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Wilful Blindness

How to debias perceptions and address climate risk now

Although the world's attention is squarely focused on managing the devastating human and economic consequences of the ongoing COVID pandemic, it serves as a stark reminder to avoid further delay on climate risk action. Unlike the pandemic, there will be no vaccine for full blown ecological collapse brought upon by unmitigated global warming.

Historical observations of global surface temperature, as well as advances in climate science including projections from the IPCC (possibly the world's largest consensus amongst scientists from various relevant fields) clearly show that we are on the path for catastrophic climate change exceeding 2^{0}C unless concerted and drastic actions are taken as soon as possible.

In fact, the climate catastrophes of 2020 such as the unprecedented Australian and Californian bushfires, as well as the rapid intensification of tropical cyclones deep into November within the North West Pacific Basin are already providing a sneak peek into the new normal. Previously, no single event could be conclusively linked to climate change, but with new advances in extreme event attribution science, the spatial breadth and anomalous warm temperatures associated with the 2016 Asian and 2020 Siberian heatwaves have been deemed theoretically impossible without climate change which has already elapsed, and that there is also a strong influence of climate change signature in the frequency and severity of the other more complex phenomena such as bushfires.

Despite mounting evidence demanding an urgent and commensurate response to the threat – current 'Nationally Determined Contribution' (NDC) commitments are inadequate to curb global emissions, with key polluting nation efforts classified as 'insufficient' to 'critically insufficient' according to the Climate Action Tracker.[1] There are some encouraging signs of recent progress, with the announcement of mandatory climate disclosures by the Reserve Bank of New Zealand and the Bank of England, as well as improved engagement from the regulatory and financial sectors by way of transboundary collaborations via the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) and Task Force on Climate-related Financial Disclosures (TCFD) initiatives. However, why does concrete action from the private sector mostly continue to lag science and policy considerations?

This article explores some of the biases that prevent firms and individuals from taking necessary action on climate change, offers insights adapted from behavioral economics research on how to work around, rather than suppress these biases (that are innate to humans), and provides a concrete starting point in which corporates can begin their journey to take meaningful action on assessing climate risk.

Identifying & addressing wilful blindness to climate risk

As physical climate risks largely exert its influence through extreme climate events, its impact on a particular individual[2] is largely perceived to be remote in time and likelihood. As such, many of the themes and insights emerging from research into perceptions of catastrophe risk from the Wharton School of Risk and others are arguably also relevant to climate risk. In Meyers and Kunreuther's prescient book "The Ostrich Paradox", the authors draw upon a wide body of behavioral science research and highlight a number of biases that hinder optimal decision making when considering tail risk events which we either have not personally experienced, or has occurred in the distant past. These biases are likely to feature across the broad spectrum of attitudes toward climate risk which entail varying levels of resistance to climate action, and some are discussed below.

[1] Climate Action Tacker
[2] And by extension – to a business as they are operated by individuals
[3] Noah Harari, 21 lessons for the 21st century, 2018
[4] Mikael Klintman, Knowledge Resistance: How we avoid insight from others, 2019

Climate Risk Denialists: The "Not Warming" and "Warming from natural causes" groups

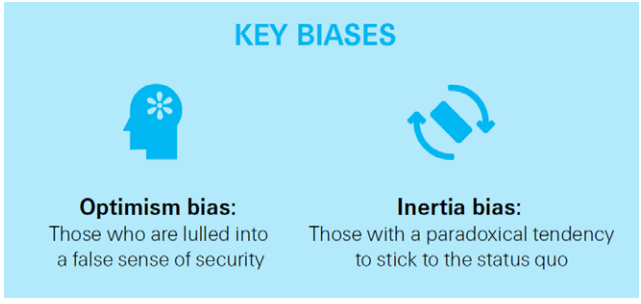
At its most extreme, there are outright climate denialists ("Not Warming") who dismiss the observations and science in its entirety. The key bias afflicting this group is that of herding, where there is strong social pressure to conform, for instance amongst right wing nationalists where climate denialism is a symptom of an ideology that does not promote global cooperation (which is required to address climate risk as no country can do it alone)[3]. This has also been observed by Klintman who coined the term "knowledge resistance"[4], and found that access to higher education in conservative groups did not correlate with higher believability in climate change, but conversely resulted in a tendency to cherry pick particular data points to eloquently further support the group narrative.

It should be noted that there is also broadly a separate group of climate change denialists who do not openly ignore or dispute that the earth is warming, but rather suffer from simplification bias, i.e. acknowledging that warming is indeed occurring but dismissing the trend, and instead erroneously over simplifying complex energy feedback processes and substituting it as "naturally occurring climate variability". While simplification is a powerful mental heuristic that allows us to solve problems, the over-simplification bias is common amongst non-subject matter experts and often exploited to further political means. For instance, how many Brexit supporters truly appreciated the socio- economic impacts of a decoupling from Europe, rather than simply "taking back control"?

Climate Risk Optimists: The "Warming, but it won't impact me" and "Hard to Change Status Quo" groups

Resistance to climate action also persists amongst those who believe in climate change. This group is arguably larger within the broader corporate community but are lulled into a false sense of security through optimism bias – which is the tendency to overestimate the likelihood of positive events and vice versa for negative events. Borrowing from research into attitudes towards catastrophe risk, residents in known disaster zones generally accept that while tropical cyclones could occur in their area, they would be unlikely to suffer its worst impacts vis-à-vis their neighbors. This false optimism can also be further exacerbated following a damaging catastrophe event, often by poor terminology used to communicate risk such as the "1 in 100 year" flood zone – leading people to think that if a flood occurred last year, it be safe for the next 99[5].

