A Blueprint for Climate Disclosure
Comments submitted to the SEC

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1 Summary

I began my corporate sustainability research with my dissertation titled: "Voluntary Overcompliance of Environmental Standard: Theory and Empirical Evidence"[1]. Most notably, I have worked on the first sustainability disclosure on toxics (The Toxics Release Inventory) and on the subsequent evaluation of the first voluntary public-private partnership between EPA and the industry (the 33/50 program)(see Arora and Cason (1995) (1998) [2]. The evaluation led to the design of five nation-wide voluntary programs. In 1998, I linked corporate sustainability emissions data with stock market data from NYSE and NASDAQ to examine the impact on stock performance in the short run and in the long run, establishing the effect of pro-environmental actions on firm buy and hold returns in the long run (Arora, 2000a [3], Arora, 2000b [4].

With this backdrop, in this white paper I'm delighted to share my top recommendations as the SEC embarks on preparing climate disclosure guidelines for companies.

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[†]https://scholar.google.com/citations

[1]http://digitallibrary.usc.edu/digital/collection/p15799coll20/id/279292

[2]https://www.sciencedirect.com/science/article/abs/pii/

[3]https://www.gsb.stanford.edu/faculty-research/working-papers/green-competitive-evidence-stock-market

[4]https://www.gsb.stanford.edu/faculty-research/working-papers/pollution-prevention-innovation-measuring-long-run-stock-performance

2 Impose a Minimum Mandatory Disclosure Requirement

2.1 Mandatory Reporting Drives Voluntary Disclosure and Reduction

In 1988, the US Congress passed the Emergency planning and Community right-to-know Act. The act mandated into law a reporting requirement by all facilities to make public their releases of over 320 toxic chemicals into the air, land, and water. While it's focus was to ensure community safety and ensure emergency planning in the case of a severe environmental accident , the mandatory reporting included a facility identification number - which my research aggregated to the company level, thereby establishing leaders & laggards . And we discovered that mandatory reporting led to voluntary reductions.

When the Natural Resources Defense Council published a ranked list of leaders and laggards in the New York Times, environment was no longer an externality. For the first time, companies were ranked by their pollution levels and could be seen by the public and the market. Shortly after, 600 CEOs of large polluting companies, e.g. Dow Chemicals, Monsanto, DuPont, approached the EPA administration to establish a voluntary emission reduction programs, resulting in the 33/50 program which heralded a new approach to regulation–a voluntary approach.

The program analysis showed that overall companies had reduced emissions while also making cost reductions in 17 high-priority chemicals. The combined financial and pollution results led to 5 voluntary corporate programs, e.g. Green Lights & Energy Star.

This suggests that all registrants with the SEC should be required to simply disclose and self-report their carbon emissions. This would enable the SEC to create a "Carbon Emissions Inventory (CEI)" similar to the 1991 EPA Toxics Release Inventory, which required facility-level disclosure for industries that emitted 320 toxic chemicals in SIC codes 20-39 with no requirement to reduce emissions.

One of the key results of my 1991 paper (Arora and Gangopadhyay (1991) showed that a minimum standard binding the "dirty" firm has the effect of improving the performance of the "cleaner" firm. We were surprised to find even then that companies voluntarily offered more information on their emissions, asked for more frameworks, and discovered voluntarily opportunities, including performance efficiencies in their supply chain, to reduce their toxic footprints to mitigate their own market and goodwill risks.

There is an asymmetry in the incentives in the provision of information. While asset owners and asset managers demand more transparency, companies are still hesitant to provide mandatory information. Furthermore there is a variation in the willingness of companies to share information, with the carbon intensive companies hesitant to disclose their carbon inventory. On the other hand, there is a greater willingness to disclose when companies are cleaner. As is

the case there is an asymmetry in the incentives to disclose carbon emissions.The cleaner and greener companies/sectors want to share more information with the market as they seek ESG funds while for the (carbon-intensive) sectors and companies, the costs of disclosing their emissions outweigh the benefits. There is a natural inclination for companies to have control over their narrative but they also need to be more accountable. Similarly, there would be higher costs for smaller sized companies. In the present context, in addition there are huge benefits in access to capital. Companies that want to benefit from a lower cost of capital and access to ESG related funds see the benefits of disclosure as outweighing the costs. At the top companies are showcasing their sustainability by participating in voluntary reporting of their emissions.

