June 11, 2021

The Honorable Gary Gensler
Chairman
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Dear Chairman Gensler:

Jupiter Intelligence (Jupiter) appreciates the opportunity to submit these comments in response to the Securities and Exchange Commission's (SEC or Commission) March 15, 2021 request for public input on climate change disclosure issued by then-Acting Chair Allison Herren Lee.

Jupiter is a company that predicts risks from weather and climate change. More specifically, Jupiter has developed a technological tool, or platform, that predicts the physical risks of extreme weather events, such as hurricanes, wildfires, and floods, from hours to decades, and at a very granular level. Jupiter's tool already is being used by several federal, state, and city agencies as well as by a range of private sector entities across critical infrastructure sectors, such as the financial, insurance, housing, and power sectors.[1] When decision makers have access to such weather and climate risk prediction capabilities, they are better able to make informed decisions that drive superior risk management, risk disclosure, and resilient infrastructure planning.

Jupiter is responding to some, but not all, of the questions posed in the request for public input.

Introduction and Overarching Comments

Climate change already is threatening "the stability of the U.S. financial system" and nearly every critical infrastructure sector.[2]

I founded Jupiter in 2016, because it was clear that weather-related physical risks were not well understood or acted upon, and that the impacts of extreme weather events were, and are, increasing in frequency and severity over time. Jupiter's findings on flooding and other perils show "a significant underestimation of risk by insurers and financial institutions that pose a

[1] Jupiter supports the risk assessments and resiliency investments of some of our country's largest corporations in asset management, banking, insurance, energy, and a host of other sectors, as well as the U.S. Air Force, the Federal Emergency Management Agency (FEMA), the U.S. Department of Housing and Urban Development (HUD), and public sector customers in Florida and New York.

[2] Commodity Futures Trading Commission's (CFTC) Climate-Related Market Risk Subcommittee of the Market Risk Advisory Committee, *Managing Climate Risk in the U.S. Financial System*, September 2020. Jesse Keenan, a Jupiter advisor, is a Co-editor of this Report.

potential economic calamity."[3] Firms that fail to act in the best interests of their shareholders and stakeholders by accurately capturing and addressing growing physical risks of climate change will be "punished" by the markets.

Thus, Jupiter wholeheartedly believes that the SEC should ***mandate the disclosure of material climate-related risks in financial filings***. A number of businesses and investors have been pushing for mandatory disclosure of climate-related risks for more than a decade. Jupiter was pleased to see then-Acting Chair Lee's statement in a New York Times op-ed to this effect that: "[d]ealing with and adapting to the coming calamities means we must price climate risk accurately," and her further recognition that, realistically, this can happen "only through mandatory public disclosure."[4] Jupiter also is pleased with the subsequent actions that have led to this request for public action.

In addition, Jupiter appreciates that the Federal Reserve Board and the Commodity Futures Trading Commission (CFTC) have begun to detail how climate change poses major risks to the stability of the U.S. financial system and its institutions, concluding that U.S. financial regulators must move swiftly to understand, measure, and address those risks.[5] At the state level, New York has notified its regulated financial institutions that they are going to have to disclose climate-related financial risks to better manage the financial impacts of climate change.[6]

In many cases, companies do not understand their current risk, let alone their future risk.[7] This is one reason why requiring companies to disclose their climate risk is so important. Having them establish a baseline and measure their risk – and changes thereto – will enable companies, their investors and shareholders, as well as consumers to better understand these risks. The companies then will be able to improve their management of such risks. As Federal Reserve Governor Lael Brainard noted in November 2020 when the Financial Stability Board (FSB) released a Report entitled *The Implications for Climate Change on Financial Stability,* "[i]t is vitally important to move from the recognition that climate change poses significant financial stability risks to the stage where the quantitative implications of those risks are appropriately assessed and addressed."[8]

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[3] Jupiter Intelligence, "BANKING & INSURANCE SPECIAL REPORT: A Deluge of Risk...and a Looming Crisis," prepared for Miami-Dade County, FL, January 2020.

[4] The Hon. Allison Herren Lee, Securities and Exchange Commission, "Big Business's Undisclosed Climate Crisis Plans," New York Times op-ed, September 27, 2020.

