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The Enhancement and Standardization of Climate-Related Financial Disclosures and Recommendations for the Improvement of Environmental, Social, and Corporate Governance (ESG) Disclosures

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I. Executive Summary

The United States Securities and Exchange Commission recently outlined a proposed rule that aims to standardize how corporations and financial institutions report their climate-related financial disclosures. The proposed rule hopes to improve the relationship between investors and corporations by improving the quality and quantity of information that corporations disclose. As the impacts of anthropogenic climate change become more widely recognized, it is important for investors to know how institutions are being impacted by these changes. It is currently difficult for investors to gain access to comparable and high-quality information due to the number of disparate frameworks that corporations use when disclosing this information. Disparate framework use and voluntary adoption of these frameworks by companies have led to investor confusion when making decisions about climate-related risks.

In a similar fashion, the myriad of frameworks available and voluntary reporting of Environmental, Social, and Corporate Governance (ESG) information has led to much investor confusion when investing with ESG in mind. ESG information can be utilized by investors to learn more about a company's practices and culture. For instance, information about a company's environmental (E) practices, like whether it sources products from suppliers with a link to deforestation, can impact investor decision-making. However, because ESG disclosures are unregulated and wholly voluntary, investors cannot always gain access to high-quality comparable information on these practices. This paper seeks to understand the proposed rule in greater detail in order to advocate for improved regulation and standardization of ESG reporting as the underlying problems and assumptions are the same in both cases.

II. Introduction

On April 11, 2022, the Securities and Exchange Commission (SEC) published a notice of proposed rulemaking, outlining a proposed amendment to the rules established under the Securities Act of 1933 and the Securities and Exchange Act of 1934. The proposed rule would require firms registered through the SEC (registrants) to disclose specific climate-related risks and information in registrants' registration statements and annual reports[1]. Climate-related risks are defined as risks attributable to changes in the climate that can "have a material impact on a registrant's business, results of operation, or financial condition"[2]. More plainly, companies could soon be required to disclose certain information on how they are potentially affected by changes in the climate and how they plan to deal with such risks. In practice, this information could be used by investors to enhance how they evaluate companies in terms of how susceptible those companies are to climate-related risks, and what solutions these companies are pursuing to mitigate their exposure to risk. The proposed rule has the potential to improve how investors interact with companies and improve the quality of information on how companies are

[1] Securities and Exchange Commission (SEC) Proposed Rule for The Enhancement and Standardization of Climate-Related Disclosures for Investors, at https://www.federalregister.gov/documents/2022/04/11/2022-06342/the-enhancement-and-standardization-of-climate-related-disclosures-for-investors

[2] SEC Proposed Rule pp. 1

addressing and acknowledging climate change. Greater standardization of climate-related disclosures can also influence how other disclosure requirements could be standardized to improve how investors assess companies. The aim of this analysis is to shed light on how the proposed rule could represent the first steps towards the regulation of corporate reporting of environmental, social, and corporate governance (ESG) criteria, a currently flawed and unregulated mechanism of disclosure for companies, and to analyze the language of the proposed rule.

The proposed rule comes at a time when many investors are signaling that they believe the disclosure of climate-related risks is vital to inform investors which companies are the most susceptible to such risks[3]. Much like legal or operational risks that companies face, climate-related risks have a chance to disrupt the normal day-to-day operations of a business on short and long time scales[4]. As changes to the climate as a result of anthropogenic influences become more realized, the impact that these changes can have on everyday life is immense. For companies that are located in areas with a high likelihood of being susceptible to these risks, or whose value chain operations stand to be impacted by these risks, the disclosure and management of such risks is entirely vital. With worsening climate change, damage caused by climate-related impacts could wreak havoc on registrants' assets[5]. For registrants in the real-estate sector, climate-related risks could manifest in the form of increasing sea-level rise that poses a threat to assets located near the ocean or increased wildfire prevalence destroying a registrant's assets. For registrants in the agricultural sector, increased drought prevalence and intensity could pose massive threats like crop failures leading to lost profits. It is important for investors to be aware of these risks when making financial decisions for a myriad of reasons. As with any business model, the companies that neglect mitigating these risks are subject to future profit losses if such risks become reality.

At the current moment, it is quite difficult for investors to compare registrants' climate-related risks due to a set of diffuse reporting frameworks and standards that companies can utilize[6]. On top of this, because reporting climate risks is voluntary at the moment, companies can utilize these diffuse frameworks to the ability they see fit to report their climate related risks. Some of these reporting frameworks include the Carbon Disclosure Project (CDP), the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), the Science Based Targets Initiative (SBTi), the Task Force on Climate Related Financial Disclosures (TCFD), and the Greenhouse Gas Protocol (GHG Protocol). While there is considerable overlap in what these frameworks are reporting, there is different guidance on how to report that data. To put this into perspective, two identical companies that disclose the exact same information, yet choose two different combinations of reporting frameworks and voluntarily choose how closely they want to follow those frameworks, could have their disclosures look vastly different. This could lead to informational asymmetries for investors who want to compare these companies. On top of this, there is no requirement for companies to disclose this information, so some

[3] SEC Proposed Rule pp. 9
[4] SEC Proposed Rule pp. 10
[5] SEC Proposed Rule pp. 11
[6] SEC Proposed Rule pp. 31

companies may choose not to provide any information on their climate-related risks, further leading to confusion. The ultimate aim of the proposed rule by the SEC is to standardize the reporting framework and to enhance any areas where the aforementioned frameworks fell short, as well as make the reporting of climate-related risks mandatory for all registrants[7]. The goal is to have more easily comparable disclosures where all registrants report the same information in the same way so as to minimize the information asymmetry between registrants and investors.