The disclosure should be tiered. There is asymmetry at many levels. One in terms of size.Just as in the TRI program, 600 companies were invited out of a potential universe of 5000 companies to participate in this program, since they were the main emitters. This can be a starting point for disclosure. Tiers could be established based on size of the company (sales, revenue), carbon intensity of the sectors and other factors. It makes sense to use some basic guidelines and target those sectors iand companies in the first phase for establishing benchmarks.

3 Mode/Form of Reporting

The SEC might consider continuing its guidance for climate change related disclosure requirements within S-K items, 101, 103, 503(c), 303 (MD&A) are identified with current disclosure, where 101 addresses the cost of compliance, 103 focuses on legal costs, and 303 includes comments on Management's Discussion and Analysis.

Companies can submit their progress in quantifiable metrics/qualitative data that are predetermined by the standards. It would be important to generate some qualitative and forward-looking data in the management and disclosure section that provides information on how these carbon emissions are being generated. A discussion of how the reduction in carbon is being met, whether for example shutting of operations or whether the company is uncovering operational efficiencies and the sources of such improvements would be highly desirable. While the focus of the disclosure is currently on risk assessment and mitigation, I think there should also be an emphasis on opportunities associated with transition pathways. Here my recommendation would be to provide clarity on the opportunity side, thereby opening the black box of how a company's climate actions can create opportunities through new investments in technology, performance efficiencies, use of information technologies to facilitate ESG integration, in addition to risk mitigation and adaptation in the form of physical and transition risks offering a holistic impact. The company should clarify how international accords are impacting its climate disclosure and strategy. It is important that companies are not allowed to create carbon havens as reporting and disclosure requirements gather steam in the US resulting in incentives

to come out clean and going beyond the law here while shifting the burden of carbon emissions in other countries.

The ultimate goal for the commission should be to obtain annual audited investor grade information within the annual report or 10K reports signed off by the CFO and the CSO.

4 What should be the scope of the coverage of the data under mandatory disclosure

4.1 Scope I and Scope 2: Direct Emissions (Quantitative Data)

At a minimum companies should be asked to report their Scope 1 that categorizes all emissions related to company facilities and their fleet and Scope 2 direct emissions that capture the emissions from purchased electricity with the provision to report Scope 3 emissions in the value chain. According to the EPA, nearly 70% of the emissions are accounted for in the value chain and hence while onerous to measure, this will then present meaningful pathways and trajectories to decarbonization. Scope 3: addresses the impacts in the value chain and this is where the challenge and opportunities may be significant. Scope 3 would also check if companies are exporting their carbon to areas and regions that do not have stringent disclosure requirements. Perhaps, make 1 and 2 reporting mandatory and a delayed start for reporting metrics for Scope 3. This is specified in the Corporate Standard of the Greenhouse Protocol.

If the disclosure is binding for Scope 1 and Scope 2 companies will voluntarily be expanding their reporting of Scope 3 to show how far they are in terms of measuring and managing their inventory. In the present context, this is likely to generate more voluntary information on how companies are reducing their carbon footprint across the value chain and managing their inventory.

4.2 The potential of Voluntary additional reporting

5 TCFD or The Value Foundation

The Task Force for Financial Disclosures was proposed by the Financial Stability Board as a framework following the recommendations of Network for Greening the Financial system comprised of 36 central bankers guiding disclosures using a four pronged approach. Companies are asked to reveal their governance (board oversight, role of the management), strategy (risks and opportunities), risk management (identification, assessment, and management of risks (physical and transition) including mitigation and adaptation), disclosure of metrics and targets that includes the Corporate Protocol issued by World Resources Institute regarding Scope1, Scope 2, and Scope 3 emissions. The TCFD provides sectoral guidance.

The Value Foundation (SASB and IIRC) provides cost effective forward looking metrics that are financially material for 77 industries. This can be useful in placing the context of disclosures with the peer industry group and help investors assess the risks and opportunities presented in the data. One of the main goals should be to move towards harmonization with the EU directives under the Corporate Sustainability Reporting Directive and Sustainable Finance Disclosure Regulations and the efforts of the IFRS foundation.

6 The need for a robust Assurance and Audit Process

As part of the minimum disclosure requirement, companies need to have obtained a third-party verification/assurance for the data. As companies start to voluntarily disclose more of their data, they should have the option to submit verified data that improves their credibility with investors. Audit and assurance experts must obtain a thorough knowledge of ESG as they examine the submissions by the companies. With disclosure comes a need for a robust assurance guidance/audit process that is investor grade. However, this assurance must in itself be informed so as to discern the impacts on the environment.