

THE CHALLENGES OF COUNTING CLIMATE CHANGE RISKS IN FINANCIAL MARKETS

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Key Points

- Climate change represents an overlooked risk in financial markets that could substantially affect the valuation of many publicly listed companies.
- In response to this concern, a nascent climate change risk disclosure regime has emerged, consisting of numerous initiatives designed to standardize, measure and communicate these risks to investors.
- A lack of coordination and enforcement limits the capacity of this regime to reduce uncertainty on climate change risks within financial markets.
- International financial regulators should initiate a project to develop a mandatory climate change risk disclosure standard and should conduct research that brings together financial and climate change modelers to reduce the uncertainty involved in measurement.

Introduction

Financial reporting standards play a critical function in the world's economy by providing information to investors that inform capital allocation decisions. These standards help to minimize risk and speculation by giving investors a better understanding of an asset's underlying fundamentals. In recent years, climate change has been identified as a risk that existing reporting standards have yet to adequately measure and communicate to investors. In response to this concern, a climate change risk disclosure regime has emerged, defined by a range of voluntary, regulatory and accounting governance initiatives. Although the regime is a promising development involving a range of influential financial constituencies, it is highly fragmented and lacks the coordination and enforcement necessary to adequately measure and communicate the impacts of climate change on financial markets.

How can policy makers leverage this nascent regime to improve governance of climate change risks within financial markets? This policy brief describes the background for the climate change risk disclosure regime and challenges that limit its effectiveness, and presents several policy recommendations to improve its capacity to measure and communicate climate change risks.

Background

Financial disclosure standards dictate the information that must be reported by publicly listed firms in their annual financial statements. International and national financial standard setters have been delegated authority to design and implement these standards. The International Accounting Standards Board (IASB) is the global regulator charged with developing reporting standards. As of 2015, 138 different jurisdictions had adopted the IASB's International Financial Reporting Standards (IFRS). Domestic financial regulators are ultimately responsible for adopting the IFRS or developing their own reporting standards. Examples of these reporting standards include the Canadian Financial Reporting & Assurance Standards, the European Union's Accounting Directive, the US Securities and Exchange Commission Regulations S-K, the United Kingdom's Companies Act, and the Japan Financial Instruments and Exchange Act.



Historically, the global financial reporting regime has focused on measuring and communicating “decision-useful” information on a company’s economic fundamentals, such as its performance, earnings and structure. Investors, for the most part, did not consider environmental issues to be decision-useful. The costs of cleaning up and fines associated with the 1989 Exxon Valdez spill changed this perception. The spill established a link between a firm’s environmental performance and financial risk. In response, investors partnered with a group of non-governmental organizations to form the Coalition for Environmentally Responsible Economies (Ceres) and initiate a set of voluntary reporting standards that could provide information on environmental performance. In 1997, Ceres expanded its standards by establishing the Global Reporting Initiative, which currently represents the world’s most recognized and popular standard for reporting corporate environmental, social and governance information.

As the body of evidence supporting climate change has grown, so too has the number of voluntary climate change risk reporting standards. The goal of climate change risk disclosure is twofold. First, disclosure improves financial stability by providing information on potential risks generated by investment in areas of the economy exposed to regulatory or physical climate change impacts. Second, disclosure improves environmental accountability by generating information that investors can use to align their portfolios with firms seeking to reduce their contribution or exposure to climate change.

The Carbon Disclosure Project (CDP) was launched in London, England, in 2002 as a partnership between investors in the London investment community and environmentalists. The CDP’s mandate is to aggregate and standardize the disclosure of climate change risk information (CDP 2010). Its annual survey asks the world’s largest publicly listed companies to voluntarily provide information on physical risks (i.e., costs from the changing environment), regulatory risks (i.e., costs associated with the implementation of greenhouse gas [GHG] reduction regulation), legal risks (i.e., costs associated with potential lawsuits targeting a firm’s climate change record), in addition to reporting on GHG emissions. To inform its emissions measurement standards, the CDP uses the Greenhouse Gas Protocol — a framework developed by the World Business Council for Sustainable Development and the World Resources Institute (2001). The GHG Protocol is important as it established the standard organizational boundaries for assessing emissions. The CDP has been quite successful and today represents the world’s largest database for information on corporate climate change information. In fact, investors representing more than US\$84 trillion in assets are members of the CDP and support its disclosure survey.