[5] U.S. Commodity Futures Trading Commission (CFTC)'s Climate-Related Market Risk Subcommittee of the Market Risk Advisory Committee, *Managing Climate Risk in the U.S. Financial System* Report, September 2020 (hereinafter referred to as CFTC Report); and, Financial Stability Board (FSB), *The Implications for Climate Change on Financial Stability* Report, November 23, 2020 (hereinafter referred to as FSB Report).

[6] New York State's Department of Financial Services, Industry Letter on "Climate Change and Financial Risks," October 29, 2020.

[7] Jupiter can help a company assess its degree of risk today and decades into the future. Jupiter also can provide companies with an emergency response plan that it can integrate into its operations. See also: Katz, Neil, "Climate Corner Office: Rich Sorkin, Jupiter Intel CEO, Believes Climate Predictions Will be Big Business," The Weather Channel, September 11, 2019, available at: https://features.weather.com/collateral/climate-corner-office-rich-sorkin-ceo-jupiter-intel/.

[8] Federal Reserve Governor Lael Brainard, Statement, upon the release of the FSB Report, November 23, 2020.

According to a recent article, which cites a KPMG "Survey of Sustainability Reporting 2020," 54 percent of U.S.-based companies that are among the 250 largest globally report climate change risks.[9] While this is a good beginning, the reporting that exists needs to be dramatically improved, as do the follow-on actions. For instance, reducing disclosure to a single number does not adequately capture the complexity or range of risks, assumptions used, or available analytics. Clearly, too, more companies need to report their climate risks.

- It is time for the United States to act on this front, and Jupiter applauds the strong push in this direction from the Biden Administration. A number of other countries already are taking steps with respect to climate disclosure.

- States, such as New York, also are beginning to act; the United States should avoid a patchwork approach to climate risk disclosure requirements.[10]

- I also have called for corporate action and leadership and urge global corporations to move to the forefront of physical climate risk management and disclosure.

As the SEC continues to examine climate risk disclosures, Jupiter suggests consideration of the following principles to help guide your process.

- Climate risk disclosure is a first step in accelerating investments in emissions reductions and resilience. However, disclosure alone is by no means sufficient.

- A common, agreed-upon set of scenarios, time horizons, acceptable risk levels, and metrics are among the criteria that will enable companies to better assess and manage changes in risk over time. These criteria also would facilitate and accelerate more meaningful disclosure reporting comparisons. Today, analytics are sufficiently mature to support comparisons among companies ***within*** a given industry or sector. However, more needs to be done to be able to accurately make comparisons ***across*** sectors.

- Harmonization, where possible, among U.S. policies and regulations and global regulations is an important goal, so that impacted U.S.-based multinational companies do not have to meet multiple standards here and in other parts of the world.

- The Federal government should lead by example and also should be held accountable to climate risk and ESG disclosure metrics and standards.

- A nuanced view of the state of the science and analytics should guide the metrics and tools used, rather than a desire for a simple one-size-fits-all approach.

- Jupiter also recommends that, if the SEC moves forward with climate-related risk disclosure requirements, it consider requiring corporations to incorporate future risks to

[9] Compliance Week, "Biden's SEC set to require disclosure of ESG, climate change risk," December 3, 2020.
[10] New York State's Department of Financial Services, Industry Letter on "Climate Change and Financial Risks," October 29, 2020.

assets in their disclosures. Undertaking this step alone would represent enormous progress.

- Greater transparency is needed in such disclosures.

- In addition, the federal government needs a holistic approach to climate risk disclosure requirements.

- Disclosure requirements must be forward-looking, rather than looking at historical data to enhance infrastructure resilience.

- The SEC also should consider clarifying the definition of materiality for medium- and long-term risks (both qualitative and quantitative).

Questions for Consideration

2. **What information related to climate risks can be quantified and measured? How are markets currently using quantified information? Are there specific metrics on which all registrants should report (such as, for example, scopes 1, 2, and 3 greenhouse gas emissions, and greenhouse gas reduction goals)? What quantified and measured information or metrics should be disclosed because it may be material to an investment or voting decision?**

   Should disclosures be tiered or scaled based on the size and/or type of registrant)? If so, how? Should disclosures be phased in over time? If so, how?

