

# The Morality of Investment Stigma and Insurance in Climate Governance

SARAH E. VAUGHN

This article examines the Insurance Development Forum (IDF) and the role morality plays in its commitments to climate governance. Initially conceived by political leaders advising on disaster risk reduction at a 2013 UN General Assembly meeting, the IDF recognizes financial institutions, practices, and devices as integral to addressing climate change. As a UN subcommittee, the IDF strives to build the capacity for risk assessment alongside markets for insurance products in the Global South. By 2017, the IDF created five working groups: Risk Modeling Steering Group; Sovereign and Humanitarian Solutions; Law, Regulation, and Resilience Policies; Inclusive Insurance; and Investment. The groups are chaired with representatives from a handful of the world's leading reinsurance companies, technical risk specialists, and modelers. Their efforts overlap with the milestones of the UN Conference of the Parties (COP), including agreements that seek to decrease global carbon emissions to below 1.5 degrees Celsius and accelerate funding for climate adaptation projects.

The IDF's activities thus far have been primarily informed by the development of an open-access database. Its software advances catastrophe modeling techniques already available in the insurance industry while deepening expertise in risk pricing.<sup>1</sup> The practical significance of the database is in its potential to make readily available datasets of natural perils (e.g., floods, hurricanes, tsunamis, and earthquakes) for

Research for this article was generously supported by the National Endowment for the Humanities Archaeological and Ethnographic Fieldwork Program Grant, RFW-286695-22.

1. *Catastrophe models* (cat models) quantify the financial risk of a present or future disaster loss. For natural perils, cat models will take into account the level of physical loss associated with the event, assess the degree to which insured property will likely be damaged, and translate the expected physical damage assessed into monetary loss. While outside the scope of this article, there is much debate among financial professionals about the extent to which climate models can (or ought to) be integrated into the operations of catastrophe models. With that said, among re-insurance companies, there is the standard acknowledgment that there is inherent uncertainty about the causal relation between climate change and a catastrophic event. Likewise, there is robust debate across varied sectors (modeling, underwriting, brokering, and actuarial practices) about the value of different kinds of datasets that account for the severity (or intensity) of different "physical variables" on catastrophic events.

government officials and NGO practitioners. Insofar as the IDF embraces catastrophe modeling, the database's development is shaped by the market ideologies of insurance. As Leigh Johnson (2015) notes, insurance and climate change are intimately related to questions of financial loss. With the aid of the database, the IDF has become more aware of the varied economic needs of markets in the Global South historically underserved by insurance and vulnerable to climate change.<sup>2</sup>

Less clear, however, are the moral assumptions underlying the IDF. Specifically, I am interested in how insurance shapes the IDF's moral assertions about people, things, natures, and places.<sup>3</sup> At the heart of my analysis is the observation that the organizational structure of the IDF depends on the efficient flow of information to manage the stigma often associated with finance capitalism. During the IDF activities I observed, the topic of stigma was discussed in relationship to devising ways to promote insurance products that are simultaneously profit-driven and equipped to create new lifesaving opportunities. Replacing the traditional industry mantra that insurance is a tool for "making people whole again," the IDF understands its role as helping Global South countries build better and smarter after a catastrophic event.<sup>4</sup> Hence, the database is not only an infrastructure intent on risk assessment; I also argue that it shapes expert morality within an ever-widening arena of public-private sector engagements around climate adaptation.

In making this argument, I follow Annelise Riles's (2011) insight that finance takes on a social life at the margins of calculative reasoning. This article foregrounds IDF's professional belief in "pool[ing] the world's risk expertise" by bringing into dialogue the knowledge of development, humanitarianism, and insurance (Moody et al. 2020: 6). The IDF's database is a tool for transforming this belief into reality. The overall emphasis on inclusion and accessibility, however, unfolds in tension with certain technical concepts in insurance, namely the "protection gap," which assumes the difference between economic and insured losses. In this light, IDF practitioners learn that the database (re)produces professional norms about the reputations of financial institutions as social do-gooders. The database helps them sus-

2. Other examples detailing the social construction of insurance markets in Global South contexts include Grove 2012 and Schuster 2021.