More recently, the accounting industry has started to work with the CDP and in 2007 formed an initiative called the Climate Disclosure Standards Board (CDSB). Unlike its predecessors, the CDSB directly involves professional accountants in developing its disclosure standards. The CDSB is designed to align existing voluntary reporting initiatives with the accounting requirements established by mandatory reporting rules outlined in international and domestic financial regulations. Accountants offer expertise on how to harmonize existing risk and emissions disclosure regulations in ways that produce the decision-useful category that investors use to make capital allocation decisions. In 2012, the CDSB released its Climate Change Reporting Framework, which outlines how reporting organizations can measure the impacts of climate change risks on their company and communicate those risks to investors.

A number of regulatory disclosure requirements focusing on environmental risks have also emerged. Unlike their voluntary and accounting counterparts, these regulations focus on environmental risks more broadly, but climate change risks fit into this disclosure category. South Africa and France have adopted mandatory rules that require each publicly listed firm to measure and disclose its environmental risks and obtain a third-party audit. Australia and the European Union have adopted similar rules but do not require a third-party audit. The Netherlands requires a separate annual report that assesses environmental risks. Regulators in Brazil and Taiwan require companies to identify whether they produce an environmental or corporate social responsibility report. Authorities in Canada, Italy and the United States have issued guidance that any environmental risks that have a material impact on the firm must be disclosed (Initiative for Responsible Investment 2013).

At the international level, regulators have yet to address concerns about including environmental risks in disclosure requirements. But research on existing international financial standards reveals language that is inclusive to environmental risks. For example, the Basel Committee on Banking Supervision’s Third Accord identifies the promotion of a “resilient” banking sector as a key objective. In addition, the Financial Stability Board (FSB) supports the disclosure of information on a bank’s business model, the assumptions used in their financial models, and non-financial risks (Enhanced Disclosure Task Force 2012). Although these standards do not explicitly identify climate change risks, regulators could cite this language as a justification for disclosure (Anderson 2014). Climate change could impact banks that are overexposed to assets that face GHG reduction legislation and might need to account for these risks in their models.

Despite the promise generated by the emergence of climate change risk disclosure, there is little evidence that these initiatives have met the needs of investors or report preparers. The United

Nations Principles for Responsible Investment (2013) has analyzed the use of financial reporting standards that provide environmental information and whether it influences investor decision making. Investors identified the lack of consistent disclosure as a major challenge that limits their capacity to assess how environmental information influences analysis of corporate performance. Bloomberg completed a similar analysis and concluded that, despite an increase in the use of environmental information, only one percent of its total user base involves this information in investment decision making (Business for Social Responsibility 2012). These findings parallel research on the effectiveness of climate change risk disclosure that finds little evidence that the information produced is helpful or influences investor decision making (Kolk, Levy and Pinkse 2008; Smith, Morreale and Mariani 2008). Despite these limitations, the demand for risk disclosure continues to grow. Even traditionally conservative financial institutions, such as the Bank of England, are starting to inquire whether financial markets are exposed to climate change risks (Clark 2014).

Assessing Climate Change Risk Disclosure

Based on an assessment of the existing disclosure standards, there are three key limitations. First, the patchwork of existing standards is inefficient and lacks the harmonization necessary to meet the needs of report preparers and investors. Investors complain about competing voluntary, accounting and regulatory standards that limit the comparability of information among different jurisdictions and standards. The existing patchwork of standards generates additional transaction costs for report preparers, as it is difficult to determine which standard or approach they should adopt. This increases the costs of additional training or measurement technologies as firms must develop expertise in responding to different reporting requirements rather than a single mandatory approach. In particular, there are multiple standards supported by independent organizations that are often inconsistent and redundant. The CDSB establishes similar disclosure requirements to the CDP, but includes an additional set of guidance from the financial reporting model designed to help align reporting with mainstream requirements. The mainstream requirements that demand some sort of environmental disclosure are also inconsistent among different jurisdictions, as some require information to be audited whereas others require firms to submit a separate report.