   How are markets evaluating and pricing externalities of contributions to climate change? Do climate change related impacts affect the cost of capital, and if so, how and in what ways? How have registrants or investors analyzed risks and costs associated with climate change? What are registrants doing internally to evaluate or project climate scenarios, and what information from or about such internal evaluations should be disclosed to investors to inform investment and voting decisions? How does the absence or presence of robust carbon markets impact firms' analysis of the risks and costs associated with climate change?

- Jupiter encourages the SEC to consider requiring both qualitative and quantitative disclosures.

- Reporting should consist of more than a single number.

- The SEC also should consider requiring disclosure of physical risk as well as of transition risk (associated with the transition to a low-carbon economy), at a minimum.

- Physical risks are among the types of climate risks that can be quantified and measured. The table below consists of the physical risks that are included as part of a larger set of risks identified by the Task Force on Climate-related Financial Disclosures (TCFD) in its June 2017 *Final Report: Recommendations of the TCFD*.[11] For these physical risks, Jupiter has developed a set of metrics it recommends for consideration to measure these particular risks.

Type	Climate-Related Risk	Suggested Metric
Physical	Acute: Increased severity of extreme weather events such as cyclones and floods	The following should be made available at several return periods to help users understand the changing frequency and severity of storms: – Flood depth at key return periods due to storm surge from tropical cyclones and extra-tropical cyclones – Flood depth due to riverine floods and intense rainfall – Precipitation during extreme rainfall events – High winds due to tropical cyclones, extra-tropical cyclones, and severe convective storms – Frequency/probability of hail, severe thunderstorms, and wildfire
	Chronic: Changes in precipitation patterns and extreme variability in weather patterns	– Total annual precipitation, total summer/winter precipitation – Days with significant rainfall, snowfall – Frequency of heat waves and cold waves
	Chronic: Rising mean temperatures	– Days exceeding historical 99th percentile temperature – Annual cooling degree days, heating degree days – Average temperature by season
	Chronic: Rising sea levels	– Water depth at the year's highest high tide (much more helpful than x cm of sea level rise)

- Jupiter's technology can be modified and/or expanded to help standardize such risks and the associated impacts. This could help the SEC identify potential climate-related disclosure requirements in the future.

- A nuanced view of the state of the science and analytics should guide the metrics and tools used, rather than a simple, one-size-fits-all approach.

- Jupiter also recommends that, if the SEC moves forward with climate-related risk disclosure requirements, it consider requiring corporations to incorporate future risks to assets in their disclosures. Undertaking this step alone would represent enormous progress.

- The Federal government should lead by example and be held accountable to climate risk and ESG disclosure metrics and standards.

- Jupiter suggests that standards be tiered, and phased in over time, starting with the largest corporations, and requiring these disclosures to be more comprehensive or detailed, then

[11] Task Force on Climate-related Financial Disclosures (TCFD), *Final Report: Recommendations of the TCFD*, June 2017. The physical risks in the table herein are drawn from an excerpt from this Report: E08 - Table 1 & 2.pdf (tcfdhub.org). *The metrics are Jupiter's own.*

moving to smaller and younger companies, as echoed, for example, in the public comments of Calvert Research and Management (Calvert).[12]

4 . What are the advantages and disadvantages of establishing different climate change reporting standards for different industries, such as the financial sector, oil and gas, transportation, etc.? How should any such industry-focused standards be developed and implemented?

- A common, agreed-upon set of scenarios, time horizons, acceptable risk levels, and metrics are among the criteria that will enable companies to better assess and manage changes in risk over time. These criteria also would facilitate and accelerate more meaningful disclosure reporting comparisons. Today, analytics are sufficiently mature to support comparisons among companies ***within*** a given industry or sector. However, more needs to be done to be able to accurately make comparisons ***across*** sectors.

- Federal and state regulators should work closely with financial institutions to undertake "pilot climate risk stress testing" for sectors (particularly for agriculture and community and regional banks) to identify specific risks posed to each sector and enable regulators to tailor their regulations accordingly.[13]

5. What are the advantages and disadvantages of rules that incorporate or draw on existing frameworks, such as, for example, those developed by the Task Force on Climate-Related Financial Disclosures (TCFD), the Sustainability Accounting Standards Board (SASB), and the Climate Disclosure Standards Board (CDSB)?[7] Are there any specific frameworks that the Commission should consider? If so, which frameworks and why?