3. For an extended discussion on reputation and insurance see Poovey 1998.

4. There is, however, little consensus within the re-insurance industry about whether insurance and finance professionals should advocate for governmental policies related to climate adaptation. Many have stated to me that facilitating resources for risk transfer, in ways that further enhance already existing insurance products that address climate-related losses (see below), should remain the industry's priority rather than advocacy. What I want to emphasize here is the particular temporal direction of the claim "making people whole again" as playing out around a tension between the past, present, and future.

tain an equally dynamic commitment to identifying the limits of their expertise for addressing globalized structural inequalities. Throughout this article, I detail this enactment of insurance expertise as the *management of stigma*, an entry point for capturing the entangled realities of finance and climate governance shaping contemporary critiques of the climate crisis.

In what follows, I draw on virtual ethnographic interviews and observations of the IDF's quarterly meetings and annual conference that took place between 2021 and 2022. I first detail how the influence of financial investment on insurance has produced a morality discourse that provides new insights on a social theory of stigma. For the IDF, understandings of stigma are deeply rooted in insurance techniques and practices designed to address not only natural perils but the needs of varied sovereign territories. Thus, I show that the development of the database is one method for managing stigma across scales. I end the article with reflections on why stigma is shaping the materiality of financial markets, specifically IDF and reinsurance industry-wide critical assessments of greenwashing.

## The Social Embeddedness of Stigma

The IDF's effort to globalize risk assessment is built on assumptions that insurance is a social good that helps address a variety of concerns related to environment-society-governance (ESG). Paralleling the broader phenomenon of a moral turn in finance, ESG is a set of moral discourses and regulatory requirements seeking to challenge the pure profit motives of asset investment (dal Maso, Tripathy, and Brightman 2022). A Western corporate ethic has long been characterized by the social responsibility to be transparent to stakeholders about financial investments and the use of assets (Welker 2014). But global events including the 2008 recession, Black Lives Matter, and the Russian invasion of Ukraine, highlight that ESG concerns impact the day-to-day operations of corporations. The logic behind ESG is that a company's material risks and growth opportunities are deeply intertwined with building more just and sustainable societies. Evolving from other historical movements for pollution reduction, employee health and safety advocacy, and corporate philanthropy, ESG has relied on international governance bodies such as the IDF to both facilitate and enhance corporate operations. Take, for instance, that the United Nations' 2009 *Global State of Sustainable Insurance* report was the first of its kind to link the industry's ESG ambitions with evidence of "success stories" from other finance/corporate sectors.

Activities related to underwriting have facilitated conversations about the links between ESG and the day-to-day operations of insurance companies. In particular, underwriting surety bonds provides insight on the ESG issues that contribute to why

contractors default on loans for critical infrastructures (Shea and Hutchin 2018). It may come as no surprise, thus, that the industry’s interest in environment, society, and governance predates its IDF collaborations. In the 1980s, asbestos-related claims dealt a major blow to the industry. Policyholders’ and clients’ long-term and recurring exposure to asbestos was an altogether new phenomenon in the underwriting of events (Murphy and Wilder 1996). Likewise, in the aftermath of Hurricane Andrew (1992), varied innovations in catastrophe modeling and their (further) integration into underwriting methods saved the industry from collapse (Werner 2016). The spiral of losses encouraged a new class of what are called *reinsurers*, or companies that provide coverage to insurance companies for major risks that could result in simultaneous and high-magnitude claims. To date, reinsurance has primarily served North American and European markets, where insurance companies already have a range of customers—from domestic policyholders, to businesses, to governments.<sup>5</sup>

Hurricane Andrew has now become third in losses to Hurricane Katrina (2005) and Hurricane Ian (2022), disasters that have accelerated and helped restructure companies’ investments in private equity funds and insurance-linked security investments, such as catastrophe bonds (Collier and Cox 2021). Moreover, the COVID-19 pandemic has only further demonstrated that life and nonlife insurance products are interlinked in ways that had previously been left unaccounted for by the industry (Roitman and Moon 2020). Indeed, the industry’s fear of insolvency has radiated beyond the marbled floors of the C-suite to court rooms and social media platforms demanding just settlements. Recent controversies surrounding the fossil fuel divestments of oil companies and financial institutions, such as BlackRock, are cases in point.