The intervention on behalf of the SEC to standardize climate-related financial disclosures could have immense benefits for investors but could also be extended to improve another currently unregulated disclosure system. Much like many investors are calling for greater standardization of climate-related financial disclosures, so too are investors calling for improvements to how Environmental, Social, and Corporate Governance (ESG) criteria are being disclosed by companies[8]. ESG criteria refers to a company's approach to various issues. If a company takes a certain stance or action that addresses pollution, deforestation, or climate change, for example, this information can be publicly disclosed to investors who can weigh that company's environmental criteria. Likewise, companies who take certain actions to address social issues or issues within their corporate governance can disclose this information to their investors. Ideally, investors can identify which companies align with their values to make a better judgement call as to where to invest. If a company is transparent with sourcing their products from suppliers committed to sustainable business practices, investors may see this as a more ideal investment opportunity when compared to investing in a company with unsustainable and destructive business practices. In practice, this information is extremely useful for investors who value ESG criteria when looking to invest. At the current moment, this information, much like companies' climate-related financial disclosures, is unregulated and voluntary. Many diverse frameworks exist for companies to report their ESG criteria which can mislead their investors and lead to information asymmetries with companies not being required to disclose the full picture of their ESG practices. Ultimately, better regulation of ESG disclosures and improved standardization would benefit investors much in the same way that better standardization of climate-related financial disclosures would.

The aim of this paper is to fundamentally understand how the proposed rule hopes to improve the standardization and regulation of climate-related financial disclosures and extend the same reasoning to advocate for greater regulation of ESG disclosures. By laying out a framework for corporations to disclose their climate-related financial disclosures, could the SEC utilize the same ideas and assumptions that the proposed rule was built upon to regulate ESG reporting? As will be discussed in further detail later, the underlying assumption of the proposed rule is to adapt currently used and popular frameworks and require registrants to utilize the frameworks to the fullest extent possible. This same logic can be used for ESG reporting as there exists widely used and popular frameworks to disclose ESG information. The standardization and enforcement of the frameworks would ideally be used to improve the information asymmetry between investors and the companies they choose to invest in.

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[7] SEC Proposed Rule pp. 17

[8] *See* The ESG Mirage, at https://www.bloomberg.com/graphics/2021-what-is-esg-investing-msci-ratings-focus-on-corporate-bottom-line/

III. Analysis

The proposed rule put forth by the SEC comes at a time when many investors are urging governments and companies to increase their transparency as to how they are being affected by climate change related risks[9]. Many of the largest institutional investors realize that without high quality data on such risks, they could stand to lose massive profits.

Currently, there are a multitude of third-party, voluntary disclosure frameworks that companies use to disclose climate metrics for their investors[10],[11]. On top of this, many firms also use a wide array of frameworks to disclose certain climate-related risks, each with different reporting methodologies and structures. Many of these disclosures are currently voluntary and disparate in the information they provide, and many companies can choose to provide partial disclosures or skip disclosing certain years[12]. Such differences in frameworks and disclosures make it difficult for investors to compare the success of firms within the same sector of the economy in their tackling of climate change issues. On top of this, the SEC mentions that because these frameworks are mostly voluntary, there are a lack of incentives for registrants to provide complete disclosures the full picture[13] (SEC 29). The proposed SEC amendment seeks to standardize the reporting structure of climate-related risks to avoid disparities in how registrants report their data, and to add an incentive structure so that firms report the full picture. Ultimately, standardization should make it easier for investors to properly identify which companies are most at risk of climate-related issues.

The SEC has proposed to modify and use two already existing and popular voluntary frameworks for climate-related risk disclosures. The first of these frameworks is the Task Force on Climate-Related Financial Disclosures (TCFD) created by the Financial Stability Board (FSB), a G20-created international body that monitors the global financial system[14],[15]. The TCFD was created as a way for an industry-led task force to promote better informed investment decisions, particularly focused on how climate-related issues impact business operations. The framework outlines different methods of analyzing a registrant's business operation for where climate risks can pose significant harm. As of October 2021, 2,600 organizations representing $25 trillion under management have expressed support for the TCFD's framework, while another 1,000 financial institutions managing $194 trillion have also shown support, highlighting the public acceptance of the framework[16]. The second framework that the SEC is drawing inspiration

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[9] SEC Proposed Rule pp. 9

[10] SEC Proposed Rule pp. 30

[11] Yale Initiative on Sustainable Finance, Toward Enhanced Sustainability Disclosure: Identifying Obstacles to Broader and More Actionable ESG Reporting (Sept. 2020), available at https://pages.fiscalnote.com/rs/109-ILL-989/images/YISF%20ESG%20Reporting%20White%20Paper.pdf

[12] SEC Proposed Rule pp. 29

[13] SEC Proposed Rule pp. 29

[14] SEC Proposed Rule pp. 34

[15] TCFD, Recommendations of the Task Force on Climate-related Financial Disclosures (June 2017), available at https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf

[16] SEC Proposed Rule pp. 36

from is the Greenhouse Gas Protocol (GHG Protocol), created by the World Resources Institute and the World Business Council for Sustainable Development, which provides guidance in quantifying a firm's greenhouse gas emissions. The United States Environmental Protection Agency currently references the GHG Protocol as a way for firms to monitor and report their carbon equivalent emissions[17]. Both frameworks have been widely adopted by a number of firms and the SEC hopes that the standardization of these frameworks imposes minimal costs for compliance on many of the registrants. However, rather than instituting these frameworks outright, the SEC believes that the current frameworks do not sufficiently protect investors, so they plan to build off of them to deliver better results for investors[18].