In addition to these inefficiencies, standards lack adequate enforcement to ensure disclosure is consistent across firms and jurisdictions. Most frameworks are voluntary, and thus rely on reporting organizations to determine what information should be disclosed. In addition, most standards adopt a “comply or explain” model of reporting: if a firm decides that it does not want to disclose or provide information to meet the standard, it simply needs to provide a justification. As a consequence, the

existing framework does not produce sufficient information to help investors make decisions. Third-party audits have been identified as an important mechanism to assess whether disclosure is sufficient, but only South Africa and France have adopted this approach, whereas the other standards depend largely on the goodwill of reporting organizations. At the same time, however, auditors have expressed concern that they lack the expertise and capacity to enforce disclosure.

The third limitation is the inherent uncertainty involved in measuring the financial risks of climate change, specifically whether risks are material (that is, will cause an unforeseen outflow of resources from the organization). Financial reporting is most effective at capturing company performance when there is evidence of a “present obligation” or a clear outflow of resources from the firm. Changes in stock price, debt levels or mergers and acquisitions are all clear, present obligations that can be measured. Climate change impacts are far more temporally and spatially diffuse than traditional present obligations. Report preparers face significant uncertainty in assessing when climate change risks are likely to manifest as a material outflow, and whether their operations are located in areas where such risks are likely to occur.

The urgency to improve the measurement and reporting of climate change risks within financial markets is growing. Large institutional investors and pension funds are actively exploring whether measuring climate change risks is a component of the fiduciary duty to their shareholders. In particular, there is a concern that large fossil fuel assets could become “stranded” as investors divest in response to growing awareness around the impacts of climate change on the economy. At the same time, fossil fuel companies continue to aggressively invest in exploration and expansion. A global climate change financial reporting regime is justified as a means to help clarify these potential risks.

Policy Recommendations

International financial regulators should standardize mandatory climate change risk disclosure. The global financial regulatory regime has a mandate that supports the harmonization and coordination of different reporting standards. For this reason, there is no need to “reinvent the wheel” when seeking to improve the climate change risk reporting regime. A mandatory and harmonized climate change risk reporting standard would eliminate any redundancy or inconsistencies that create inefficiencies for preparers and investors, and ensure that the information disclosure is consistent. The IASB or the International Organization of Securities Commissions (IOSCO) could lead this process. The IASB could use its expertise and authority to standardize the accounting of climate change risk disclosure. Organizations such as the CDSB have already developed a viable

framework that could be adopted by the IASB. In addition, the IASB has experience working on this issue, but has yet to pursue a formal standard.

As the regulatory body charged with coordinating international standards for securities regulators, IOSCO should initiate a similar project. IOSCO's mandate includes the promotion of consistent international standards for securities regulators. Existing standards on environmental and climate change risk adopted by security regulators are poorly coordinated and inconsistent, which justifies a much stronger role for IOSCO.

Enforcement of a mandatory standard faces significant political obstacles, as most governments responsible for large financial markets (for example, the United States and the United Kingdom) remain focused on post-financial crisis regulatory reform. But these governments are also moving ahead with domestic and international climate change regulations. The United Kingdom is a strong proponent of an international emissions treaty through the United Nations Framework Convention on Climate Change and is a member of the European Union's Emission Trading Scheme. The United States recently adopted a bilateral climate change agreement with China, and its subnational governments are active in GHG emission reduction regimes. Political support for strengthening climate change regulations between the United States and the United Kingdom could provide an opportunity for proponents of similar disclosure regulations within financial markets.

International financial regulators should establish research on strategies that can help reduce uncertainty when assessing the financial risks of climate change. The FSB can help reduce uncertainty on the spatial and temporal aspects of climate change by supporting a research project that brings together leading financial and climate change modellers. Financial models represent important tools that practitioners and regulators use to reduce uncertainty about future risk. Climate change researchers also rely on forward-looking models to assess the economic risks of global warming. These two communities remain within their respective professional "silos," with little interaction. As the head of the global financial regime, the FSB can take a leadership role by bringing together financial and climate change experts to assess how each community could help address gaps in their respective approaches. The Basel Committee on Banking Supervision has oversight on the models that banks use to inform their decision making. This organization represents a potential host for research within the FSB's jurisdiction that helps leverage the financial and climate change research communities' expertise in managing the financial risks of climate change.