Against this backdrop, ESG has evolved less as a one-size-fits-all framework than as a range of auditing practices (Power 1999). Many consultancy firms promote services for data analysis and benchmarks for meeting ESG “targets.” Currently, there is no single ESG rating system that is distinct from credit ratings nor is there an agreement among (inter)national regulators about which financial risks and non-financial risks should count toward ESG.<sup>6</sup> As Arjun Appadurai (2015: 64) argues, market rating systems “[allow] the qualities of individual lives to be converted into aggregate forms.” FICO credit scores, for instance, classify individual consumers as financial actors who have a certain capacity to contribute to markets over time.

5. There are three domiciles worldwide that are arguably at the center of reinsurance: London, Switzerland, and Bermuda. For an extended analysis see Jarzabkowski, Bednarek, and Spee 2015.

6. However, there is much work being done within the European Union. With ESG understood as integral to efforts toward a so-called European green deal, EU commissions have been at the forefront of creating a rating system and global markets for it.

Likewise, ESG is concerned with the classification of potential behavior, with the individual at stake being a financial or corporate institution rather than a consumer.

Despite the absence of a universal rating system, ESG has been a point of departure for improving corporate image and engagement with the public sector (Atkins 2020). For many, ESG is a means for seeking status and appearing as a responsive rather than reactionary company. The IDF, I suggest, is one such moralizing project deeply entrenched in reimagining insurance companies around ESG frameworks. Integral to this reimagining is the belief that insurance companies not only intervene on markets and transform them but are also historical actors whose “pragmatics of valuation” (see Roitman 2014: 64), public sector collaborations, and efforts at internal assessment shape their reputations as so-called good or bad actors contributing to societies. Thus, the varied activities and technological investments undergirding the IDF are dedicated to corporate reputation-building and the avoidance of stigmatization, more broadly.

Erving Goffman’s ([1963] 1986) classic work on social identity formation is a helpful starting point for unpacking this dynamic of financial markets, stigma, and material investments. He locates the social origins of stigma in the Greek belief that a visible bodily marking—or stigmata—signifies something unusual about the “moral status” of an individual (9). Stigma creates social expectations about an individual’s character, behavior, and status vis-à-vis others deemed worthy of full social acceptance. Analyzing stigma as a social interaction, Goffman argues that stigmatization “imputes” a virtual social identity and an actual social identity on an individual (9). Virtual social identity is an effect of the stereotypes a society holds about a stigmatized individual based on their appearance. Take, for instance, an individual’s dependence on a wheelchair compared to the clothes an individual wears to do sex work. Such physical attributes can shape attitudes toward being labeled as part of a stigmatized group as well as the built environments and institutions engaged on a daily basis.

Although Goffman does not draw from a theory of performative utterances, virtual social identities demonstrate how “words are used in order to do something other than making an assertion” (Black 1963: 217). Actual social identity, however, is established through the stigmatized individual’s strategic disclosure *and* withdrawal of social information about “undesirable attributes” in order to defy a perceived stereotype (Goffman [1963] 1986: 10). Moreover, the relative visibility of a stigma—such as a facial disfigurement, mental disorder, or skin color—tends to shape the level of contempt a stigmatized individual encounters in “mixed” company (44). Stigma, thus, is an adaptable social identity and trait. Any change in the way a stigmatized individual presents themselves also tells us something about shifting relations of power, secrecy, and transparency.