As mentioned previously, the TCFD framework has been used by many investors and companies in the past for general guidance on how to evaluate a firm's exposure to climate-related risks. Many other voluntary climate disclosure frameworks build off of TCFD guidance, so the overall system that climate-related disclosures is built around is concrete and recognizable. The SEC has mentioned that it hopes utilizing this framework as a baseline reduces the costs of creating an entirely new system and reduces the costs for registrants to become accustomed to a new system[19]. This reduces the overall burden placed on registrants and makes them more willing to adopt this regulation. Additionally, the SEC has mentioned that many investors believe the TCFD framework produces quality information and is adopted globally, making it easier for international comparability on climate-related disclosures.

Within the guidelines and recommendations set forth by the TCFD's framework, the SEC is generally proposing to mandate that companies report information relating to:

- How a registrant's board and management is overseeing and governing climate-related risk management. Essentially, how a board plans to create a devoted team that addresses climate-related risks.
- How any climate-related risks identified by the registrant have had or are likely to have a material impact on its business and consolidated financial statements, which may manifest over the short-, medium-, or long-term;[20] Or more plainly, what are the risks a registrant faces in the short, medium, and long term, and what are the associated costs of those risks? An interesting point to note is that the SEC does not directly define what short, medium, and long term time horizons mean. This is currently up for debate to determine if these numbers should be determined by the SEC or if registrants will choose what this means.
- How any identified climate-related risks have affected or are likely to affect the registrant's strategy, business model, and outlook;[21]. In essence, how will climate risks

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[17] EPA on GHG Protocol
[18] SEC Proposed Rule pp. 8
[19] SEC Proposed Rule pp. 45
[20] SEC Proposed Rule pp. 128
[21] SEC Proposed Rule pp. 129

change how a business is operating, whether it be shifting business to new locations or reorganizing the value chains of their business.

- The registrant's processes for identifying, assessing, and managing climate-related risks and whether any such processes are integrated into the registrant's overall risk management system or processes; [22]. Ideally, this will address the disclosure of any tools that a company uses to calculate its risk and then the process of how they plan to manage those risks. For example, if a company located along the shore is subject to damages caused by sea level rise, what models are they using to predict the rise of sea-level and the cost of the damages that such a rise can have, and what steps are they taking to protect themselves.
- The impact of climate-related events (severe weather events and other natural conditions as well as physical risks identified by the registrant) and transition activities (including transition risks identified by the registrant) on the line items of a registrant's consolidated financial statements and related expenditures, [23] and disclosure of financial estimates and assumptions impacted by such climate-related events and transition activities. [24]. Essentially, what risks is a registrant's business open to in regard to transitional and physical risks. Physical risks being severe weather events like wildfires or hurricanes or more long-term events like sea level rise. Transitional risks being those that are either positive or negative by transitioning to a different business model. For example, a manufacturer of gasoline-powered cars exposes itself to extra costs by switching to electric vehicle manufacturing, but if it chooses not to, then it might not capitalize on shifting markets that favor electric vehicles and could lose profits if it does not transition.

Within the guidelines and recommendations set forth in the GHG Protocol's framework, the SEC is generally proposing to mandate that companies report information relating to:

- A registrant's broad emissions within the framework of Scopes 1 and 2 as outlined by the GHG Protocol. Scope 1 is defined as any direct emissions that are produced by a source that is controlled by an organization[25]. This could refer to gasoline burned by company vehicles that can be tied directly to an organization. Scope 2 emissions are defined as indirect emissions attributable to an organization's purchasing of electricity, steam, heating, and cooling[26]. Though not directly produced by the organization, the carbon equivalent emissions that a utility produces through the generation of electricity can be linked to an organization's usage of that energy, and the organization is therefore responsible for those emissions. The overall emissions must be documented as an

[22] SEC Proposed Rule pp. 130
[23] SEC Proposed Rule pp. 131
[24] SEC Proposed Rule pp. 132
[25] Environmental Protection Agency: https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance
[26] Environmental Protection Agency: https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance

aggregate of all contributing greenhouse gases, as well as how much each greenhouse gas produced contributes to the total emissions.

- Similarly, Scope 3 emissions disclosures will be required if those emissions are material, or quantifiable. Scope 3 is defined as a broad category that can include, but is not limited to, transportation and distribution of a sold product, an organization's investments, and their global business travel[27].
- A registrant must also disclose if they have climate-related goals and transition plans to reduce their emissions if they have any set[28].

In broad terms, the SEC could require firms to disclose the above information in registrant's registration statements and annual reports. Below, the analysis will work through some of the proposed requirements in detail and discuss some of the implications of the disclosure requirements. The analysis will also cover where these disclosure statements can be found for investors and the timelines through which the SEC hopes to enforce these disclosures by. The SEC proposed rule covers about six general areas of disclosure. Those disclosures include, but are not limited to: Impact Disclosures, or what climate risks are affecting a registrant; Governance Disclosures, or who a registrant is putting in charge of managing their climate risk on their boards and management teams; Risk Management Disclosures, or how those persons or teams identify, assess, and then plan to manage those risks; Financial Disclosures, or how, once identified, are those climate-related risks and opportunities going to affect the company financially; Greenhouse Gas Emissions Disclosures, or how much carbon dioxide equivalents (CO2e) is the company emitting in their Scopes 1 and 2, and if material, Scope 3; Targets and Goals Disclosures, or if the registrant has set a goal to reduce their overall emissions, how they plan to achieve such a goal. This analysis will touch on those six broad categories of disclosure requirements and discuss the greater implications and some examples of what the SEC expects from these requirements.

III.a Definitions

Before analyzing the proposed disclosure requirements, the SEC outlines clear definitions for a number of terms mentioned in the proposed rule. Perhaps most principally, the SEC defines "climate-related risks" as the actual or potential impacts directly attributable to changes in climate conditions that could affect a registrant's business or value chain. Value chain is defined as a registrant's upstream and downstream activities. In other words, a registrant's starting product sourced from a supplier and the consecutive refining of that product to the eventual selling and distribution of such a manufactured good. If at any point in this value chain or business operation there is some climate-related risk, registrants will be required to disclose such. In an example of this, you could imagine a paper manufacturer who sources their products from forests and delivers their products to distributors with coastal facilities. Increasing risk of

[27] Greenhouse Gas Protocol: https://ghgprotocol.org/standards/scope-3-standard
[28] SEC Proposed Rule pp. 134

wildfires in those forests or sea level rise near those facilities would require the paper manufacturer to disclose these risks as they are directly attributable to the manufacturer's value chain.

