

Whitepaper

MISPRICING CLIMATE RISK IN REAL ESTATE:

12 questions to be asked by
banks, asset managers and
institutional investors

July 2021

Structural climate risk and financial resilience

Climate risk is a non-linear and unevenly distributed threat to our economy. It is a long-term financial risk which requires action today. The response to this challenge is both global and local, which is creating dislocations in the real estate market.

There are structural changes being made to the financial system and our political economy which will result in both financial winners and losers. Public opinions and social norms are also changing as a result of our increased awareness of the impact of climate change on our quality of life.

Our increasingly sophisticated understanding of climate change means that we can use science-based, futurist techniques to forecast likely scenarios and near-term outcomes to better understand the risks. Translating that into policy, targets and action plans across all sectors.

However, typical indicators of financial risk - such as market indices, ratings and asset certification - do not account for these future risks from climate change. The risk is multi-dimensional, including physical risk, transition risk and litigation risk. A significant part of the financial risk can be measured, but it is not in most cases.

The majority of real estate funds, debt books and companies are not yet forward-looking on climate resilience and so these likely risks can't be priced-in. The standard valuation models available to them do not incorporate future risks, as these are based on observed changes. The ability to create value and outperform the market in a climate changed economy will be constrained until those risks are better understood, and it is a fiduciary duty to do so.

Investments have to be made in real estate to make it climate resilient and avoid the erosion of asset value. It is not possible to adopt a strategy that is only based on trading your way to a climate resilient real estate portfolio. The market changes slowly: there are \$300tn of real estate assets worldwide, \$10tn is professionally managed, and only \$1tn is traded each year. Early-movers can dispose of their assets with a high climate risk, but that strategy cannot be sustained for the long-term without investment to make the assets more resilient.

Investors and financiers are asking more questions about climate risk at a corporate and entity level, but not the right asset-level questions for real estate to ensure that this climate risk is made transparent and successfully managed within a resilient strategy. By asking the right questions it is possible to find an optimal path to climate resilient financial success.

Collateral climate change risk in real estate

The incorporation of climate risk into the financial system is hampered by two structural market failures, which we need to correct:

1. the tragedy of (access to) the commons¹;
2. the tragedy of the horizon².

To make this possible, the Cambridge Institute for Sustainable Leadership (CISL)³, has set out ten tasks which need to be completed and we are already seeing these tasks being undertaken:

Finance

1. Ensure capital acts for the long term
2. Price capital according to the true costs of business activities
3. Innovate financial structures to better serve sustainable business

Business

4. Align organisation purpose, strategy and business models
5. Set evidence-based targets, measure and be transparent
6. Embed sustainability in practices and decisions
7. Engage, collaborate and advocate change

Government

8. Measure the right things, set the right targets
9. Align incentives to support better outcomes
10. Drive socially-useful innovation

There are several structural initiatives already underway to correct these market failures. The priority is to incorporate climate risk into every financial decision. These include the UN 2030 Agenda for Sustainable Finance⁴, the Taskforce for Climate-related Financial Disclosure (TCFD)⁵, and the EU Action Plan for Sustainable Finance⁶. These provides a combination of new guidance, incentives and an updated regulatory framework for financial services. Whilst there is a high concentration of effort on climate risk in Europe and a recognition of the inherent fiduciary duty, there is a clear expectation that this will ripple across the financial markets to the North American and Asian markets. Central banks, in all of these regions, are co-ordinating their efforts to drive change so that financial stability is sustained.

¹ Frischmann, B. (2018). [‘The Tragedy of the Commons, Revisited’](#) (Scientific American, 19 November 2018)

² Carney, M. (2015). [‘Breaking the tragedy of the horizon – climate change and financial stability’](#) (Bank of England, 29 September 2015)

³ [‘Rewiring the Economy’](#) (CISL, 2015)

⁴ <https://www.un.org/sustainabledevelopment/sg-finance-strategy/>

⁵ <https://www.fsb-tcf.org/>

⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0097>

There are inherent climate risks in real assets where the fabric and operation of a property either contributes to climate change or is affected by a changed climate. The extensive efforts to understand climate risk at a corporate or entity level can obscure the underlying risk in these assets where there is no standard measurement of material risks. An effective strategy for value creation in real assets should incorporate climate risk measurement, mitigation and adaptation measures, and the associated capital requirements.