Goffman's analysis of stigma tends to treat the embodiment of moral status as a distinctly human phenomenon. That is, the bodily stigma is symbolic of an injured human corps and psyche. At the same time, the emphasis on the human bypasses an analysis of how the management of stigma materializes across lifeworlds. Recent work on the politics of infrastructure bring into focus the management of stigma as a socially embedded practice. As Judith Butler (2018: 21) notes, "The dependency of human creatures on sustaining and supporting infrastructural life shows that the organization of infrastructure is intimately tied with the enduring sense of individual life." For Butler, stigmatization is linked to certain political demands (e.g., voting rights) for establishing adequate infrastructure. In other words, the management of stigma is not isolated to the question of social identity, but rather, to how spaces are "assembled" to become (more) hospitable over time for varied groups (see also Simone 2004). John Urry (2014) likewise argues that stigma (re)produces political economies of space. Better known as *offshoring*, the financialization of markets has contributed to dividing the planet into legal jurisdictions that keep from public view the ins and outs of monetary and informational transactions. Infrastructures that are mobile (e.g., telebanking) make offshoring possible by buttressing a globalized system of not only investment but competing geographies of risk transfer. In so doing, the triumphs of offshoring can also accelerate new forms of stigmatization in ways that breed paranoia, inequality, and political repression (Nuttall and Mbembe 2015).

In short, the management of stigma is inseparable from the material operations of infrastructures. As Anand, Gupta, and Appel (2018: 3) note, infrastructures "are critical both to differentiated experiences of everyday life and to experiences of the future." "The promise of infrastructure," however, is more than a historical standpoint or horizon; it also creates particular demands for investment as such (3). For instance, *who* asserts which infrastructures are sustainable is as much a question of expertise as the forms of financial capital—such as green bonds—that are designed to achieve certain social and environmental goals while sidelining others (Tripathy 2017). Finance capitalism thus encodes humans, governmental bodies, natures, and the corporate sector as targets of ongoing moral improvement through the development of infrastructures. Specifically, infrastructures—such as the IDF's database—intend to make legible the stigma that pervades or may become an obstacle to reinsurance companies being economically productive *and* social do-gooders who seek out public sector alliances or ESG activities. But to recognize how this dynamic occurs requires a social theory of stigma that makes visible not only the calculative logics of infrastructure per se, but also the human and more-than-human embodiment of moral status. Accordingly, the remainder of this article details the unfold-

ing of market morality around the IDF's entangled logics of risk assessment and infrastructural development.

### Stigma, Process, and Flow

The IDF's preferred open-source software for its database is the OASIS Loss Modelling Framework. A web-based interface, OASIS allows users to not only access catastrophe models but to help develop new ones by contributing originally sourced data to the database. An array of professionals, including UN disaster and humanitarian aid specialists, applied academics in risk management and modeling, underwriters, and database engineers and developers, attend the IDF's quarterly meetings. For all involved, the database is an infrastructure that best serves *risk analytics*, a set of techniques that quantifies and predicts risks such as flooding and bundles this information together for the needs of different users. Nonetheless, the IDF exhibits a cautious optimism in the database's potential. Indeed, much of the running commentary in IDF-related reports is that "the [current] supply of risk analytics is inefficient and ineffective" (Moody et al. 2020: 16). Implied in this assessment is that without more robust data, the IDF can only provide a partial perspective on insurance loss and coverage. Assembling and curating the IDF's "actual social identity," thus, is an important goal of its quarterly meetings.

During one meeting a participant affiliated with the Sovereign and Humanitarian Solutions working group presented a PowerPoint slide that communicated an ominous warning. The image was of a cloudy, dark seascape with crashing waves in the foreground and a lighthouse receding into the horizon. Projecting the idea that climatic risks are unavoidable, the slide summarized in a bullet-point outline the projects that are in either the "execution or application phase." The projects will ultimately help transition governments traditionally dependent on external donors for humanitarian aid to an insurance-based approach for public sector spending on climate adaptation and disaster preparedness. Given that many countries had yet to sign off on agreements with the IDF, he could not provide details about individual projects. Nonetheless, he assured those in attendance of the projects' growing potential.

