for retail investors and deprives them of potentially lucrative returns. Some of the largest market returns ultimately accrue from firms entering the public market to secure funding for additional growth. Retail investors provide the capital to these firms and then, when the firm grows successfully, are rewarded with a return on their investment. If these firms forgo public funding and seek private funding instead (which most retail investors do not have access to), retail investors miss out on the substantial growth and return produced by these firms (lowering the overall returns available to retail investors).

For example, an analysis by Marketwatch found that for the 3 years preceding June 2021, 952 IPOs occurred on US or Canadian stock exchanges (blank-check and special-purpose acquisition companies were excluded).[8] The top 20 IPOs generated cumulative returns from when they were offered through June 2021 between 569% (for Dye & Durham Ltd.) and 1,477% (for BioNTech SE). These 20 firms are clearly not a random sample of the entire set of 952 IPOs; however, if even 1 of these firms would have chosen to stay private instead of go public because they faced substantially increased SEC compliance costs, retail investors would have lost out on the tremendous growth opportunity they represented. This is certainly a possibility, as one of the primary drivers for firms going private is to avoid the significant cost imposed by compliance with SEC regulations.

Market Inefficiency from Misallocation

By changing disclosure requirements, the rule as promulgated impacts capital allocation decisions. By singling out climate change risks separately from all others, it draws special attention to these types of risks as opposed to others. As is often stated, what gets measured gets managed and in this case it means additional scrutiny will likely be paid to company climate change emissions. This in and of itself is not necessarily a bad thing. However, the rule also suggests prescriptive actions companies should take to address climate change. Company's therefore must not only state their climate change risks, but also their plan to address this risk. Implementing suggestions provided by the SEC displaces the judgment of highly efficient capital markets in choosing "winners" and "losers" in the marketplace with the imposed preferences of government regulators. Worse, the prescriptive nature is necessarily limited by current technologies and alternatives. As companies create plans to address this risk following the types

[8] www.marketwatch.com/story/the-20-best-performing-ipos-of-the-past-three-years-have-returned-up-to-1-477-11624547503

of suggestions delineated within the rule, capital is directed more prominently to known, existing technologies and may be misallocated away from less proven or nascent alternatives. This reduces the efficiency of markets and imposes real costs on the economy, potentially delaying or outright preventing deployment of better technological alternatives to combat climate change which markets left alone may support.

Adopting a particular technology or system has been called "lock-in," in which a specific course of action is taken within the market, and it becomes difficult to switch to an alternative path.[9][10] Lock-in implies that, once a particular technological path is taken, the barriers to switching may be prohibitive. This is especially problematic if it would have been in society's overall interest to adopt a different technology or system. It also raises the question of whether policy interventions — involving central government suggestions or requirements — might create undesirable cases of this lock-in phenomenon by guiding technological paths in directions inferior to those that would be taken by the free market. This lock-in can be persistent and severe when costs associated with switching to a new technology or system exist, which is likely to be the case for technological solutions to climate change. The presence of these factors has the potential to lead to a market equilibrium in which a socially suboptimal standard or technology ends up being employed. This results from the fact that companies and markets no longer have the same flexibility in finding the most cost efficient solution to a given environmental problem.

Conclusion

Although the SEC disclosure rule is not a direct command-and-control policy, it may ultimately mimic one because of the prescriptive suggestions provided. While not strictly required to adhere to the suggestions, companies will be more likely to follow the guidance in the rule in order to ensure compliance and minimize the likelihood of fines or lawsuits. In place of these prescriptive suggestions, more efficient market-based instruments encouraged through comprehensive legislation would provide better incentives for companies to adopt less costly and more effective climate change mitigation technologies. This is because market-based instruments properly incentivize firms to engage in private actions, which also promote social outcomes. For example, a carbon tax incentivizes firms to reduce its Scope 1 and Scope 2 carbon emissions because the firm then saves on the cost of the tax. In privately reducing Scope 1 and Scope 2 emissions in order to benefit the firm itself, the public good is also promoted. More importantly, comprehensive legislative policy incorporating market-based instruments, such as a carbon tax, would also apply economy-wide thereby reducing distortions from application of the disclosure rule in this case to the public corporate sector alone.

---

[9] Jaffe, A. B., R.G. Newell, & R.N. Stavins. 2003. "Chapter 11 - Technological Change and the Environment." In *Handbook of Environmental Economics* edited by K.-G. Mäler & J. R. Vincent, 461-516. Elsevier.

[10] Krysiak, F. C. (2011). Environmental regulation, technological diversity, and the dynamics of technological change. *Journal of Economic Dynamics and Control*, *35*(4), 528-544.

As demonstrated throughout, the disclosure rule itself will likely create substantial economic costs that exceed the benefits to investors of improved climate-risk comparability across companies. The disclosure rule itself will also likely not generate significant environmental benefits, perhaps a secondary underlying rationale for the rule. Without corresponding reductions in demand and changes in border adjustments, significant climate change emissions will simply be displaced overseas or to the private sector where they are not subject to disclosure. Well-intentioned as it may be, the rule is unlikely to pass an appropriate cost-benefit test and therefore results in reductions to social welfare.

Promulgating this rule also creates an additional, potentially more insidious, cost - the cost of avoiding meaningful legislative action. If spurring climate action is truly the underlying goal of the rule, as opposed to solely the standardization of climate disclosures - as seems likely to be the case - this rule may result in exactly the opposite of its intended effect. The rule as proposed reduces incentives for Congress to engage in comprehensive, legislative policy, which ironically in turn results in delays to meaningful action and therefore larger environmental damages. The commercial and industrial sectors only represent 30% of emissions, so other important economic sectors including residential, government, and nonprofits are not covered.[11] Putting into place this second best policy response to climate change, lowers incentives for first-best policy action. The only truly effective and efficient way to make progress on climate change will be to comprehensively price carbon emissions within the economy, which will require legislative action. Outsourcing action to un-elected government officers may be politically expedient, but it is not an effective or efficient way to run an economy or to tackle the climate change problem.

[11] https://cfpub.epa.gov/ghgdata/inventoryexplorer/#allsectors/allsectors/allgas/econsect/all