There is also considerable explanation of the different definitions of risk. The proposed rule defines two sources of potential risks: Physical and Transitional Risks. Physical risks refers to the physical impacts of climate change on a registrant's value chain, which can also be broken down into acute and chronic risks. Acute risks account for extreme weather events that can manifest within the short-term, such as flooding or hurricanes/monsoons, whereas chronic risks account for long-term extreme climate conditions like changes to sea level, increased ambient temperatures, increased wildfire probability, or increased drought probability. In the aforementioned example of the paper manufacturer, the distributor's coastal facilities are at risk of hurricanes that could disrupt the supply of goods, while the forests that supply those products are at risk of increased wildfire probability. Transitional risks refer to the costs that come with changes in policy or climate change that force or nudge the registrant to adopt mitigation strategies or change its practices. With increasing wildfire risk, the manufacturer might decide to locate less susceptible forests or work with a third party to engage in preventive measures of better forestry management practices. These transitions to more sustainable business models represent costs to the registrant that might not have been included in previous reports but represent serious risks that registrants should be thinking about.

It may also be true that consumers of the paper manufacturer's products decide they only want to purchase products from companies that engage in better forestry management practices, representing an opportunity for the firm to shift its business model to one in which they take up more sustainable measures. Such opportunities are deemed climate-related opportunities, whereby climate risks also open up areas for new business models that could allow the registrants to access new markets, thus gaining benefits by transitioning to the more sustainable practice. However, these climate-related opportunities are not being considered for implementation, only optional, to remove any "anti-competitive concerns might arise from a requirement to disclose" such [29].

Overall, these definitions are extremely important to set the precedent for which the entire rule is built on. By making these definitions, the SEC makes it clear for what they could be requiring from registrants. However, the SEC has chosen not to designate definitions for what short, medium, and long-term time horizons are defined as. In essence, climate risks that manifest in the short-term could be those that affect a registrant's business in one or two years, or it could take on a more conservative designation of potentially five to ten years. Such designations, while tough to mandate collectively for every sector, should be set on a sector-by-sector basis to explicitly state what the SEC plans to require from registrants. In essence, if two paper manufacturers operate in the same area, and our aforementioned company designates wildfire risk increases to be realized in one to two years while the other manufacturer designates those risks to be realized only in five to ten years, then the former has a much less risk insulation on paper, while both companies are operating in the same forest. The former company, to

[29] SEC Proposed Rule pp. 62

investors, could potentially look much less desirable because of the lack of comparability in their time horizon designations. Such reasoning highlights the need for the SEC to define these time horizons in greater detail, on a sector-by-sector basis so as to reduce the confusion for investors.

III.b Impact Disclosures- The What and The Where

Broadly, this section touches on the disclosures that could be expected by the SEC in terms of what impacts a registrant is facing, and where those impacts will be realized[30]. In essence, registrants could be required to say, these are our potential impacts that we could face and here is where we expect them to manifest. These impacts could affect the registrant's business operations or its value chain as described above. Essentially, the SEC expects registrants to lay out their business model and value chain operations and discuss what their perceived risks are and where those risks could be realized.

To elucidate this disclosure, consider the paper manufacturer from before. The proposed rule could expect the manufacturer to walk through its value chain from start to finish and point out exactly what problems it is facing with respect to its climate risk. It would have to lay out the risks it faces from continuing its forestry practices in places where increased droughts lead to increased prevalence of wildfire risk. It could point to how increasing ambient temperatures could affect its workforce or the employees who cut down those trees. If it has to send the logs to a refining facility, it could face risk of intense flooding that damages its supply lines. Its distributor for the end-source products could face similar challenges. That same distributor could also face increased risk of its coastal facilities being damaged by hurricanes or eventual sea-level rise. At every step in the way where it has defined those risks, the registrant could also be responsible for giving exact area codes of the business operations so as to deliver better data to investors. It could give insight into which forests the company is logging in, where its refining facilities are located, and what risks they face, or where the distribution centers are that could face other risks.

It is important to note, this proposed rule is not finalized at the current moment of this writing. While these are the current proposals of the rule, they are by no means an indication of what the finalized rule will look like. From an objective standpoint, the discernment of these risks and where they are likely to affect registrants is entirely vital to understanding which registrants are at the most risk and which are the most risk insulated. However, something that is worth noting is to what degree this information will be used for. From an equity point of view, would knowing what risks a company faces and where they are located allow larger, more entrenched firms to use their capital to relocate themselves or access greater funding because they are risk insulated? In other words, if two companies are comparable in every way, yet one has significantly more capital than the other, could they use their capital to relocate to better areas or allocate more funding towards the mitigation of their risk, thus pulling funding away from less entrenched firms because they are seemingly more risky? In the same regard, if one company does not consider one area of risk while the other does, do they hurt themselves by

[30] SEC Proposed Rule pp. 72

being more transparent with their risk? Ultimately, for investors, understanding which company is open to more risk is valuable information, but there is a chance that defining companies by their risk mitigation is incentivizing capital allocation towards larger, wealthier firms. These points will be discussed in detail later on, but extremely important to note when attempting to build off of this system for more comprehensive ESG regulation.

