

UNDERSTANDING U.S. CLIMATE RISK DISCLOSURES

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Climate change is increasing risks to publicly traded firms, both from the physical impacts of climate change and the impacts of government regulations enacted to facilitate the transition to a low-carbon economy. The possibility that some or all of these risks are financially material to firms has generated increased focus on their identification and disclosure to investors. The Securities and Exchange Commission (SEC) requires publicly traded firms to disclose “material” risks. Ten years ago, the SEC adopted general guidance on how firms should disclose climate risks; however, this general guidance has left many questions unanswered. Several organizations have published guidelines for how firms should disclose climate-related risks, both in their mandatory SEC disclosures and in voluntary climate reports.

These include the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), around which many firms and other organizations have begun to coalesce. An increasing number of institutional investors have been calling for more meaningful disclosures based on these and other guidelines. This primer (1) explains the types of climate risks faced by publicly traded firms, (2) describes existing legal disclosure requirements, (3) briefly reviews voluntary disclosure frameworks, and (4) outlines the motivations behind recent attempts to increase disclosure standards.

The Wharton Risk Management and Decision Processes Center, established in 1985, is a research center affiliated with the Wharton School at the University of Pennsylvania. The Center is recognized worldwide as a leader in risk-related research and policy analysis and serves as a bridge between scholars at Penn and organizations and decision-makers in the public and private sectors. Our primer series provides an introduction to topics in risk and resilience.

WHAT RISKS DOES CLIMATE CHANGE POSE TO FIRMS?

Climate change poses many financial and operational risks to publicly traded companies. These risks are usually categorized into physical risks, transition risks, and liability risks. The Financial Stability Board (FSB), a body that monitors and promotes the stability of the international financial system through international coordination and standard-setting, provides the following definitions [1]:

- **PHYSICAL RISKS:** “the possibility that the economic costs of the increasing severity and frequency of climate-change related extreme weather events, as well as more gradual changes in climate, might erode the value of financial assets, and/or increase liabilities.”
- **TRANSITION RISKS:** “[risks] that relate to the process of adjustment towards a low-carbon economy. Whilst such an adjustment may be a necessary part of the global economy’s response to climate change, shifts in policies designed to mitigate and adapt to climate change could affect the value of financial assets and liabilities.”
- **LIABILITY RISKS:** risks that “might arise when parties are held liable for losses related to environmental damage that may have been caused by their actions or omissions.”



Firms in different industries—and even different firms within the same industries—are not necessarily exposed to these risks equally and will need to closely examine their own assets, liabilities, and operations. For example, physical risks could arise from a stochastic event like flooding that results in damage to a building or infrastructure, temporarily halting a firm’s normal operations and revenue stream. Physical risks could also include a gradual increase in temperature that, for example, changes crop yields for a key ingredient in a product. Transition risks could include the prospect of the government instituting a carbon tax or other regulatory measures, which could significantly increase the cost of production for industries that rely heavily on fossil fuels, decreasing their profits. Finally, one example of a liability risk emerges from the recent bankruptcy filing of a California electric utility following severe wildfires, as the state holds utilities strictly liable for all third-party wildfire damage when the fire ignition is linked to their equipment. [2] Another example of liability risks could be lawsuits against fossil fuel firms seeking reimbursement of climate damages.

WHAT ARE DISCLOSURES?

Disclosures refer to the release of information by a firm that would influence an investor's decision about whether to invest and at what price. Disclosures provide a number of benefits to investors and the financial system. For example, when investors can obtain an accurate picture of the risks facing firms, they are better able to understand their value and, as a result, can better decide how to invest their money. Generally, comprehensive disclosures allow for more efficient capital allocation—or in other words, enable investors' money to be allocated where it will be used most productively. More efficient capital markets, in turn, can make it easier for the average firm to access financing. [3]

Disclosures can be mandatory or voluntary. In the United States, since individual firms otherwise might not disclose any information that might highlight costs or risks, all publicly traded companies are required to disclose “material” information to investors. The U.S. Supreme Court has held that a fact is “material to investors if there is ‘a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.’” [4] Current Securities and Exchange Commission (SEC) regulations require publicly traded companies to provide these disclosures quarterly (in forms known as 10-Qs) and annually (in 10-Ks). [5] In addition, Form 8-K is used when there is a specific event—like a merger—that triggers reporting requirements.

ARE CLIMATE DISCLOSURES LEGALLY REQUIRED?

