



## Integrating Climate Change Risk into Institutional Investing: From Rhetoric to Action

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#### **Shelina Visram:**

Hello everyone. Welcome to a Toronto Centre Podcast. I'm Shalina Visram, Senior Program Director with Toronto Centre. Today's podcast will address some key topics for leaders, including financial regulators and supervisors to consider on the widespread impacts of climate change, the evaluation of the disclosure landscape in regard to climate change, and what tools are available for financial market participants to manage and reduce associated risks. I have the pleasure of speaking with Kathryn Bakos, Director, Climate Finance and Science, Intact Centre on Climate Adaptation. Welcome, Kathryn.

#### **Kathryn Bakos:**

Hi, Shelina. Thanks so much for having me.

#### **Shelina Visram:**

Our pleasure and thank you very much for your time. Before we get into the questions, may I please request that you make brief introductory remarks and speak to the Intact Centre and your research focus areas, please?



**Kathryn Bakos:**

Of course. Well, for your listeners who are unfamiliar with the Intact Centre on Climate Adaptation, the Intact Centre is an applied research centre out of the University of Waterloo that helps homeowners, communities, businesses, and governments reduce risks associated with climate change and extreme weather events.

So, that's particularly in relation to flooding, wildfire, and extreme heat. Under my personal domain, I've performed the first ever quantitative analysis in Canada looking at the impact flooding has on the Canadian housing market, and my area focus of research is also in regards to engaging the financial community from investors, credit rating agencies, securities commissions, boards of directors, and regulators and supervisors in incorporating the physical risks of climate change into investment and business decision-making, and this is the research that I'm really looking forward to sharing with you today.

**Shelina Visram:**

That's great. Thank you very much for that background, and it's a pleasure to have you back again. I remember we talked about the risk matrixes in our past podcast, so thanks again. So, let's start with our first question. So, our listeners, as you know, have a strong understanding of the evolving risk of climate change, but can you please review the threat climate change poses to global financial markets?

**Kathryn Bakos:**

Yes, of course. Well, climate change manifests as extreme weather events. So, that's floods, wildfires, extreme heat, droughts, permafrost, and loss which cause widespread adverse impacts to individuals, communities, governments, and businesses. So, transitioning to a low carbon global society, this is actually imperative to avoid the worst impacts of climate change in the future. But we know that due to the cumulative emissions of greenhouse gas emissions to date, a certain degree of climate change is irreversible. So, in response to this irreversible climate change, global warming exacerbated extreme weather events, and the global response to these threats, the safety and soundness of the global financial system will continue to significantly be impacted. So, physical climate change and extreme weather adversely affect economic and financial outcomes across industry sectors through loss and damage to private and public infrastructure, negative supply chain shocks, disruptions to the continuity of business operations, reduced labor productivity, and rising mortality rates. So, this prompts the reassessment of asset values, changing the cost or availability of credit and insurance, which may affect the timing or reliability of cash flows. Impact could also be observed through micro and macro-economic trends. So, jobs creation and loss, household income and debt, inflation, which could create and ultimately amplify financial risk.

**Shelina Visram:**

As scary as that is, I think, to compound the matter, I think that this would also have a very potentially negative impact on financial inclusion work that particularly happens in developing countries. Would you agree to that?



**Kathryn Bakos:**

Yes, I would.

**Shelina Visram:**

Absolutely. So, in terms of disclosures then, how have voluntary disclosure frameworks and standards like TCFD, SASB, ISSB, et cetera influenced financial decision-making regarding climate change by contributing to the evolving disclosure requirements implemented by supervisory and regulatory bodies worldwide?

**Kathryn Bakos:**

Well, disclosure requirements have been driven by the needs of the marketplace. So, to support efficient capital allocation towards companies responding to the threats of climate change, financial markets must price risk appropriately, and to do so, they must have accurate information to inform market participants. We need comparable, reliable, and timely disclosure from companies across all industry sectors and sub sectors to properly price that risk and opportunity. Now, within the growing field of sustainability and climate related disclosure, there are multiple frameworks and standards that exist to establish that foundational layer of data required to inform investment and business decision making. I believe it might be a little beneficial for your listeners if I offer just a little bit of background information here.

**Shelina Visram:**

Please.

**Kathryn Bakos:**

Thank you. So first, I often notice when discussing disclosure frameworks and standards that people are unsure of how those two terms differ.

So first, to confirm, disclosure frameworks provide a set of principles-based guidance for how information should be structured across broad topics. So as an example, what is your company disclosing in regard to its governance structure, strategy risk management, and what metrics and targets are being utilized to achieve your climate goals? Now, disclosure standards then provide specific and detailed requirements of what should be reported for each topic. So, disclosure frameworks are broad, while standards get into the specifics; they get more into the weeds and frameworks and standards. They're also complimentary and they're meant to be, or they're designed to be used together.