III.c Governance Disclosures- The Who

Drawing upon inspiration and recommendation from the TCFD's framework, the SEC is proposing to require registrants to disclose how the registrant's board and their management team are addressing climate-related risks[31]. In other words, the disclosure of what a company's board is doing to assess climate risks meaningfully, and what institutions they are putting in place to manage climate risks. The SEC has mentioned that many commentors believe climate-related risks should be treated in much the same way as other material risks [32]. Overall, this section discusses examples and expectations for how a board and management teams should disclose their risks.

In terms of the disclosure of how a board is handling the oversight of climate-related risks, the SEC is requiring a number of things from a registrant's board. First, the registrant must disclose any board members or a committee of board members responsible for the oversight of climate-related risks. The disclosure of this information could give investors greater knowledge of who is responsible for the company's handling of climate risks from a board position. Second, to build on the previous disclosure, registrants will be required to disclose what level of expertise those board members possess with respect to the management of climate risks. In essence, what credentials does this board member have and do they have a track record of climate action or inaction? This is an important discussion piece as it could give insight to investors to see if the board member appointed to address climate risks is a firm believer and will take action, or if the board member has no interest in addressing climate risks. Additionally, registrants will be required to disclose how often their board plans to meet to discuss climate risks and include a description of how they discuss those risks[33]. Another item requiring disclosure is whether and how the board considers these risks as part of the registrant's business strategy. This information could allow investors to see directly how a company's board is factoring climate change into the company's business model. Finally, a registrant's board will now be required to disclose how they set targets and goals, if they set them, and how they plan to achieve such goals. Rather than blank promises for decarbonization goals, boards must disclose how they assessed these goals and must disclose how they plan to achieve them.

In a similar regard, management teams within the registrant's company would be required to disclose how they also are addressing climate-related risks. Many of the newly required disclosures are similar to the board's required disclosures. These include disclosures of whether

[31] SEC Proposed Rule pp. 93
[32] SEC Proposed Rule pp. 56
[33] SEC Proposed Rule pp. 93

they have management teams or committees that are addressing climate risks and the expertise of such teams and committee members, as well as how these teams are assessing and monitoring those risks, and how often, if at all, these teams report to the board about such management practices. In essence, the SEC is requiring firms to disclose what institutions are being put in place to manage climate-risk, if at all, who is leading those institutions and what are their credentials, and what tools are they using to evaluate their risks that inform their institution's decision-making.

III.d Risk Management Disclosures- The How

The disclosures that could be required from the SEC in this section touch on how registrants go about identifying, assessing, and then mitigating those risks[34]. In other words, what tools is a registrant using, what was factored into their assessment, and how does the registrant decide if a risk is material or not.

Pulling directly from the proposed rule, such considerations for disclosures include[35]:

- How a registrant determines the relative significance of climate risks compared to other risks they face.
- How a registrant considers existing or likely regulatory requirements or policies when identifying the risks they face. For example, policies that hope to curtail carbon emissions could play into a registrant's decarbonization strategy.
- How a registrant considers shifts in customer preferences that reflect changing markets that align with their transition risks. For example, does a car manufacturer take into account increasing preferences for electric vehicles that would support the shift towards changing its supply lines?
- How a registrant determines the materiality of climate-related risks, and the overall size and scope of that material risk.
- How a registrant decides to mitigate, accept, or adapt to a particular risk.
- How a registrant prioritizes addressing climate-related risks.
- How a registrant determines to mitigate a high-priority risk.

Ultimately, the transparent process of identifying which risks a registrant considers and how it considers them, sheds light into a company's practices and is a positive for investor insight. Such a designation of how a registrant evaluates its risks is important for comparability between not only firms within the same sector but can allow intersectional comparability in the determination of risk. For example, firms in the technology sector may evaluate climate risks to their worker base as being quantifiable while firms in the automobile sector may choose not to evaluate these risks. Leaders in the technology center may determine that because there are

[34] SEC Proposed Rule pp. 100

[35] SEC Proposed Rule pp. 100

climate risks that affect their worker base, they should use that determination to transition to a lower carbon business model or take care of their workers to a degree. Investors could see that certain risks were evaluated in one sector, while not being evaluated in another and therefore make a push for the latter to include those risks in their determination. This could work within sectors as well, as industry leaders could identify a risk and use it as justification to transition their business model and influence the average firm to adopt that same justification. Understandably, this could have the opposite effects of some firms evaluating risk to a higher degree than others, which could hurt the former's business model, much like the scenario discussed in the *Impact Disclosure* section. Again, the proposed rule is not finalized at the time of this writing, but these possibilities should be considered when evaluating companies purely from a risk perspective. Ultimately, more transparent disclosure of the methodology of assessing those risks is a positive goal altogether. Such disclosures would make it much easier for investors to compare registrant responses to the assessment of climate risk.

III.e Financial Disclosures- The How Much

Much like the previous section, the SEC is considering requirements to disclose the process of identifying the potential costs of climate-related risks on a registrant's business[36]. Once risks are identified, how much are those risks going to cost the registrant, and what models or tools have they used to evaluate those costs. More broadly, the SEC hopes to gain information on registrants' financial impact metrics, expenditure metrics, or how much they are spending to mitigate, and the financial estimates and assumptions they use to calculate the financial impacts. A registrant might expect to incur a million dollars' worth of damage for their coastline properties due to hurricanes over the course of ten years. The SEC would require them to disclose the financial metrics they are evaluating, like shoreline loss with a price attributed to that, what the costs are to mitigate it, and what tools they've used or what assumptions they've made to come to the evaluation of the costs.

The SEC would require an open narrative to provide context for why a registrant considered certain climate-related risks. For example, consider a car manufacturer who is deciding whether to make a transition to producing electric vehicles. In their financial impact statement, they choose to include the costs of locating and sourcing precious metals that are necessary for battery manufacturing. The narrative discussion could include why manufacturers decided not to move into the electric vehicle market, citing the high cost of sourcing those precious metals. Rather than simply stating that the costs are too prohibitive, a registrant can be required to disclose why those costs are too prohibitive and offer some of the assumptions that went into their decision. In a similar regard, the registrant from the example above might discuss why they are choosing to spend a million dollars this year to develop the coastline to prevent future damages, and how it could benefit them in the future.