More recently, the optimism bias has again been identified as a key factor in preventing the spread of COVID-19 where many people discount the individual threat of COVID-19 to themselves despite being aware of its risk to others, which has led to issues such as resisting mask wearing and mass gatherings. Finally, some optimists may accept that the new climate reality could be associated with adverse impacts to them but have a paradoxical tendency to stick to the status quo, known as the inertia bias. Inertia bias is especially strong due to the myopic, short-term view when weighing up immediate costs and the potential benefits of protective investments to a business.



Improving risk communication and working around the biases

Re-framing the climate discussion will be key to achieve improved buy in for both climate denialists and optimists alike. While incentivizing broad swaths of staunch climate denialists to be genuinely convicted to address climate change is desirable, a more realistic outcome would be to first make these communities feel assured that tackling the climate crisis does not have to come at the expense of cherished personal liberties, and could co-exist with their value systems. Instead of a top down approach, finding shared common ground such as exploring climate adaptation (which disaffected communities appear less resistant to) rather than imposing extreme mitigation measures, may be another helpful way to start bridging the gap.

The 'low hanging fruit' in terms of a call to climate action lies with further engaging climate optimists. The challenge here is centered around first *improving risk communication* by removing as much subjectivity as possible around risk assessment, and for business leaders and individuals to *close the gap* between perceived and actual severity and likelihood of the threat. For example, a simple, and mathematically equivalent re-framing of the "1 in 100 year" flood could be a 18% chance of occurring within the next 20 years, which is a far more realistic for the lifetime span of a business rather than a single year. When the corporate community's perception of climate risk is within the same objective ballpark, this can lay the foundation for broad based action. As a start, regulators should (and are already starting to) make climate risk reporting mandatory rather than voluntary. Similarly, climate catastrophe risk insurance schemes to bolster climate risk resilience should be 'opt out' rather than 'opt in' as a default to break away from inertia bias.

[5] Which is the wrong interpretation.

[6] Meyers and Kunreuther, The Ostrich Paradox: Why we underprepare for disasters, 2018

At a firm level, 'behavioral risk audits' and 'pre-mortems' can be deployed to systematically identify leading sources of biases and how to overcome them[6]. As discussed above, instead of focusing on annual exceedance probabilities of extreme events, stretching time horizons and estimating the chances of damaging climate disasters over a longer time span will help to overcome the myopia and optimism biases. In addition, economic incentives ranging from corporate KPIs tied to sustainability practices, or loans to spread climate mitigation costs over time – where the cost benefit of the loan is higher than insurance costs – can help to cushion the upfront costs while at the same time compel firms to think longer term, and rapidly advance broad based corporate engagement around different aspects of climate risk.

A natural starting point for corporates: Physical Climate Risk Assessment

Aside from addressing the biases above, the start of the journey of climate risk engagement can seem daunting due to the breadth and complexity of the challenge. Firstly, firms should not wait for regulators to dictate their climate risk strategy as there is inherent business value in forming their own approach, of which meeting regulatory disclosure requirements is simply one of many other benefits. For example, climate risk assessment can yield insights into business strategy considerations through the safeguarding of supply chains and ensuring the sustainability of insurance cover, help to keep investors and stakeholders informed, or provide a view on asset value estimations in the future as climate risk renders certain locations to be at greater risk from heatwaves or coastal flooding.

While conventional frameworks on climate risk assessment generally stipulate three categories of climate risk – i.e. physical, transition and liability risk – *a natural starting point ought to be physical climate risk assessment* because it is only through an improved understanding of physical risk can one then have a meaningful view on when, for example, climate change impacts may get critical enough for governments to impose sudden stringent carbon taxes or force abrupt adverse changes to polluting sectors (akin to the Japan nuclear shutdowns following the 2011 Tohoku Earthquake, or drastic governmental lockdowns in the midst of COVID). Performing proper physical climate risk assessment is not easy. Key challenges faced by most corporates include a lack of regulatory or reporting standards for climate disclosure, as well as the lack of in-house capability.

In particular, physical climate risk assessment requires a unique set of cross disciplinary skills as it lies at the confluence of climate science (i.e appraising output from complex global climate models) and catastrophe modelling – which converts peril risk into economic loss estimates. For example, for scenario analysis of tropical cyclones in the future, global climate model output such as sea surface temperature anomalies (SSTAs), and the frequency of cyclone formation in particular basins can be used to inform parameters of tropical cyclone catastrophe models and produce modified stochastic event sets that result in different risk profiles. This is not a straightforward undertaking and corporates are likely to seek external support. Unsurprisingly, climate risk advisory has recently emerged as a rapidly growing service sector ranging from start-ups (often staffed with climate scientists) and niche players such as catastrophe model vendors at one end to the big four and management consultants. As a result, *choosing the right partner to work with is critical.*

To this end, an unusual candidate in the form of insurers (particularly those who develop their own view of risk from first principles) are well placed as a keen option. Apart from being well versed in catastrophe modelling, insurers crucially have actual 'skin in the game' and possess a long history of underwriting climate disaster risk. As such, a commercial insurer that is open to engaging on physical climate risk is effectively sharing some of the same risk knowledge that it uses in its day to day business dealings. Furthermore, there is arguably a mutual alignment of interest as both parties are threatened by climate risk: corporate clients seek sustainable insurance capacity while insurers want to maintain access to profitable risk pools. Therefore, dispensing climate risk advisory in the spirit of risk partnership built upon a common appreciation of the underlying technical risk, and subsequently developing potential solutions together can pave the way to keep insurance both affordable and profitable.

Concluding, while certain aspects of climate risk appraisal can be outsourced to experts, the onus really lies on corporates to perform its own climate due diligence and keep abreast of the latest developments within climate risk research to update their own respective risk views as the science evolves.

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