To address questions concerning which climate-related disclosures are “material” to firms, in 2010 the SEC issued guidance clarifying that existing disclosure requirements apply to climate change. Firms must disclose the impact on the company of (1) actual or potential climate legislation and regulations, (2) consequences of climate regulations or business trends, and (3) the physical impacts of climate change. [6]

While this guidance makes clear that existing disclosure requirements apply to climate risks, it does not provide companies with a more specific framework for how to decide which risks to disclose and how to disclose them. As a result, many investors and scholars have argued that the current state of environmental disclosures is subpar. Not all firms disclose climate risks in their SEC disclosures, and those that do tend to use “boilerplate” language that does not allow investors and regulators to determine their specific levels of risk. A 2020 Moody's Analytics study of reporting from roughly 12,000 companies found that less than 20 percent had reported climate-related information and that there was “significant variation” in content, details, and quality. An earlier report by the Sustainability Accounting Standards Board (SASB) found that the “boilerplate” language was used more than 50 percent of the time when companies addressed topics that the SASB determined to be material. [8]

VOLUNTARY DISCLOSURE STANDARDS

Many companies—both public and private—voluntarily provide disclosures beyond what is required by securities regulations. They might do this to attract further investment, to get ahead of expected future regulation, or even to respond to pressure from major shareholders demanding more robust disclosure of climate risks and impacts. In recent years, there has been a dramatic rise in the voluntary reporting of environmental, social, and governance (ESG) risks and opportunities broadly—and a major aspect of ESG reporting relates to climate risk and how firms are managing these risks. [9]

A number of different voluntary reporting standards have emerged in the United States and globally. Some of the most notable are the Task Force on Climate-related Financial Disclosures (TCFD), the Sustainability Accounting Standards Board (SASB), the CDP (formerly the Carbon Disclosure Project), the Climate Disclosure Standards Board, and the Global Reporting Initiative. While the proliferation of different disclosure frameworks and standards indicates that many stakeholders with different perspectives are focused on climate and ESG disclosures, it has also generated confusion and duplication.



THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

Within the last few years, the Task Force on Climate-related Financial Disclosures (TCFD) has emerged as one of the predominant voluntary reporting frameworks for climate risks. The Financial Stability Board established the TCFD in 2015 to develop recommendations for more effective climate disclosures. In principle, these recommendations would enable stakeholders to better understand the exposure of the financial system and the broader economy to climate-related risks.

The TCFD released its final disclosure framework in 2017. [10] The TCFD’s aims were four-fold: (1) to be adoptable by all organizations; (2) to be included in financial filings; (3) to solicit decision-useful, forward-looking information on financial impacts; and (4) to focus on risks and opportunities related to the transition to a low-carbon economy. The disclosure framework is structured around four “thematic areas” that represent core elements of how organizations operate: governance, strategy, risk management, and metrics and targets.

According to a September 2020 report, more than 1,500 organizations, including more than 1,340 companies with a market capitalization of \$12.6 trillion and financial institutions responsible for assets of \$150 trillion, have expressed their support for the TCFD framework. [11] However, the TCFD reviewed publicly available reports from over 1,700 companies during fiscal years 2017, 2018, and 2019, and found that actual reporting of the potential financial risks related to climate change remained lower than levels of expressed support for their approach. [12]



THE SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB)

Another prominent voluntary climate disclosure approach has been put forth by the Sustainability Accounting Standards Board (SASB), founded in 2011. Similar to the TCFD, the SASB aims to establish and improve disclosure standards for financially material ESG topics. However, unlike the TCFD’s overarching framework approach, SASB identifies the subset of ESG issues most relevant to financial performance for firms in 77 different industries through industry-specific “materiality maps.” [13]

The SASB has recently attempted to significantly clarify the picture of climate disclosure standards and frameworks for issuers and investors. In late 2020, the SASB and four other major climate and ESG standards organizations issued a joint statement clarifying the complementary roles that each organization fills in the reporting landscape. [14] As an example, the SASB explains that its standards can be used as a more practical tool for implementing the framework recommended by the TCFD. [15]

CALLS FOR INCREASED SEC DISCLOSURE REQUIREMENTS

The expanding universe of private disclosure standards has prompted many in business, government, and academia to call for the SEC to adopt more explicit climate risk disclosure requirements for firms. For example, in September 2020, the U.S. Commodity Futures Trading Commission issued a report proposing clearer rules to improve the quality of climate risk disclosures. [16] One approach would be for the SEC to issue entirely new disclosure rules for climate risks. Another approach would be for the SEC to adopt one of the existing voluntary disclosure approaches as its own. Proponents argue that improving the quality of climate disclosures would reduce disclosure costs for firms, allow for better comparative benchmarking across firms, and better enable regulators to monitor risks in the financial system.



Some members of Congress are seeking to formalize this approach. For instance, H.R. 3623 (the Climate Risk Disclosure Act of 2019), would require firms to report additional specific information in public disclosures, including their greenhouse gas emissions, fossil-fuel-related assets, and financial strategies under different climate scenarios. [17] This bill has not yet passed either chamber of Congress.

In late February, Acting SEC Chair Allison Lee signaled that the Commission was increasing its focus on the climate information included in financial disclosures. Initially, the Commission will review the extent to which publicly traded companies have followed its 2010 guidance. While the action it will take afterward is still unclear, Lee acknowledged that investors increasingly consider climate-related issues and that it is the SEC's responsibility to "ensure that they have access to material information when planning for their financial future." [18]

IS CLIMATE CHANGE BROADENING OUR UNDERSTANDING OF MATERIALITY?