One example of how these obscured risks could impact on asset values is where a property is acquired this year. The due diligence and valuation is completed on the basis of historic market performance with cap rate and NOI assumptions based on BAU. No account is taken of inevitable changes to climate policy and future climate scenarios, despite the fact that there is an international consensus about the need to act now to make significant changes during this decade. Without the appropriate climate risk foresight there are a number of ways in which the exit value could be eroded resulting in cap rate changes. For instance, new regulations could require a deep retrofit to reduce carbon emissions and NOI or the increased frequency of extreme weather events could increase insurance premia, reduce cover and maybe even make the asset less desirable.

There is an opportunity for real estate to out-perform and minimise risks by incorporating climate resilient financial management practices. At a fund or portfolio level, this builds on historic ESG management practices to track and improve on historic performance. The new element is to be forward-looking, to *grow the pie* of value whilst reducing the carbon emissions. There are some clear steps which must be taken to be successful:

1. To discharge the TCFD recommendations for governance, strategy, management and measurement to minimise the risk of future litigation⁷
2. Screen for physical climate risks and understand the implications and cost of actions required, or value erosion at exit⁸
3. Calculate the carbon footprint of the asset/s and understand their relative carbon intensity against industry benchmarks⁹
4. Use an asset survey to evaluate the transition cost along a science- or context-based pathway to Net Zero Carbon by 2050 or earlier¹⁰
5. Put this transition cost in the context of relevant policy and regulatory changes, some of which are inevitable and could introduce a carbon price as a fine or tax¹¹

⁷ <https://www.tcfdhub.org/recommendations/>

⁸ <https://427mt.com/2018/10/11/climate-risk-real-estate-investment-trusts/>

⁹ <https://ghgprotocol.org/>

¹⁰ <https://www.sustainableorganizations.org/context-based-metrics-public-domain/>

¹¹ <https://www.unpri.org/inevitable-policy-response/the-inevitable-policy-response-policy-forecasts/4849.article>

6. Understand changes to insurance policy premia and cover, which could be affected by climate change, such as extreme weather cover¹²

These are real estate-specific actions which can be undertaken today to better understand, price and manage climate risk.

For banks, asset managers and institutional investors there are questions which should be asked to properly understand where there are underlying risks which need active management.

12 questions to better understand and manage climate risk in capital allocation to real assets

Finance available for climate resilience

1. How does the mandate for the available investment or financing of this portfolio allow for the management of future climate risks, and does this include clear ESG requirements for discharging the fiduciary duty?
2. Is capital required to make the real assets more climate resilient, are those funds available and what is the cost of capital?

Understanding & managing physical risks

3. What are the forward-looking physical climate risks and how have they been assessed relative to a BAU projection, for existing and new assets as well as the broader market?
4. Are there climate adaptation costs expected at the asset or city level?
5. Are insurance premiums related to extreme weather disruption increasing and is cover decreasing?

Understanding & managing transition risks

6. What is the carbon¹³ footprint of the portfolio and how intensive is it compared to sector benchmarks, e.g. Weighted Average Carbon Intensity (WACI), and how is this distributed between the assets?
7. Does that include scope 3 carbon emissions, including tenants, refrigerant gases and embodied carbon?
8. What are the costs, over the next 10 years, to reduce carbon emissions by 50% and the operational energy consumption by 25%?
9. Which climate and energy (in real estate) regulations will affect your assets, in each location?

¹² <https://www2.deloitte.com/us/en/pages/financial-services/articles/insurance-companies-climate-change-risk.html>

¹³ For ease, carbon is used throughout the document in place of carbon dioxide (CO₂) and greenhouse (GHG) emissions.

Climate risk management

10. Have you implemented the TCFD recommendations at company and fund level, and are you ready to disclose publicly?
11. Has your valuation model been adapted for forward-looking risk, for example do you use an internal carbon price range and how is this integrated into financial decision-making to stress test and understand price sensitivity, for both existing assets and new assets?
12. How are temperate-weighted scenarios being used to understand the comparative risks between BAU (i.e. a 3.5°C increase in global average temperature) and a low carbon future (<2°C)?

The methods to price-in climate risks are still evolving due to the multidimensional nature of climate risk and the various impact pathways. This challenge is compounded by the backward-looking nature of valuation models and risk metrics. However, with these questions answered, it could be possible to allocate capital in a way which has more climate impact and mitigates some of the financial risk. This knowledge can be applied whether the investment strategy is screening out risk, tilting towards better performance, full ESG integration or impact investment, and for the effective, low-risk provision of green finance.

This discussion paper has been written to stimulate further discussion in the real estate market to better understand climate risks for real estate and the forward-looking techniques to manage those risks. It is not intended as investment guidance. Given the complex nature of climate change and related climate action, any attempt to reprice assets must recognise that uncertainty.

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