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[36] SEC Proposed Rule pp. 110

III.f GHG Emissions Disclosures- The How Much contd.

The SEC is considering requirements for registrants to report and record their overall greenhouse gas (GHG) emissions because, much like financial disclosures of impacts, GHG emissions are quantifiable and comparable[37]. Investors can easily look at emissions numbers and see a somewhat clear picture of just how much companies are emitting, and how on track registrants are to meeting their proposed goals. To bolster the disclosure of GHG emissions, the SEC outlines a definition of "greenhouse gases" to mean seven of the most important substances attributable to changes in the climate which include: carbon dioxide ("CO2"); methane ("CH4"); nitrous oxide ("N2O"); nitrogen trifluoride ("NF3"); hydrofluorocarbons ("HFCs"); perfluorocarbons ("PFCs"); and sulfur hexafluoride ("SF6")[38]. The definition of these greenhouse gases is an important distinction because these are the gases that all registrants will be required to track and disclose, separately and aggregated. Aggregated emissions could be required to be disclosed as a CO2 equivalent (CO2e), meaning that respective greenhouse gases have a certain amount that translates to the same warming potential as CO2 at release. In other words, one ton of methane, when in the air, might have the same warming potential as 27-30 tons of CO2 over one hundred years, so one ton of methane is designated as approximately 27 tons of CO2e (EPA) [39]. This distinction allows for greater comparability between different emission sources, whereas tracking them separately allows investors to see if a given company is emitting a certain pollutant in excess. Tracking both gives investors much greater clarity over what a registrant is emitting.

In addition to tracking each gas separately, registrants will also be required to disclose their emissions based on the Scope in which those emissions were generated. The concept of Scopes was pioneered by the GHG protocol where it outlines 3 major pathways of direct and indirect emissions that a company produces. Scope 1 is regarded as direct emissions, where the emissions source is generated by the company or with some machinery owned by the company. For example, if a company owns any vehicles or combustion powered machines, the emissions directly linked to those machines are to be reported in a registrant's Scope 1 disclosure. Scopes 2 and 3 are seen as indirect emissions sources. Scope 2 refers to any emissions generated through a company's purchasing of electricity, heat, water, or steam. For example, because many companies' buildings are tied into a grid and that power is generated by an external utility, those emissions are not directly linked to the company themselves, but the emissions are reliant on the company's energy usage. Scope 3 emissions are generally referred to as every other emission source, although the SEC mentioned they would only require disclosures if these emissions were material [40]. For example, the Scope 3 emissions for a car manufacturer of internal combustion engine vehicles refers to the emissions from every car produced that drives on the road as a material source of Scope 3 emissions. These emissions are not generated by the manufacturer themselves, but by the usage of their product. Similarly, an oil or gas producer is responsible for

[37] SEC Proposed Rule pp. 147
[38] SEC Proposed Rule pp. 185
[39] Environmental Protection Agency: https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance
[40] SEC Proposed Rule pp. 208

the Scope 3 emissions of their products when consumers use that oil and gas. In these cases, Scope 3 emissions are fundamentally important to enhance investor's decision-making. In cases where it is a bit more nuanced, Scope 3 disclosures will only be required if the emissions are material. In a broad sense, if those emissions are important for investor decision-making, they could be required to be disclosed.

Additionally, rather than just purely disclosing GHG emissions and the scopes in which they are emitted from, the SEC has proposed to include a disclosure of overall GHG intensity[41]. Simply put, one firm might have more overall GHG emissions, but have greater production, while another firm might have less GHG emissions, but a less efficient process. The proposed disclosure would include a discussion of some unit that measures GHG emissions per unit of production. This is an important distinction because the largest polluters may have much greater emissions, but a more streamlined production process enables them to have lower emissions per unit of production. This still does not necessarily mean that the larger polluter is less risky, as the polluter will still have to find ways to decarbonize with future policy options. This disclosure is simply to the benefit of registrants who may have large scale operations, but less emissions per unit.

On top of the disclosure of emissions and their scopes, registrants could also be responsible for disclosing insight into how all of that data was collected and how they determined these emissions. This could look like the discussion of what methodologies they used, what assumptions were made when calculating emissions, and where were these emissions made. While the SEC mentioned that the actual numbers might be difficult to quantify, the discussion of the assumptions and the methodologies to get a close number is ample in providing a clear picture. In other words, registrants should calculate their emissions to the best of their abilities and then disclose how they got such numbers and what assumptions they made along the way. Additionally, the SEC could require registrants to make a note of if they change their methodologies from year to year with different assumptions, to provide better insight for investors to compare past calculations.

Finally, to alleviate some of the concerns for determining whether some industries should report their Scope 3 emissions, the SEC outlines a safe harbor for those registrants to provide some time for better data and disclosures to come out[42]. Because the SEC notes that for some industries Scope 3 emissions can be difficult to account for, they hope that there will be positive spillover effects made by industry leaders who disclose their Scope 3 emissions which could then provide a baseline for others. More plainly, if one registrant discloses certain Scope 3 emissions that many other registrants do not, but investors see that it is important for decision-making, then there is a phase-in period for other registrants to begin collecting that data. This scenario will likely play out in greater detail once the rule is finalized but provides ample room for more registrants to not be held responsible if changes to Scope 3 disclosures come out.