With regards to ESG, the projects would help reduce the *protection gap*, or the total amount of uninsured losses, across the project sites' sovereign jurisdictions. The utility of the concept of protection gap to ESG auditing is a central issue in insurance. The protection gap is defined as an "S" impact perpetuated by existing conditions of (un)employment and poverty. In turn, the "causes" for the protection gap in developing markets is often associated with the reality that people lack the financial literacy or means to buy into insurance products (Schanz 2018). "The

uninsured,” in other words, is a classification of stigma. “Closing” the protection gap involves the industry focusing on issues of affordability as much as modifying its underwriting techniques. At the same time, the IDF’s investment in OASIS—software that allows users to tinker with the building of catastrophe models—suggests that the protection gap blurs the lines between E, S, and G. Its repository of catastrophe models and outputs is not intended to represent risks per se, but provides working tools that identify new and potential, unknown risks that contribute to climatic vulnerability.<sup>7</sup> The IDF, in other words, is doing more than simply facilitating markets for insurance. It is also creating a new stock of ESG narratives that position the IDF as a moralizing agent—a social do-gooder of climate governance.

To this end, the database is an infrastructure of information flow. The IDF depends on the database to help project an image of inclusivity thereby countering the idea that to be stigmatized as an “uninsurable country” is fated or a permanent state of existence. This image of inclusivity unfolds across two types of biography. The first is the biography of an individual place or locale that the IDF identifies as a developing market. The second is the biography of the individual government or professional agency in need of the IDF to enhance its existing infrastructures for risk analytics. At the IDF’s quarterly meetings, these biographies were often integral to attendees’ anecdotes about the obstacles they face identifying sites for their working group projects. Some developing markets, for instance, have a plethora of local risk specialists trained in GIS but with little computing capacity at their offices to carry out systematic data collection for OASIS. In other instances, governments simply do not have the legal frameworks to support hybrid public-private sector insurance programs.

All of this is relevant to how the IDF manages the stigma associated with the protection gap. As Goffman ([1963] 1986: 54–55) notes, “Whether an individual’s biographical life line is sustained in the minds of his intimates or in the personnel files of an organization . . . he is an entity about which a record can be built up—a copybook has been made ready for him to blot.” A similar observation about the importance of recordkeeping is made in the IDF’s concept design report. “A single hazard, single transaction approach is prevalent [in developing markets], emphasizing short term consequences in the absence of a strategic risk management policy. A lot of money is being spent [by state actors], but not always in effective ways that leave a country or city better able to manage its own risk across departments for the long term” (Moody et al. 2020: 14). Thus, the IDF’s management of stigma pivots less on answering questions about the quality of risk data than on adjusting risk analytic techniques to local milieus.

7. For an extended discussion about the shifting relations between representation, modeling, and market innovations, see Callon 2021.



Concerns about the management of stigma, however, are never evenly felt nor attended to by experts across the IDF's five working groups. Reinsurance underwriters, for instance, are not professionally trained to imagine risk beyond the dictates of market behavior, while humanitarian and development workers have prior professional experience wherein risk assessment might manifest in ways that are not market driven (e.g., governmental protocols for environmental conservation or war). The meaning of stigma is a moving target, enacted with every newly identified threat and data point entered into the database. Multiple ESG narratives—from energy transition, insolvency, sustainability, social inflation, war, and humanitarian aid to “failed state”—have the potential to dictate the future aims of the IDF to close the protection gap.

## Conclusion

IDF activities demonstrate that markets and morality are not ontologically separate claims about the world. Moreover, the IDF goes to great lengths to mobilize new ethical relations not only with economic concepts in mind, but also to enhance very material infrastructures that make its understanding of natural perils and climate change possible in the first place. This may not be all that surprising given the ways in which moralizing language such as *greenwashing* has for decades pervaded popular understandings of environmental advocacy and activism. But the IDF's investment in an open-access database demonstrates that stigma cuts across epistemic-political worldviews, in ways that underscore disagreements over factual evidence about the protection gap and what to do about it. In other words, the database creates varying hierarchies of stigma as well as the management of it, as countries, NGOs, and different reinsurance companies decide to participate in, or opt out of, climate governance projects.