- Jupiter supports drawing, at a minimum, on the TCFD, SASB, and CDSB; please see additional information in the subsequent bullets. Reducing duplication of efforts and streamlining processes and activities in rulemaking processes is cost-effective, efficient, and beneficial in terms of research done to date, building on lessons learned, and more.

- In September 2020, five leading voluntary framework and standard-setting organizations – the CDP, the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC), and the Sustainability Accounting Standards Board (SASB) – announced their intent to develop a comprehensive corporate reporting system for sustainability disclosures, including climate change.[14] Recently, the IIRC and SASB announced plans to the Value

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[12] Calvert Research Management (Calvert), public comments in response to this SEC request for public input on climate disclosures, page 6, June 1, 2021.

[13] CFTC Report.

[14] CDP, the Climate Disclosure Standards Board (CDSB), the Global Reporting Initiative (GRI), the International Integrated Reporting Council (IIRC), and the Sustainability Accounting Standards Board (SASB), *Statement of Intent to Work Together Towards Comprehensive Corporate Reporting*, facilitated by the World Economic Forum, Impact Management Project, and Deloitte, September 2020.

Reporting Foundation, which will streamline and facilitate the effort toward an integrated reporting framework.[15]

- The International Financial Reporting Standards (IFRS) Foundation, the umbrella body for the London-based International Accounting Standards Board (IASB), is laying the groundwork for a global Sustainability Standards Board, which it is aiming to announce at the annual international climate negotiations, i.e., the 26th United Nations Climate Change Conference of the Parties (COP26), this coming November.[16] In September 2020, the IFRS Foundation published a Consultation Paper, which noted that "all stakeholders share a common message: there is an urgent need to improve the consistency and comparability in sustainability reporting. A set of comparable and consistent standards will allow businesses to build public trust through greater transparency of their sustainability initiatives."[17]

- After its February 2021 board meeting, the International Organization of Securities Commissions (IOSCO), recognized as the global standard setter for securities regulation, stated: "IOSCO sees an urgent need for globally consistent, comparable, and reliable sustainability disclosure standards and announces its priorities and vision for a Sustainability Standards Board under the IFRS Foundation."[18] As part of its future plans, IOSCO – whose membership regulates over 95 percent of the world's securities markets in approximately 130 jurisdictions – will work with the IFRS Trustees as it develops sustainability and disclosure standards alongside the IASB.

9. **What are the advantages and disadvantages of developing a single set of global standards applicable to companies around the world, including registrants under the Commission's rules, versus multiple standard setters and standards? If there were to be a single standard setter and set of standards, which one should it be? What are the advantages and disadvantages of establishing a minimum global set of standards as a baseline that individual jurisdictions could build on versus a comprehensive set of standards? If there are multiple standard setters, how can standards be aligned to enhance comparability and reliability? What should be the interaction between any global standard and Commission requirements? If the Commission were to endorse or incorporate a global standard, what are the advantages and disadvantages of having mandatory compliance?**

   - Harmonization, where possible, among U.S. policies and regulations and global regulations, is an important goal, so that impacted U.S.-based multinational companies do not have to meet multiple standards here and in other parts of the world, which could pose additional compliance burdens and costs.

[15] PRNewswire.com, "IIRC and SASB announce intent to merge in major step towards simplifying the corporate reporting system," November 25, 2020.
[16] Reuters, "New global sustainability disclosures board draws heavyweight backing," June 7, 2021.
[17] IFRS Foundation, *Consultation Paper on Sustainability Reporting*, September 2020.
[18] International Organization of Securities Commissions (IOSCO), "IOSCO sees an urgent need for globally consistent, comparable, and reliable sustainability disclosure standards and announces its priorities and vision for a Sustainability Standards Board under the IFRS Foundation," media release, February 24, 2021.

- Due to growing calls for standardization around the world, the alphabet soup of agencies and organizations handling climate disclosure recommendations, and a relative lack of quality in disclosures, a global standard for climate reporting merits serious consideration.