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[41] SEC Proposed Rule pp. 215

[42] SEC Proposed Rule pp. 208

III.g Targets and Goals Disclosures- The When

The last major disclosure that could be required by the SEC largely surrounding the disclosure of a registrant's targets and goals with respect to reducing their risk or their overall emissions. The SEC mentioned a Wall Street Journal publication that found that despite two-thirds of S&P 500 companies setting carbon reduction targets, many of those companies did not provide insight into how they would achieve those goals[43],[44]. While the SEC is not proposing to mandate that registrants create a goal, rather for those that have, must now back up that goal or target with evidence.

Some of the requirements for such a disclosure include the time horizons for which the goal should be achieved in, any interim targets to evaluate how a registrant is obtaining that goal, the unit of measurement they will use to set this target, and a discussion of how the registrant plans to meet that target, among other requirements. Ultimately, this should allow investors to hold registrants accountable for their goals and targets and could certainly shed light on which registrants are obtaining their goals and which are not. It could also shed light on which companies are truthfully acting on their goals and not just delivering false promises. Again, while the disclosure of targets and goals would not be required, the discussion of such could incentivize firms to take up more reasonable goals and actually act on those goals.

IV. Discussion

The previous section laid out what the proposed rule could contain and what the SEC could require registrants to disclose. In summary, those proposed requirements could be: Impact Disclosures, or what a registrant's climate-related impacts are and how those impacts are affecting their business; Governance Disclosures, or who a registrant is putting in charge to mitigate climate-related risks; Risk Management Disclosures, or how a registrant identifies and plans to mitigate the risks it has identified; Financial Disclosures, or how much capital is affected by those risks; Emissions Disclosures, or how much a registrant is emitting in its defined scopes; and Targets and Goals Disclosures, or when a registrant plans to reduce their emissions, if at all. Now that there is a general understanding of the proposed rule and its stipulations, we can consider why this rule is fundamentally important to understand in order to advocate for further improvements to ESG regulations.

The proposed rule offers a wide-reaching and holistic strategy to require registrants to disclose their climate-related risks and strategies. The rule tackles issues like who is in charge of managing and identifying these risks, what tools they plan to use, and what strategies are being used to address those risks. Adapting and utilizing popular and widely used frameworks currently in use, the SEC is setting a precedent that greater regulation of climate-related disclosures is inherently in the best interests of investors.

[43] SEC Proposed Rule pp. 266

[44] Jean Eaglesham, Climate Promises by Businesses Face New Scrutiny, The Wall Street Journal (Nov. 5, 2021).

The rule also has the added potential benefit of influencing how corporations are thinking about and acting on climate change and the associated risks with a rapidly deteriorating climate. Though not the sole focus of this paper, it is important to note that there are wide-reaching benefits of this proposed rule. With the proposed disclosure requirements, investors should be more easily able to see which corporations are undervaluing the effects of climate change and are opening themselves up to considerable risks. Greater access to high quality and comparable data can allow investors to hold registrants accountable for undervaluing climate change. Ideally, investors can demand that a corporation invests in its value chain and boards can appoint members who are committed to tackling corporate climate action. While this may not be the case across the board, ultimately better access to high quality data will allow for such notions to follow. If you as an investor see that a corporation you and others are heavily invested in is not valuing the effects of climate change properly, you can better exercise your right to deallocate funding or pressure the board of the corporation to vote on measures that value climate change more. It should thus also be easier for you to compare within sectors which companies are insulating themselves versus those that are not. While this is an inherent positive for investors, there does need to be some discussion of the equity considerations of the proposed rule.

The proposed rule could also signal a need for greater equity considerations when designing future regulations. If it is easier for investors to decipher which companies are more risk insulated, this may lead to more profitable or well entrenched companies to dominate. More plainly, if you are trying to save your investments and invest in corporations that are more risk insulated, you might find that larger corporations can allocate more capital to address their climate risks. Imagine two companies who offer the same product and are subject to the same risks, yet company A has considerably more capital than company B. These corporations might find that transitioning to a certain production line or moving out of an area that is susceptible to wildfire risk is in their best interest, yet company B lacks the funds to make this transition while company A can allocate funds to make the transition. In this case, company A appears to be more risk insulated, and thus a more suitable investment opportunity, because it made the transition while company B suffers. Ultimately, larger corporations are always going to be more risk insulated and protect themselves from the risks associated with climate change more easily because they have the means to do so. Company A, because it is a larger company, may also be more directly responsible for a larger share of GHG emissions, yet company B takes the fall because it cannot make the transition. While I do not propose any solution to this problem, it stands to reason that there should be equity considerations for much smaller companies that cannot make the transition to a different business model or protect themselves from climate risks as easily. Though the proposed rule does offer a safe harbor and a lag time for adoption of the rule for smaller companies, these smaller companies will always appear less risk insulated than the larger, well-entrenched corporations and have less available funds to quantify their climate-related risks.

V. Recommendations

The recommendations that I plan to lay out are two-fold. First, I plan to recommend considerations for improving the proposed rule in its current state. At the current time of this writing, the proposed rule is still under deliberation and many stakeholders and interested parties have been commenting on the state of the rule. In light of many of the recommendations that have been proposed, I plan to address considerations that I had not seen many comments on. Second, I plan to recommend to the SEC possible future rulings that can be implemented to improve how ESG information is disclosed to investors. The proposed rule offers a precedent that the SEC is looking to improve how investors gain access to comparable and high quality data. In order to address the rapidly growing field of ESG investing, I believe it is prudent for the SEC to begin drafting further rulings that seek to improve transparency and standardization. I offer this recommendation as I believe the solutions put forth by the proposed rule would solve some of the issues found in ESG investing, particularly standardizing the frameworks used, and making these disclosures mandatory for corporations seeking to disclose ESG information.

In order to address a shortcoming of the proposed rule, I recommend that the SEC deliberate more on possible equity considerations between larger registrants and smaller registrants. Though touched on briefly above, the proposed rule does not offer much in the way of protecting smaller registrants from losing out on some of the risks. If we consider each of the categories of disclosure requirements, we can lay out a clearer picture of why larger companies may be favored in this rule.

