

## A Warming World

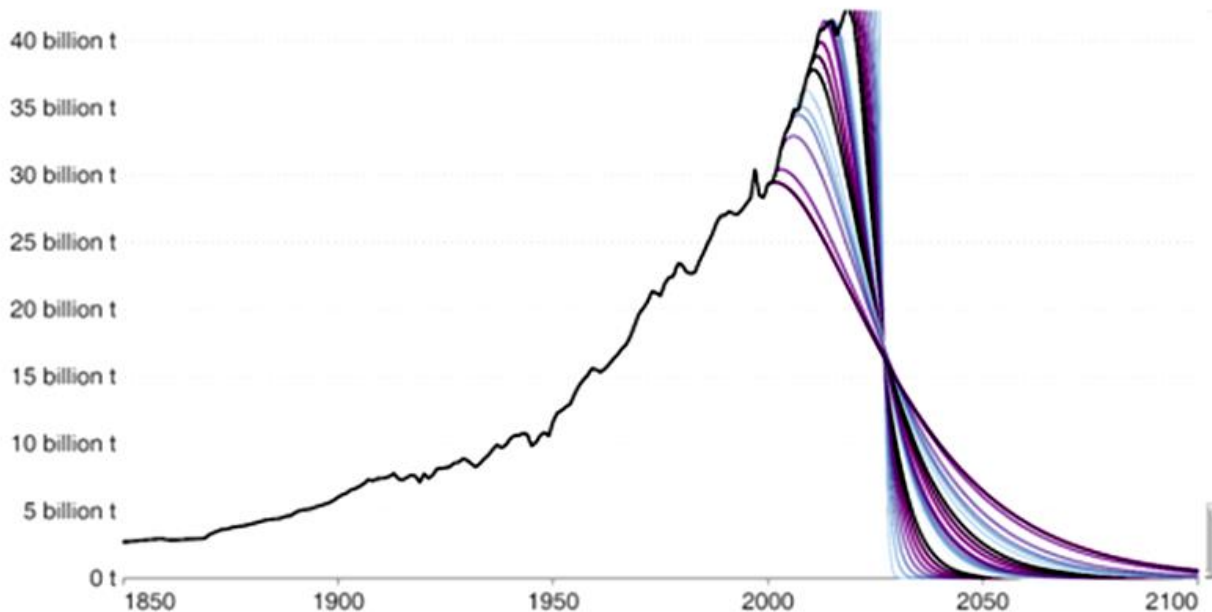


Climate change: a long emergency that is rapidly becoming shorter according to the recently released 6<sup>th</sup> Assessment Report of the Intergovernmental Panel on Climate Change. The outlook is grim with some irreversible effects of climate change now baked into our future and an ever-diminishing window of opportunity to take action and head off the worst. This is “code red for humanity” as put by UN Secretary General, Antonio Guterres. The evidence is now in plain sight, forest fires and then floods due to excessive precipitation in British Columbia last year, coastal erosion due to sea level rise and heavy rainfall in Prince Edward Island, strong winds buffeting the Atlantic Region now almost a weekly event.

A few months ago, the author of this article turned 35. Old man, I know. But even from here, just past the threshold of maturity, let me tell you that aging is a hell of a trip. With a few decades and milestones under my belt, I can now regularly perceive the arc of time, but still hold clearly in my mind the memories of early childhood when nothing existed beyond the “now”. I can vividly remember, for example, sitting in the school library in Grade 4 and learning about the Montreal Protocol and how it reversed the depletion of the ozone layer (something very topical to a pasty redhead with British genes). I remember learning how something called the Kyoto Protocol was going to help prevent a different environmental crisis called Global Warming. It felt like an imperceptible eon away at the time, what a different world we would be facing if that had panned out.

## CO<sub>2</sub> reductions needed to keep global temperature rise below 1.5°C

Annual emissions of carbon dioxide under various mitigation scenarios to keep global average temperature rise below 1.5°C. Scenarios are based on the CO<sub>2</sub> reductions necessary if mitigation had started – with global emissions peaking and quickly reducing – in the given year.



Source: Robbie Andrews (2019); based on Global Carbon Project & IPCC SR15

Note: Carbon budgets are based on a >66% chance of staying below 1.5°C from the IPCC's SR15 Report.