An appreciation for the complexity of financial investment decisions has been identified by Bill Maurer and Sylvia Martin (2012) in more general terms as the practices, idioms, and events that influence the aesthetics of corporate behavior. A similar dynamic is at play with the IDF and climate governance, wherein IDF practitioners are focused on regulating “stigmatizing” behavior associated with its potential (public sector) clients and managing the IDF's own image through the enhancement of database infrastructures. Take, for instance, the 2022 IDF annual conference where the website for the database was launched. A two-hour panel with representatives from reinsurance companies, the IDF's five working groups, and the United Nations were present. During the question-and-answer portion of the event, an audience member affiliated with an international development NGO lauded the

efforts of reinsurance to partner with the United Nations but also paused to ask, “Where are more of you?” They expressed ambivalence about the viability of the IDF unless there is more corporate participation, reminding the audience that “the development community is waiting.” The reinsurance representatives on the panel offered comfort, explaining that there is industry interest but that many will be further convinced to join only after they “see the database put to use.”

In this exchange, the management of stigma is not only structured by the market. The panel attendees, instead, are in search of wisdom or a pattern of empathy that unfolds around the operations of the database and not solely in debates about ESG and profit. In the meantime, the database acts as one node within a globalized network of social information about climate change that underscores relations of value, knowledge, and critique. Here, then, we see a reverse engineering of what is often touted as the corporate narrative of “the merchants of doubt” who generate uncertainty about climate change (Conway and Oreskes 2010). For the IDF, a dual process of social identity construction between reinsurance and humanitarianism/development is being produced, wherein both groups realize that they depend on one another to account for climate change. Neither anticipated this, but they have found that climate change has brought with it a transformation in the relation between the materiality of markets and morality.

**Sarah E. Vaughn** is an assistant professor in the Department of Anthropology at the University of California, Berkeley. She is the author of numerous articles and the book *Engineering Vulnerability: In Pursuit of Climate Adaptation* (2022), winner of the American Anthropological Association’s 2022 Julian Steward Award.

## References

- Anand, Nikhil, Akhil Gupta, and Hannah Appel, eds. 2018. *The Promise of Infrastructure*. Durham, NC: Duke University Press.
- Appadurai, Arjun. 2015. *Banking on Words: The Failure of Language in the Age of Derivative Finance*. Chicago: University of Chicago Press.
- Atkins, Betsy. 2020. “Demystifying ESG: Its History and Current Status.” *Forbes*, June 8. <https://www.forbes.com/sites/betsyatkins/2020/06/08/demystifying-esgits-history-current-status/?sh=7c12c2842cdd>.
- Black, Max. 1963. “Austin on Performatives.” *Philosophy* 38, no. 145: 217–26.
- Butler, Judith. 2018. *Notes toward a Performative Theory of Assembly*. Cambridge, MA: Harvard University Press.
- Callon, Michel. 2021. *Markets in the Making: Rethinking Competition, Goods, and Innovation*. Translated by Olivia Custer. Edited by Martha Poon. Brooklyn, NY: Zone Books.
- Collier, Stephen, and Savannah Cox. 2021. “Governing Urban Resilience: Insurance and the Problematicization of Climate Change.” *Economy and Society* 50, no. 2: 175–96.