So, you mentioned TCFD. Well, as a principles-based framework, the Task Force on Climate Related Financial Disclosures, this was created to help investors, lenders, and insurance underwriters identify and understand the information needed to assess and price climate related risk and opportunity. But then to action frameworks such as TCFD, the Sustainability Accounting Standards Board, SASB, develop specific metrics and targets across 77 industry sectors that identify ESG, Environmental, Social, and Governance issues most relevant to financial performance and enterprise value.



Now, these are just two of many frameworks and standards in the marketplace, which has kind of led to an oversaturation of disclosures and the lack of complete, consistent, and comparable information. As an example, to streamline sustainability and climate disclosure requirements, the International Sustainability Standards Board, ISSB was created to develop a comprehensive global baseline of sustainability and climate related disclosures to meet information needs in the capital markets. Now, the ISSB has taken the TCFD and SASB and incorporated it into one framework. Yet, these are still voluntary disclosures, and so now you have this growing pressure from governments, consumers, and investors that voluntary disclosures are often seen as inadequate. So, voluntary disclosures experience significant gaps in reporting is not all issuers disclose risk that may be material to operations. So, as an example, many companies fail to consider the strategic and financial impacts physical climate risk has on their business while only assessing the impact their business has on the environment. So, as a business, I'm only looking at how I'm emitting greenhouse gas emissions into the atmosphere, and I'm not thinking how physical climate risk is going to impact my business operations at site level or across supply chain. We have to think of all of this materiality.

These voluntary disclosures have driven the marketplace towards mandatory climate disclosure standards to drive standardization, reduce fragmentation, and simplify the disclosure landscape. Now, we've seen this develop here in Canada through our regulator, the Office of the Superintendent of Financial Institutions, their B15 Climate Risk Management guideline in the United States, the Securities and Exchange Commission, the SEC, is proposing amendments to the Securities Act, which would require registrants to provide climate related information in their registration statements and annual reports, and in my opinion, the Europeans are by far leaders in this space. As an example, the European Commission has adopted a technical standard to be able to be used in the financial market. Participants can use this when disclosing sustainability related information under the sustainable finance Disclosures regulation. So, many countries are in their first attempt of developing these disclosure requirements, but as we've grown from no disclosure to voluntary disclosure, now mandatory disclosure, disclosure requirements themselves will continue to evolve and become more robust. We just have to understand what's missing to continue to make these requirements more fulsome to ensure the accurate pricing of risk and opportunity.

### **Shelina Visram:**

In your view, what is the uptake of this or the level of activity in the developing countries versus the developed countries? I think you mentioned European, US, Canada... any perspective on that?

### **Kathryn Bakos:**

I would say that, most definitely in the developed countries, that this is... and I worked in the financial markets for five years a few years ago before I led to my research at the University of Waterloo. And really, the financial markets, even in developing countries, or developed countries, are just really starting to have the conversations. I'd say in the last two to three years, the climate related conversations and sustainability focused discussions, again, these have been happening for dozens of years now, but the seriousness around it and really driving forces behind it, I'm seeing that development within the last two to three years here in Canada and the United States, and Europe has really taken the lead there. So, I would say that developing countries can see what developed countries have done, and they may have a fast track of, okay, well, we don't have to wait. We can just get on board with this now. So, I see the marketplace as a whole really driving towards this a lot faster than I've ever seen it before in history.



**Shelina Visram:**

Yeah, I mean, using the concept of proportionality will probably help as well in the application, particularly in the developing countries.

**Kathryn Bakos:**

Correct.

**Shelina Visram:**

Thank you for that perspective. So, the Intact Centre recently released the report "Transitioning from Rhetoric to Action: Integrating Physical Climate Change and Extreme Weather Risk into Institutional Investing". Can you please tell us a little bit more about this report and its objective?

**Kathryn Bakos:**

Of course. Well, as I just mentioned, global framework and standard setting bodies such as the TCFD, SASB, and now ISSB, they've done a great job offering that foundational layer of data needed in the disclosure landscape. But to make disclosure requirements more robust though, the marketplace needs to identify what's lacking from these frameworks and standards as regulation as being built off of them. So, from a physical risk perspective, current frameworks and standards, they're not specific enough to identify what key physical climate risks will impact businesses operating within a given industry sector. And nowhere in these disclosures, or from a very limited sense, do these disclosures offer measures that need to be put into place to reduce risk. We have to remember that when we're talking about climate change, it's not just about risk identification, but risk reduction is key to get risk out of the system. With the current disclosure landscape, I don't see this as a driving force.