Conclusion

Climate change risk represents an overlooked threat to the stability of global financial markets. Although a nascent climate change risk reporting regime has emerged, supported by various voluntary, accounting and regulatory standards, it lacks the coordination and enforcement necessary to adequately measure and communicate these risks. Challenges to this regime include inefficiency related to the fragmentation of current standards, inadequate enforcement and the inherent uncertainty involved in measuring climate change risks. Fortunately, the global financial regime has the resources and institutional capacity to address these challenges. International financial standard setters, specifically the IASB and IOSCO, should initiate projects seeking to develop a mandatory climate change risk-reporting standard. Governments that already have active climate change regulatory regimes could also support improvements in disclosure. The FSB can buttress this effort by bringing together financial and climate change risk modellers to reduce uncertainty involved in managing climate change risks.

Works Cited

- Anderson, Charles. 2014. "UNEP Finance Initiative: Sustainable Financing Policy & Basel III." www.ficci.in/events/22128/ISP/Charles-Anderson_UNEP-FI_Plenary-Session-2_UNEP-FICCI-New-Delhi_251114.pdf.
- Business for Social Responsibility. 2012. *Trends in ESG Integration in Investments*. www.bsr.org/reports/BSR_Trends_in_ESG_Integration.pdf.
- Clark, Pilita. 2014. "BoE Demands Climate Answers from Insurers." *Financial Times*, October 27. www.ft.com/intl/cms/s/0/dedd1954-5bad-11e4-a674-00144feab7de.html#axzz3Lh9OJmdc.
- CDP. 2010. "What We Do." www.cdproject.net/en-US/WhatWeDo/Pages/overview.aspx.
- . 2013. "CDP Investor Initiatives." www.cdproject.net/en-US/WhatWeDo/Pages/investors.aspx.
- Enhanced Disclosure Task Force. 2012. *Enhancing the Risk Disclosures of Banks*. Basel: FSB.
- Kolk, Ans, David Levy and Jonathan Pinkse. 2008. "Corporate Responses in an Emerging Climate Regime: The Institutionalization and Commensuration of Carbon Disclosure." *European Accounting Review* 17 (4): 719–45.
- Smith, Jeffrey A., Matthew Morreale and Michael E. Mariani. 2008. "Climate Change Disclosure: Moving Towards a Brave New World." *Capital Markets Law Journal* 3 (4): 469–85.
- Initiative for Responsible Investment. 2013. *Current Corporate Social Responsibility Disclosure Efforts by National Governments and Stock Exchanges*. Working Paper of the Initiative for Responsible Investment. Boston, MA: Harvard Kennedy School.
- United Nations Principles for Responsible Investment. 2013. *How Investors Are Addressing Environmental, Social and Governance Factors in Fundamental Equity Valuation*. www.unpri.org/viewer/?file=wp-content/uploads/Integrated_Analysis_2013.pdf.
- World Business Council for Sustainable Development and World Resources Institute. 2001. "The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard." December. www.ghgprotocol.org/files/ghg-protocol-2001.pdf.

About the Author



Jason Thistlethwaite is a CIGI fellow, as well as assistant professor in the School of Environment, Enterprise and Development in the Faculty of Environment at the University of Waterloo.

At CIGI, Jason's research focuses on the implications of the new environmental and climate change risks disclosure regime on the financial sector, and on recommendations to help align policy and industry's resources toward an effective approach to mitigate climate change. To inform this research, Jason works directly with business and government leaders in the insurance, banking, real estate, building and investment industries. His research has been published in a number of academic and industry journals, and he is a frequent speaker and media contributor on Canada's growing vulnerability to extreme weather. Jason holds a Ph.D. in global governance from the Balsillie School of International Affairs.

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CIGI Papers No. 47
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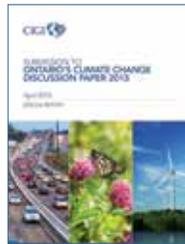
In recent years, a plurality of different governance initiatives has emerged that are designed to expand the disclosure of environmental risk within financial markets. The emergence of these initiatives represents an important policy development, and it has the potential to reduce environmental risk within the financial sector by incentivizing investments in sustainable economic activity capable of long-term value creation. Unfortunately, environmental risk disclosure has yet to be assessed as a field of governance activity in addition to its potential effectiveness in improving disclosure within financial markets.



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