11. Should the Commission consider other measures to ensure the reliability of climate-related disclosures? Should the Commission, for example, consider whether management's annual report on internal control over financial reporting and related requirements should be updated to ensure sufficient analysis of controls around climate reporting? Should the Commission consider requiring a certification by the CEO, CFO, or other corporate officer relating to climate disclosures?

- Climate risk disclosure is a first step in accelerating investments in emissions reductions and resilience. However, disclosure alone is by no means sufficient.

- Federal and state regulators should work closely with financial institutions to undertake "pilot climate risk stress testing" for sectors (particularly for agriculture and community and regional banks) to identify specific risks posed to each sector and enable regulators to tailor their regulations accordingly.[19] In particular, the CFTC report recommends that the Financial Stability Oversight Council, which is chaired by the Treasury Secretary and also includes the CFTC chair as a voting member, update its mandate to include climate risks in its evaluation of threats to U.S. financial stability.

- See also the references to other efforts under Question #5 above.

15. In addition to climate-related disclosure, the staff is evaluating a range of disclosure issues under the heading of environmental, social, and governance, or ESG, matters. Should climate-related requirements be one component of a broader ESG disclosure framework? How should the Commission craft climate-related disclosure requirements that would complement a broader ESG disclosure standard? How do climate-related disclosure issues relate to the broader spectrum of ESG disclosure issues?

- Jupiter believes that climate-related disclosure indeed should be one component of a broader ESG disclosure framework. Jupiter commends the SEC's Investor Advisory Committee for recognizing the importance of addressing, and need to address, ESG disclosure in its May 21, 2020 Recommendation to this effect.[20] Jupiter echoes and underscores the SEC Investor Advisory Committee's recognition that: ESG reporting is a "mainstream, global investment and geopolitical priority."[21]

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[19] CFTC Report.
[20] SEC Investor Advisory Committee, "Recommendation of the SEC Investor Advisory Committee Relating to ESG Disclosure," May 21, 2020.
[21] Ibid.

Additional Background on Jupiter Intelligence

Jupiter's unique, world-class ClimateScore™ risk platform provides predictions of extreme weather events from the street level to the portfolio level on time horizons ranging from a few hours to decades, and at an extremely high resolution. These tools enable customers to assess the vulnerability of systems and critical infrastructure, and to make operational and planning decisions over short- and long-term time horizons that will help improve the resilience of infrastructure assets. These products combine weather prediction and climate models, with Artificial Intelligence (AI), cloud computing, satellite data, and more, providing services that surpass what is available from the public sector or universities.

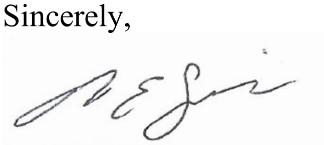
In fact, *WIRED Magazine* wrote: "If you run a business, or maintain a city, or plan power plants or highways or bridges, you'd like to know how bad things are, and how bad they're going to get. . . . Jupiter explicitly incorporates climate change into its models for catastroph[ic] risk, both proprietary and public, and then offers that knowledge to the kind of people who might lose money when the floods, fires, storms, and heat waves really kick in."[22]

Jupiter seeks to help fulfill the need to provide highest-quality, actionable data to facilitate the understanding of the impacts of climate change in a form that is relevant, affordable, and easy to use by decision makers. Customers and citizens rely on such data to better understand, manage, disclose, and reduce risks related to climate change. It seeks to provide transparency to ensure that its analytics are credible to both customers and the broader scientific and policy communities.

Conclusion

In this new environment filled with fast-moving shifts in climate policy, it is critical to implement superior climate risk management strategies, train boards and senior management to address this material risk, and craft measures to conduct scenario analyses at the highest level. The prosperity and future of global corporations, the economy, and our planet depend on it. Jupiter again commends you for your leadership and stands ready to be a resource to you at any time.

Sincerely,



Rich Sorkin
CEO
Jupiter Intelligence

Cc: Hon. Allison Herren Lee, Commissioner
Hon. Hester M. Peirce, Commissioner
Hon. Elad L. Roisman, Commissioner
Hon. Caroline A. Crenshaw, Commissioner

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[22] Rogers, Adam, "Companies Can Predict Climate Catastrophes for You – as a Service," *WIRED,* April 29, 2019.