- Conway, Erik, and Naomi Oreskes. 2010. *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Climate Change*. New York: Bloomsbury.
- dal Maso, Giulia, Aneil Tripathy, and Marc Brightman. 2022. "A Moral Turn in Finance? Labeling, Purpose, and the Morality of Markets." *Focaal—Journal of Global and Historical Anthropology* 93: 1017.
- Goffman, Erving. (1963) 1986. *Stigma: Notes on the Management of Spoiled Identity*. New York: Simon and Schuster.
- Grove, Kevin. 2012. "Preempting the Next Disaster: Catastrophe Insurance and the Financialization of Disaster Management." *Security Dialogue* 43, no. 2: 139–55.
- Jarzabkowski, Paula, Rebecca Bednarek, and Paul Spee. 2015. *Making a Market for Acts of God: The Practice of Risk-Trading in the Reinsurance Industry*. Oxford: Oxford University Press.
- Johnson, Leigh. 2015. "Near Futures and Perfect Hedges in the Gulf of Mexico." In *Subterranean Estates: Life Worlds of Oil and Gas*, edited by Hannah Appel, Arthur Mason, and Michael Watts, 193–210. Ithaca, NY: Cornell University Press.
- Maurer, Bill, and Sylvia J. Martin. 2012. "Accidents of Equity and the Aesthetics of Chinese Offshore Incorporation." *American Ethnologist* 39, no. 3: 527–44.
- Moody, Nick, et al. 2020. *The Development Impact of Risk Analytics*. Insurance Development Forum. [www.insdevforum.org/wp-content/uploads/2020/12/IDF\\_Risk\\_Analytics\\_21Dec.pdf](http://www.insdevforum.org/wp-content/uploads/2020/12/IDF_Risk_Analytics_21Dec.pdf).
- Murphy, Michael J., and Robert E. Wilder. 1996. "The 'Event' Debate in Asbestos-Related Excess of Loss Reinsurance Disputes." *Tort and Insurance Law Journal* 31, no. 3: 687–709.
- Nuttall, Sarah, and Achille Mbembe. 2015. "Secrecy's Softwares." *Current Anthropology* 56, no. 12: S317–24.
- Poovey, Mary. 1998. *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society*. Chicago: University of Chicago Press.
- Power, Michael. 1999. *The Audit Society: Rituals of Verification*. Oxford: Oxford University Press.
- Riles, Annelise. 2011. *Collateral Knowledge: Legal Reasoning in the Global Financial Markets*. Chicago: University of Chicago Press.
- Roitman, Janet. 2014. *Anti-crisis*. Durham, NC: Duke University Press.
- Roitman, Janet, and Andrew Moon. 2020. "Where Is the Risk in the COVID Economy? A Look at Shadow Banking." Paper presented at Public Seminar, New School, New York, July 30. <https://publicseminar.org/essays/where-is-the-risk-in-the-covid-economy/>.
- Schanz, Kai-Uwe. 2018. *Understanding and Addressing Global Insurance Protection Gaps*. Zurich: Geneva Association. [https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf\\_public/understanding\\_and\\_addressing\\_global\\_insurance\\_protection\\_gaps.pdf](https://www.genevaassociation.org/sites/default/files/research-topics-document-type/pdf_public/understanding_and_addressing_global_insurance_protection_gaps.pdf).
- Schuster, Caroline E. 2021. "Weedy Finance: Weather Insurance and Parametric Life on Unstable Grounds." *Cultural Anthropology* 36, no. 4: 589–617.
- Shea, Matthew, and James W. Hutchin. 2018. "The Importance of Environmental, Social, and Governance Risks to Surety Underwriters." *Asia-Pacific Journal of Risk and Insurance* 12, no. 2: 1–14.
- Simone, AbdouMalik. 2004. "People as Infrastructure: Intersecting Fragments in Johannesburg." *Public Culture* 16, no. 3: 407–29.
- Tripathy, Aneil. 2017. "Translating to Risk: The Legibility of Climate Change and Nature in the Green Bond Market." *Economic Anthropology* 4, no. 2: 239–50.
- Urry, John. 2014. *Offshoring*. Cambridge: Polity.
- Welker, Marina. 2014. *Enacting the Corporation: An American Mining Firm in Post-Authoritarian Indonesia*. Berkeley: University of California Press.
- Werner, Welf. 2016. "Natural Catastrophes and Their Effects on Reinsurance." In *Managing Risk in Reinsurance: From City Fires to Global Warming*, edited by Niels Viggo Haueter and Geoffrey Jones, 248–76. Oxford: Oxford University Press.