To add one additional wrinkle, the SEC’s current interpretation of materiality states that a climate risk is material to investors only when it is connected to a firm’s financial performance. Others argue for (and some voluntary disclosure regimes incorporate) a broader definition of materiality that includes environmental and climate risks independent of their impact on a firm’s financial performance. The argument for expanding our understanding of materiality is fairly simple at its core: investors increasingly care about more than a firm’s pure financial returns. To give one example, Larry Fink, CEO of BlackRock—the world’s largest institutional investor—stated in his 2021 letter to CEOs that “no issue ranks higher than climate change on our clients’ lists of priorities; they ask us about it nearly every day.” [19]

As a result of increased investor interest in how firms are considering climate change in their decision-making, requiring the disclosure of climate risks could be considered material—even if there is no concern about near-term negative financial impacts. The SEC does possess the authority to require broader disclosures, which it has done regarding topics like board meetings, compensation, and illegal actions by management without a demonstration of financial materiality. It may be the case under the Biden Administration that the SEC takes this broader approach, but this issue remains controversial.



WHAT’S NEXT FOR CLIMATE DISCLOSURES?

With an SEC more focused on climate risks, increasingly prevalent and established voluntary reporting frameworks, and an administration with ambitious climate goals, the climate disclosure environment has been developing at a rapid pace. Time will tell how the SEC’s increased focus on climate disclosure will end—with the adoption of explicit climate disclosure requirements, the continuation of existing requirements (perhaps with updated guidance), or something else. In any case, investor demand for climate information is only increasing, as are the risks that publicly traded firms face from the climate.

REFERENCES

- [1] “The Implications of Climate Change for Financial Stability.” Financial Stability Board, November 23, 2020. <https://www.fsb.org/2020/11/the-implications-of-climate-change-for-financial-stability/>.
- [2] For more detail on this example, [see an August 2018 Risk Center issue brief](#) outlining how the costs of utility-started wildfires in California are shared, and a February 2019 Risk Center report examining potential financing options for third-party wildfire damages.
- [3] There is a large amount of research in this area. For one of the first formal models of how this could take place, see: Douglas W Diamond and Robert E Verrecchia. “Disclosure, Liquidity, and the Cost of Capital.” *The Journal of Finance* 46, no. 4 (September 1, 1991): 1325–59. <https://doi.org/10.1111/j.1540-6261.1991.tb04620.x>.
- [4] *TSC Industries, Inc. v. Northway, Inc.*, 426 U.S. 438, 449 (1976).
- [5] The SEC is a government entity established in 1934 to (1) protect investors, (2) maintain fair, orderly, and efficient markets, and (3) facilitate capital formation. To this end, it proposes, updates, and enforces federal securities regulations, including disclosures.
- [6] Commission Guidance Regarding Disclosure Related to Climate Change, 75 Fed. Reg. 6290, 6293-95 (Feb. 8, 2010)
- [7] Michael R Bloomberg, “Task Force on Climate-related Financial Disclosures: 2020 Status Report.” September 22, 2020. https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Status-Report.pdf
- [8] “2017 State of Disclosure Report.” Sustainability Accounting Standards Board, December 2017. <https://www.sasb.org/wp-content/uploads/2017/12/2017State-of-Disclosure-Report-web.pdf>
- [9] For more detail on how this landscape has changed over time, see [The KPMG Survey of Sustainability Reporting 2020](#).
- [10] Michael R Bloomberg, “Recommendations of the Task Force on Climate-related Financial Disclosures.” Task Force on Climate-related Financial Disclosures, June 15, 2017. <https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf>
- [11] Michael R Bloomberg, “Task Force on Climate-related Financial Disclosures: 2020 Status Report.” Task Force on Climate-related Financial Disclosures, September 22, 2020. https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Status-Report.pdf
- [12] As the TCFD notes in this report, “not all organizations that support the TCFD recommendations implement them. Some organizations express support by convening their members and facilitating consistency in implementation, while others... express support by encouraging or requiring companies and other organizations to implement the recommendations.”
- [13] For more on how these standards differ by industry, [see the SASB’s Materiality Map here](#).
- [14] Janine Guillot, “Progress Towards a Comprehensive Corporate Reporting System.” Sustainability Accounting Standards Board, September 11, 2020. <https://www.sasb.org/blog/progress-towards-a-comprehensive-corporate-reporting-system/>
- [15] For more, [see SASB & Other ESG Frameworks](#).
- [16] Rostin Behnam and Bob Litterman, “Managing Climate Risk in the U.S. Financial System: Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission.” U.S. Commodity Futures Trading Commission, September 9, 2020. <https://www.cftc.gov/PressRoom/PressReleases/8234-20>
- [17] Climate Risk Disclosure Act of 2019, H.R. 3623, 116th Congress (2019). <https://www.congress.gov/bill/116th-congress/house-bill/3623/text>
- [18] Allison Lee, “Statement on the Review of Climate-Related Disclosure.” U.S. Securities and Exchange Commission, February 24, 2021. <https://www.sec.gov/news/public-statement/lee-statement-review-climate-related-disclosure>
- [19] Larry Fink, “Larry Fink’s 2021 letter to CEOs.” BlackRock, January 26, 2021. <https://blackrock.com/corporate/investor-relations/larry-fink-ceo-letter>