And so, the Intact Centre report that you just mentioned, "Transitioning from Rhetoric to Action: Integrating Physical Climate Change and Extreme Weather Risk into Institutional Investing", slightly long for a title, presents a practical means to factor climate change and extreme weather risk into investment and business decision making. So, our team at the Intact Centre, we've developed a globally scalable framework that complements global framework and standard setting bodies. But it goes a step further in identifying the top key physical climate risk that could impact business operations within a given industry sector, while more importantly, in my opinion, identifying what measures need to be put into place to reduce those risks. Unlike the 50 to 100-page disclosures that are currently in the marketplace, we do all of this on one page. So, we've dubbed this framework The Climate Risk Matrices, and we've developed them for industry sectors including financials: so, banking, mortgages and PNC insurance, utilities: the transmission and distribution of electricity, hydroelectricity generation and wind electricity generation, and commercial real estate.

So, what are the benefits of the CRMs, the Climate Risk Matrices? Well, they act as a template to help any business operating within a given industry sector to understand what key physical climate risks could impact business operations and where assets should be directed to put measures in place to reduce those risks. So, there could be a hundred different risks that companies could address, and yet most companies don't have the assets, time, or money to solve all of these different risks. So, in regard to physical climate change, businesses want to know what their top one-to-two key risks are that could impact their business operations and what measures they need to put into place to reduce those risks.





The CRMs also act as a benchmark for investors to easily understand the risk facing a given company operating within a given industry sector, so they can compare those results to other companies in which they might invest.

So, the CRMs even offer questions that investors could ask an issuing company operating within these industry sectors to determine if these companies understand their risk and if they've put measures into place to reduce that risk.

So, the questions offered throughout the CRMs sum up to: have you, as an issuing company, identified your risk, and are you mitigating against your risk? If either of those answers are no, no, we've not identified these risks and no, we've not put measures in place to reduce those risks, that would be a red flag to an investor. And whether they would want to invest assets in that company. Or other financial market participants, banks and insurers, may not want to loan money or provide insurance, or they may loan money at a higher rate or provide insurance at a higher premium. So, by utilizing the climate risk matrices, the CRMs financial markets can actually ask the questions and receive answers that will allow for the appropriate pricing of risk and opportunity in the system,

### **Shelina Visram:**

Great risk management practices, and I think it would also help to somewhat standardize the approach interpretation of the results and where the levels of risks are. So, this is very helpful, and I think for most countries, as you may know, a lot of central banks and other regulatory bodies are moving, particularly in the developing countries, towards risk-based supervisory frameworks. So, there's a good commonality there in the approach. So, very helpful. So how are the findings of the report directly applicable to global disclosure requirements and how can it support and strengthen the global disclosure landscape for regulators?

### **Kathryn Bakos:**

Of course. Well, CRMs have applicability to the disclosure landscape, the global disclosure landscape, since much of that landscape reflects the direction of the TCFD and more recently the ISSB and their pillars of governance, strategy, risk management, and metrics and targets. So, as an example, governance. The organization's governance around climate-related risks and opportunities can be informed by the CRMs within that given industry sector. For strategy, the CRMs represent the actual climate related risks and opportunities that can inform an organization's business strategy and financial planning. Risk management: CRMs offer the processes used to identify, assess, and manage climate-related risks, and then metrics and targets; CRMs offer the metrics and targets used to identify, assess, and manage relevant climate related risks and opportunities. Now, to offer a more specific example, we can actually turn to our regulator here in Canada, the office of the superintendent of financial institutions, OSFI.

So, OSFI's B15, Climate Risk Management Sound Business Practices guideline emphasizes that building resilience against climate related risks requires vulnerabilities to be addressed throughout business models, operations, and balance sheets. So, federally regulated financial institutions and other businesses should identify, collect, and use reliable, timely, and accurate data pertaining to physical climate risk concentrations. So, this could be the geophysical location of exposures, sectors, and products relevant to its business activities to inform risk management and business decision making. So, this information can also be used to measure and assess climate related risks. While the Climate Risk Matrices, the CRMs, provide a means to mobilize on OSFI's, B15 Climate Risk Management guideline.



So, CRMs identify and prioritize extreme weather, so whether that's flood, wildfire, wind, et cetera. and those impacts specific to the operations of an issuer, and the actions the company should take to limit those risks.

So then, when tools are developed by external third parties such as the CRMs, OSFI advises that businesses should understand the data, methodology, assumptions, and limitations of the information being provided. Well, the value CRMs provide is that they're non-technical in nature. So, interpretation of physical climate risks, that doesn't require in-depth expertise; anyone from retail investors to portfolio managers with or without expertise in a given industry sector could actually utilize this information. And OSFI also advises that climate related risks should be incorporated into internal monitoring and reporting to assess the effectiveness of climate risk management. Well, CRMs offer practical, cost-effective, and user-friendly methods to incorporate physical climate risk into investment and business decision-making that complements those frameworks and standards that are already in the marketplace.

