



# The Polar Bears can Sink or Swim, but the Stock Market needs to Soar

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[stag\_intro]In the last week, record-breaking cold temperatures hit the eastern half of the US and Canada, powerful cyclones slammed Australia, and a devastating drought rages on in Brazil. At the same time, there is no scientific body of national or international standing now disputing the human contribution to climate change.[/stag\_intro]

So why is hardly anyone compelled to do hardly anything about it? Could it be possible that the answer to the climate change crisis is not in our will to keep the planet and ourselves alive ... but to keep our bank balances in the black?

There is a meme floating around social media which has scientists reassuring the public not to freak out about Ebola. Of course, everyone panics immediately. The scientists go on to advise the public that they need to freak out about climate change. Everyone laughs out loud, then ask for someone to pass over some coal.

As with all great memes, this one's success is just how succinctly it captures a cultural moment. In this case, it's our collective sense of unease whereby we acknowledge climate change exists, our complicity in creating it, and the devastating consequences to come all over the world, but we are unprepared or unwilling to make the serious changes required to stop it. It is far better and far easier to focus our conversations, reading and nightmares on a scary threat, far away, wringing our hands about progress being made by others in keeping us safe. It's just another meme, another scare, another tragedy to provide short-term interest at the expense of long-term attention and action.

The irony is, after years of exhaustive and at times virulent debate, the climate change controversy is finally over. All scientific bodies of national or international standing agree that global surface temperatures have increased in recent decades and that the trend is caused primarily by human-induced emissions of greenhouse gases. But now that we have finally reached this point, there is a standstill. In a horrific anti-climax, the most the average person is doing is a bit of recycling and turning off the lights when leaving a room. Apocalyptic predictions of unbearably hot summers, endless storms, a loss of sea ice, and accelerated sea level rise ... for how long can we bury our heads in the sand and treat climate change as a distant concern of not real and immediate importance to us?

But a group of business people are setting out to change all this, and their innovative approach may just be the right one to make everyone sit up and take action. We may be able to turn a blind eye to all sorts of horrible implications of climate changes, snubbing our noses at the plight of the polar bears and small island nations, but there is one thing that people just won't stand for, and that's losing money.

This past year, a group of American businesspeople started a committee called The Risky Business Project, looking at the economic risks of climate change in the United States. Led by a hedge fund billionaire, Tom Steyer, the former chief executive of Goldman Sachs and the Treasury secretary under President George W. Bush, Henry M. Paulson Jr, and former New York city mayor and billionaire founder of Bloomberg L.P., Michael R. Bloomberg, it's an impressive and high-profile group, and their united aim is make the climate threat feel real, immediate and potentially devastating to the business world. It draws inspiration from a similar study conducted in Britain called the Stern Review, published in 2006.

The study has made some compelling findings: energy demand in Texas will increase by 9.2 percent by mid-century, crop yields in Missouri and Illinois and Missouri will face a 15 percent decline over the next 25 years, and the annual property damage from severe storms will likely increase \$11.1 billion by the end of the century in the Northeast. These are economic realities that touch a lot of industries. By focusing on the clearest and most economically significant risks of climate change through the year 2100 with empirically-derived estimates of the impact of projected changes in temperature, precipitation, sea levels and storm activity on the US economy, and presenting ways to adapt to climate change and to mitigate future impacts by reducing carbon emissions, the study provides each industry and region the information and impetus required to rise to the challenge and lead the way in helping reduce climate risks.

However, for its good intentions of breaking down the regional economic risks brought on by climate change across the United States, does this American study fall into the very trap that it seeks to avoid: making the economic effects of climate change too distant and not immediate enough for us to care? Whilst it acknowledges that damages from storms, flooding and heat waves, all examples of increased weather extremes, are already happening, these are considered the impetus for the study's research into climate science projects though the year 2100... a distant future that carries us away from the present volatility caused by climate change and the economic consequences already being experienced. The average company's business plan looks ahead 1-5 years. Any emphasis on the year 2100 may directly feed into behavioural and organisational inertia.

Is it possible that the political and economic clout of the Risky Business committee, paired with today's climate change-induced weather volatility, may be strong enough to get business leaders to take action? Documenting the risks and incorporating risk assessment into capital expenditures and balance sheets is an important and necessary first step for decision-makers in the business and policy communities to determine their own tolerance for, and reactions to, climate change risks. Rational business actors have no choice but to adapt, by investing in new technologies, new crops, new equipment and new expertise.

As the Stern Review pointed out, some adaptation will occur autonomously, as individuals respond to market or environmental changes. Markets that respond to climate information will stimulate adaptation among individuals and firms. High-quality climate information and tools for risk management will help to drive efficient markets. Improved regional climate predictions are critical, particularly for rainfall and storm patterns. Thus, a worthwhile adaptation that industries are starting to employ is hiring weather risk management consultants. Innovative companies such as Meteo Protect, headquartered in Paris, and with clients worldwide, offers weather risk assessments, financial communication and reporting of weather risk, weather-driven commodity price risk management, weather sensitivity portfolio analysis and management, and the creation of innovative marketing campaigns with weather hedging.

Moreover, the Stern Review suggests that risk-based insurance schemes provide strong signals about the size of climate risks and therefore good risk management. Developed countries typically have well-established markets with individuals and firms modifying their behaviour in response to price signals, and markets that respond to changing climate risks will stimulate adaptation in the private sector, where adaptation is likely to be most responsive (this is particularly the case in sectors dominated by traded goods, such as agriculture and energy). By accurately measuring and pricing today's climate

risks, insurance can help incentivise the first steps towards adaptation. Without any insurance system the costs of weather disasters will lead crushing business liabilities.

Low-cost micro-insurance options, particularly weather derivatives, also spread the risks of extreme weather events across a large pool of individuals or businesses. This is particularly relevant to developing countries as a means of sharing risk. Thus, Meteo Protect also provides index-based weather insurance, a type of insurance that is triggered when the index (a temperature threshold, precipitation level, sunshine duration, wind speed, or any other weather variable) exceeds a predefined value. The cover of index-based weather insurance is designed to compensate exactly or partially the losses incurred through adverse weather conditions, without the requirement of a field loss assessment or other administrative procedure, so that payouts are immediate in the case of adverse weather. The benefit of weather-based index insurance over traditional insurance, then, is that in the case that a threshold is triggered, but the business does not suffer as feared, the payout is still received and can be reinvested in the business or put forward to cover a further number of insurable years.

They are just two examples of pioneering market responses to climate change, and they demonstrate that where fear, hand-wringing and inaction may cripple policy makers and the general public, for the business community, the step from risk assessment to risk management for climate change is a manageable one, and demonstrating how climate change is exacerbating naturally occurring weather variability now is the key.