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

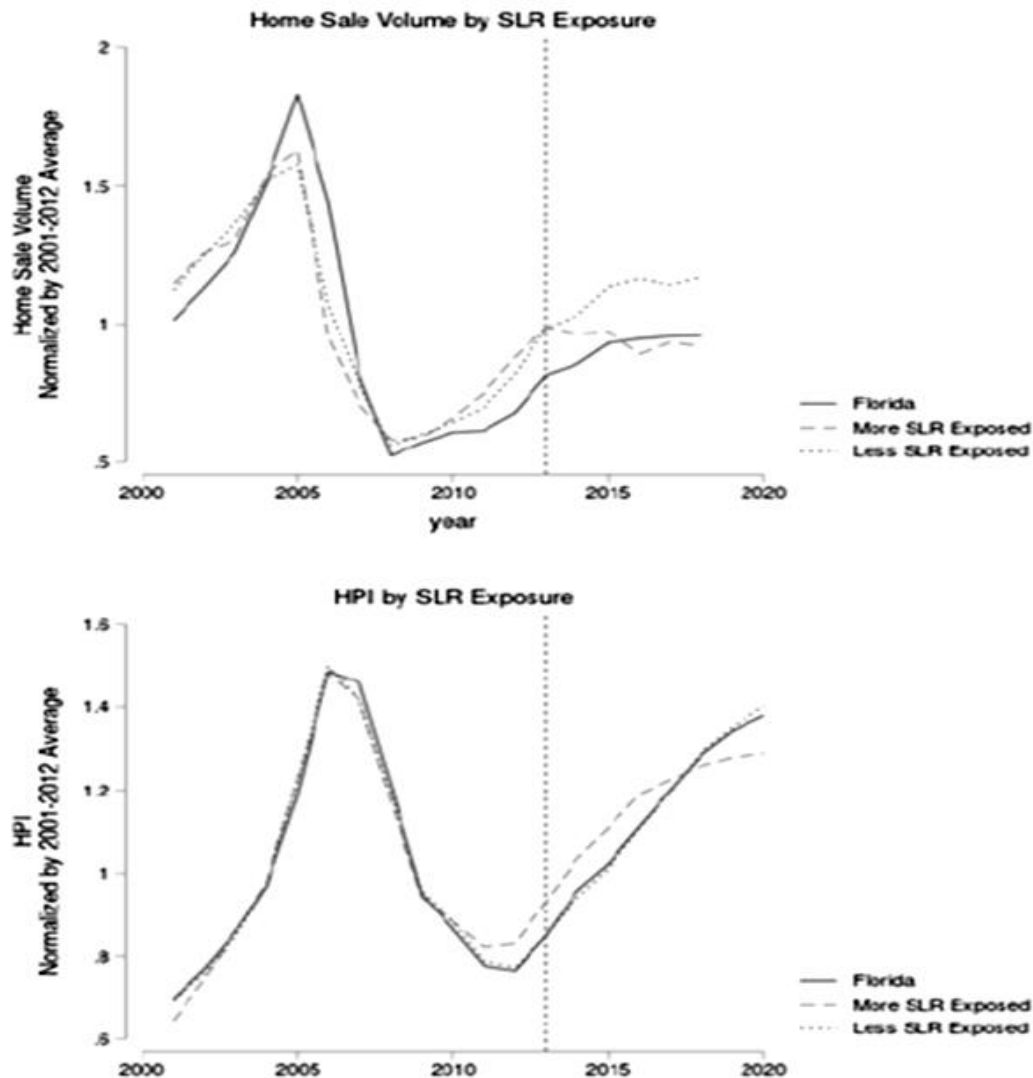
My daughter turned 5 this spring and at the moment her “now” is a lot more focused on Covid than climate, but that will probably change soon. That long arc of time leading to climate-driven environmental and social crises has converged with the now. As the IPCC report lays out, our window of opportunity to shape future impacts and head off the worst is running out. Not in imperceptible eons, not in generations, but in a decade (singular), in near-term political cycles. In all likelihood, I will know whether or not my daughter is inheriting a disastrous +2°C world before I know whether or not she’s passed her driver’s test.

But even that sentiment downplays the issue. In fact, we are already living with the impacts of climate change and it’s easy to find the real estate angle. Earlier this week our social media accounts shared this article [www.cbc.ca/news/business/climate-risk-real-estate-1.6139206](http://www.cbc.ca/news/business/climate-risk-real-estate-1.6139206) from the CBC examining the lack of climate risk information in the typical real estate transaction process. The topic is presented against the background of raging wildfires in the BC interior, which have destroyed numerous homes and disrupted even more communities. This is already leading to some early musings that the housing markets of Vancouver Island could see a groundswell of demand pressure over the long term as people are increasingly motivated to move upwind of areas where “50-year fires” are now happening multiple times in a decade, threatening life and shelter, and choking out the rest.

So far, the smoke is dissipating before it reaches this side of the continent, so our concerns are not so focused on forest fires (though not to be ignored). Sea level rise and flooding are the risks du jour. We’ve visited this topic a number of times already, in research articles from [www.turnerdrake.com](http://www.turnerdrake.com) → Research → [2006](#), [2007](#), [2013](#), [2016](#), and most recently [2019](#). It’s a subject that we care about and have integrated into our valuation practice, adding a climate risk section to our standard reports just a few years ago. But as one small firm in this big industry it is difficult for us to push that envelope.

Well, reality is on its way to force the issue. Back in the fall of last year the National Bureau of Economic Research published a working paper from a couple of good eggs at the Wharton School examining the capitalization of climate risk in real estate prices. More specifically, their analysis [www.nber.org/papers/w27930](http://www.nber.org/papers/w27930) of home sales in coastal areas of Florida noted that properties more exposed to the risks of Sea Level Rise started to see lagging sales volumes in the early 2010s, with price appreciation starting its underperformance a few years later. Their conclusion? This is a

demand-side trend, buyers are now thinking about climate change in the timespan of their own mortgage term! Here's the money chart:



**Figure A-2: Housing transaction volume (top panel) and home price (bottom panel) trends across all of Florida (solid lines) and coastal Florida census tracts with high versus low SLR exposure (dashed and dotted lines, respectively). Housing volume and home price index are normalized by their 2001-2012 mean.**

This trend is just starting, and with the IPCC telling us that a +1.5°C world is now unavoidable, it will only grow in impact in the years to come. Not eons, not generations, years! We'll continue to look for ways to integrate climate risk assessment into our work, and we recommend that anyone considering a real estate acquisition these days do the same. Even if you don't expect to own the property long enough for sea level rise and other climate impacts to physically threaten your asset, the next buyer sure could be, and property values look to be a leading indicator now, not a trailing one. In other words, without due care, your mortgage could be underwater long before the property is itself.