### **Shelina Visram:**

So, shifting gears to financial institutions then. So, how can financial institutions, of which regulators have oversight responsibility, utilize this work to strengthen their risk management practices to mitigate climate risks?

### **Kathryn Bakos:**

Well, we know that regulators must facilitate and promote an efficient and effective regulatory system to control and manage risk through fostering sound risk management and governance practices, while monitoring and evaluating system-wide and sectoral developments that may have negative impact on the financial condition of financial institutions. Now, as I mentioned earlier, we also know that the physical impacts of climate change have and will continue to have direct negative impact across industry sectors, and there has been and will continue to be direct impact on the financial condition of financial institutions since the costs of physical climate change continue to increase through insurable claims, housing market impacts, mortgage arrears and deferrals, and that list goes on. And so, regulators must set appropriate policies and supervise financial institutions to determine whether they're meeting their regulatory and supervisory requirements in regard to climate change. To do this though, it's important to recognize if regulators themselves have the appropriate expertise to understand the evolving means by which climate change and extreme weather will be realized over the geographies of which they regulate.

So, can you as regulators and supervisors demonstrate that you have done due diligence in understanding physical climate risk? To be able to exercise oversight? If not, how can that knowledge be developed further? How can you utilize, as an example, the framework that I just described or running scenario analysis to understand how and where physical climate risk will manifest? Hiring climate change experts; can you put together a climate change committee with individuals with expertise in climate change? Working with organizations like the Toronto Centre and the Intact Centre to advance your understanding further. As well, do regulators have the appropriate understanding of the guidelines and standards already developed to mitigate extreme weather risks? So, as an example, are you aware of the guidelines and standards available to reduce the risk of flooding and wildfire, just as an example. So, these standards and guidelines can offer regulators direct guidance and means on how to deploy and operationalize this information to reduce risks through the financial systems of which they regulate.



And then, it's also important that the financial bodies of which regulators have responsibility over also understand the evolving climate risks, the guidelines, and standards to mitigate physical climate risks. So, as an example, if flooding is a major risk in your jurisdiction, then banks and insurers should be distributing home flood protection information to their clients to help customers understand the risk facing their household and what measures need to be put into place to reduce that risk, thus potentially reducing insurable losses and impacts to mortgage portfolios. This information is offered throughout our CRMs for PNC, home insurance, and banking, home, and mortgages. So again, that framework is very applicable here as well.

How are banks and insurers incorporating the evolving risks of climate change into analysis and not just through back casting, how are they incorporating evolving climate risk and the operationalization of standards and guidelines into loan rates and premium calculations? So, we have resources available for the financial community to be more secure in their understanding and deployment of change on the ground, but these resources need to be used more readily so that we can get risk out of the system.

**Shelina Visram:**

Yeah. You've shared a lot of information tools, and examples; perhaps some final thoughts, just some takeaways from what you've shared so far.

**Kathryn Bakos:**

Of course. Well, if I could just do a summary of everything that we've spoken about, we understand that the global financial system will continue to be significantly impacted by the physical risks of climate change. So, to support efficient capital allocation towards companies responding to these threats, financial markets have taken steps to price risk appropriately through climate related disclosures. But for climate related regulation to continue to evolve, though the marketplace needs to identify what information is lacking to continue to add to the robustness of disclosure requirements. So, organizations like the Intact Centre, we have done the work, identified some gaps, and offered solutions. So, we've developed a framework that can identify the top key physical climate risks that will impact business operations of a company operating within a given industry sector. And again, more importantly, what actions need to be taken to get risk out of the system. Is this all the information investors need to know? No, of course not. But in my opinion, it's a great place to start. So, at the Intact Centre, we have a wealth of resources from what companies and investors should be doing in regard to physical climate risks, the physical risks of climate change, to what individuals and communities can be doing. So, please check out the Intact Centre website; all of our resources are freely available. We know what to do to get risk out of the system. We just have to do it now.

**Shelina Visram:**

And I encourage our listeners to read the report in more detail, and the references in there are great as well. In addition to that, Toronto Centre has also developed a wealth of knowledge and resources around climate and biodiversity risks. We have a toolkit with the lens of financial supervisors because they are our primary partners. So, I encourage our listeners to review all of those on the Toronto Centre website as well as at the Intact Centre. Kathryn, the session has been very, very insightful. The examples you've shared, the tools that you've mentioned, the practicality, the ease with which this can be applied, you can simplify it, as well as there is a model for more complex issues and how to deal with that. A one-page risk matrix is truly impressive considering how complex this can be, this risk.





So, thank you very much for your time, and I hope to reconnect with you on more work as you go through your research areas. You've been listening to a Toronto Centre Podcast. Thank you all for joining us, and thank you Kathryn, once again for your time and sharing your knowledge with us.

**Kathryn Bakos:**

Thank you so much for having me.

**Shelina Visram:**

You're welcome.