Considering *Impact Disclosures*, or what a registrant's climate-related impacts are and how those impacts are affecting their business, you might recall that the proposed rule hopes to have registrants detail the methods or models they use to qualify their risks. Such methods and models may be extremely costly or may be outsourced to a separate entity to identify. In such a case, larger registrants with greater available capital or more resources at their disposal may find it considerably easier to model their risks when compared to smaller registrants who lack the same resources. While the proposed rule does include a safe harbor and lag times for smaller registrants to comply, the costs of compliance are not necessarily reduced in any way. What may work for one corporation does not necessarily mean that it will work for another in the same way. This is the same case for *Governance* and *Risk Management Disclosures*, as each of these disclosure requirements requires the registrant to allocate funds to appoint members to identify the risks and describe how those risks are likely to affect the business model. Each of these disclosures takes time and effort on behalf of the registrant.

In a similar vein, the current method of *Financial Disclosures,* or how much capital is affected by those risks and how much they plan to allocate towards solving the problem, could also hurt smaller registrants. Larger companies may have more assets affected by the climate risks, but they also may have considerably more funds to allocate to address those problems. Larger companies may also see the costs associated with their assets and decide to move their business operations elsewhere to avoid taking those risks. To draw a better picture, consider two real estate companies with holdings in an area of high wildfire risk. A larger company may be able to either cover the costs of the buildings that are likely to burn down or may be able to

afford to sell their assets and acquire other assets elsewhere. Such a scenario is difficult for the smaller company. Because of these disclosures, investors may see that the larger company is taking measures to protect itself and it may lead to a false interpretation of the climate risks. While this may be a very nuanced case, it stands to reason that ultimately, larger companies are more risk insulated than smaller companies, but there should be protections put in place for the proposed rule to ensure that the allocation of funding because of these disclosures does not pull all funding away from smaller companies into the more well entrenched and larger corporations.

Ultimately, there are other equity considerations that should be taken into account when finalizing the rule. While these cases may not be the full picture, the SEC should nonetheless account for these possible scenarios when drafting the rule to protect smaller registrants that do not have the same liquidity as larger registrants entertain. While I do not propose any direct solutions to these issues, I believe it is within the scope of the proposed rule to address these concerns.

To build off of the proposed rule, I recommend that the SEC begin to consider drafting legislation on standardizing the collection and disclosure of ESG information. ESG disclosures face the same problems that currently plague climate-related risk reporting. These problems are voluntary reporting and the use of a number of disparate frameworks that can lead to much investor confusion. Ultimately, the proposed rule seeks to solve the problems associated with climate-related risk disclosures. I propose that the same notions used in solving this issue can be extended to improving ESG data disclosures.

As mentioned previously, to solve the issue of climate-related risk disclosures, the SEC is standardizing and enhancing the frameworks that registrants use and modeling those frameworks off of popularly used and comprehensive frameworks already in existence. The SEC is also solving the issue of voluntary reporting by mandating that all registrants comply with the rule if it is established. These solutions should generate easily comparable and comprehensive disclosures of climate-related risks. Thus, in order to extend the same logic to solving ESG data disclosures, the SEC could identify multiple frameworks that are widely used and comprehensive and mandate that all registrants who wish to disclose their ESG data, do so in accordance with this framework.

Currently, there are two popular and widely accepted frameworks that exist for companies to report their sustainability and ESG information. The frameworks published by the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB) both offer extremely comprehensive frameworks that collect data on sustainability practices and ESG information [45],[46]. Each of these frameworks has a large following across multiple countries, with 78% of the top 250 global companies using GRI and about 50% of those same companies using

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[45] See Global Reporting Initiative's Sustainability Reporting Standards at https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-english-language/
[46] See Sustainability Accounting Standards Board Global Use Standards at https://www.sasb.org/about/global-use/

SASB according to a 2022 KPMG Survey[47]. The popularity of these frameworks and the global acclaim for them is a signal that many companies already disclose their ESG information using these frameworks. Requiring registrants to disclose utilizing these frameworks would not be extremely costly and would even benefit investors by making these disclosures globally comparable. If the SEC were to modify and standardize these frameworks, the result would be an increase in transparency and comparability for investors, while minimizing the impact of compliance on registrants. These aims are similar to the aims of what the proposed rule is hoping to achieve for climate-related risks and should be explored for potential future rulings.

VI. Conclusions

Reporting of climate-related financial disclosures is currently flawed as it suffers from voluntary reporting and disparate framework use. The SEC's proposed rule to standardize and enhance climate related financial disclosures seeks to amend some of these pitfalls and make reporting of climate risks mandatory and standardized. The overall scope of the proposed rule seems to improve transparency and accountability of registrant's climate-related risk, but still suffers from a lack of equity considerations. While there are some measures to address equity, I recommend that the SEC deliberate further on adding more protections for smaller registrants who lack the same abilities as larger registrants.

The proposed rule also offers insight into how we can solve a similar problem that is plagued with voluntary reporting and disparate framework use. Modelling the proposed rule on its notions to include widely used frameworks and mandatory reporting, we can solve the issue of ESG data disclosures. The proposed rule is offered as a solution to protect investors from being misled and another intervention on behalf of the SEC could protect investors from misleading ESG information that is rife in the ESG investing realm. Ultimately, ESG investors need better access to comparable and quality data, and the proposed rule could offer guidance on how to make that dream a reality.

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[47] See KPMG Survey of Sustainability Reporting at https://info.kpmg.us/news-perspectives/industry-insights-research/2022-sustainability-reporting.html#:~:text=According%20to%20the%20survey%2C%2078,companies%20are%20using%20the%20GRI.

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