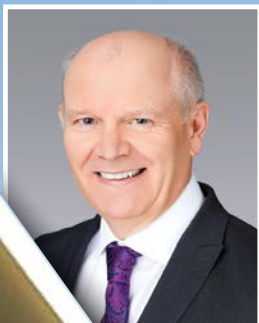


How to quantify the impact of climate risks and sustainability factors in commercial real estate valuations



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BACKGROUND AND CONTEXT

At the recent Appraisal Institute of Canada (AIC) National Conference in Montreal, there was significant discussion around the topic of the impacts of climate change, net zero carbon targets for commercial buildings, and how to quantify the impact of sustainable features in valuations. While these issues are not new to the appraisal community, there is now a significant impetus to understand and address them in our appraisals.

I recently co-authored a study entitled *Impact of Climate Risks and Sustainability Factors on Commercial Real Estate Values* with my colleague Rob Purdy, P. App., AACI, MRICS, Senior Vice President, Valuation and Advisory Services, Colliers, who had recently addressed this issue in valuations performed for institutional clients, and Alexandra Faciu, MRICS, President, Alexandra Capital, who champions identifying and managing climate, sustainability and green risks and opportunities in asset management and portfolio strategies. Together, we aimed to provide asset owners and professionals involved in sustainable investment, asset management and financing with additional information to support their portfolio and asset strategies.

In 2004, I conducted another research study on valuation of sustainable features titled *Green Value: Green Buildings, Growing Assets*. This study was the building block for the subsequent research on this topic and had included both a literature review and extensive analysis of case studies from around the world.

The study is available to download here: www.collierscanada.com/en-ca/news/green-premium-or-brown-discount-tl. This article highlights some of the key findings of that study and their relevance for AIC Members.

While the study focused primarily on Canada and the US, it also drew on information, research papers and publications from Europe.

The investigations covered climate- and sustainability-related elements that affect value. A simple example is the impact on net operating income, increase in insurance premiums and lack of insurance options brought about by acute and chronic physical climate risks. The central thesis of the research was to derive specific valuation parameters for buildings before and after 'greening.' Can the 'green premium' or 'brown discount' be quantified, and if so, which elements exactly, and how?



The key aspects of the work plan were:

1. Review existing research and literature on the subject.
2. Identify key sustainability drivers of value and risks that impact it.
3. Identify assets that have been developed, retrofitted or transacted in the past three to five years to correlate the key sustainability drivers and risks to the pricing achieved.

While the first two objectives were relatively straightforward to achieve, despite requiring time to gather and process the information at hand, the research revealed that the financial information needed for comparable transaction evidence essential to establishing open market values is still generally not available to the market as a whole. This issue can be attributed to two main factors: first, high interest rates have significantly reduced the volume of transactions in the North American markets over the past few years, and second, it is difficult to isolate these specific elements from the traditional risks and drivers of value.

SUMMARY OF RESEARCH

As sustainability-related risks and disclosures become embedded in investment decisions and regulatory frameworks, our research suggests that North American professionals will need to stay in step with, if not ahead of, global trends. Tools like the book written by Tim Rundle and Stacey Thoyre, *The Valuation of Green Commercial Real Estate*, or standards and guidance notes issued by organizations like ISSB, IVS and RICS, remain invaluable, helping appraisers make sense of complex sustainability features in a market that increasingly demands accountability, transparency and environmental responsibility.

Sustainability-focused real estate certifications and rating systems have become essential in qualifying an asset as 'sustainable' and the degree of sustainability. They evaluate the environmental, social and governance matters of assets, offering a standardized way to measure and promote sustainability practices. The most relevant

for the North American markets are LEED, BREEAM, GRESB and Energy Star, which are detailed in our full report.

To guide appraisers, it is important to dive into some technical aspects of valuing green assets, especially in a context where comparable evidence is scarce. The most effective method for assessing the impact of climate risks and sustainability factors on real estate values is the income approach, primarily using direct capitalization and discounted cash flow (DCF) methods. The main distinction between these two approaches is that the DCF method is dynamic, enabling the appraiser to consider the treatment of each individual tenant in a multi-tenant property. This includes projected renewal probability, projected market rent, treatment of percentage rent (in a retail property) and renewal costs (i.e., leasing commissions and leasehold improvement allowances, etc.), as well as treatment of vacant space in terms of how long individual units will take to lease, and costs of lease-up (i.e., free rent, leasehold improvement allowances, leasing commissions, etc.).

This is particularly relevant for buildings with sustainable attributes when assessing rent premiums, operating cost reductions, reduced lease-up costs and potentially reduced marketing periods for new tenants. The analysis of the market will determine if there is any evidence to support a rent premium, reduction in operating costs or reduction in lease-up time periods for a green building versus a conventional building. This would typically be accomplished through the implementation of a conventional paired comparable analysis. While this theoretical model appears sound, in practice, it is not easy to isolate the variables due to the scarcity of real-world data. Asset owners with larger portfolios or with more tenants have an advantage, as most of the comparable data can be extracted from their own assets.

With regards to cap rates, deriving market evidence from transactions to demonstrate any clear advantage for green buildings is even more difficult. For these buildings, valuation considers rent premiums, operating cost reductions and lower lease-up costs. However, in many situations, the study





observed that sustainability factors get diluted, even overlooked, by purchasers and tenants when traditional property fundamentals are weak (i.e., a sustainable building in a poor location would perform generally worse than a well-located building without green features).

Legislation pertaining to decarbonization is increasing, and buildings with robust sustainability programs may be viewed as lower risk due to reduced near-term capital requirements. This can be reflected in adjustments to terminal cap rates. For instance, a property implementing a decarbonization strategy over a 10-year holding period may face lower leasing and expenditure risks compared to one that is not, which could justify valuation adjustments. However, data supporting this remains limited in North America – as well as in Europe, as a matter of fact.

Additionally, 'brown' properties – those lacking sustainability features – may face higher cap rates due to reduced tenant demand and investor interest. Some tenants and institutional investors prioritize green buildings, leading to lower liquidity and increased risk for properties that do not meet evolving sustainability standards.

The overall conclusion acknowledged that 'brown discounts' are more easily identifiable than 'green premiums' in several metrics, but more pronounced in rental growth, renewal probabilities and stabilization rates.

SPECIFIC GUIDANCE FROM STANDARD SETTERS

There is specific guidance available to appraisers to assist them in identifying and valuing sustainable elements of a property. This is provided in the form of a checklist from the Appraisal Institute in the US and more general guidance from the RICS in their global valuation standards or *Red Book*. These are summarized as follows:

The Appraisal Institute (US) now provides their appraisers with a checklist to assist them in addressing the impact of sustainable features when completing appraisals. There are separate checklists for both residential and commercial buildings. The following are the 10 items the client is recommended to provide to the real estate appraiser for analysis:

1. LEED checklist (if appropriate) or other checklist if certified by another organization
2. Contact information or details of green experts (i.e., LEED consultant, architect(s), builder, and engineer)
3. Energy modeling results (or third-party energy ratings for residential)
4. Plans and specifications
5. Intended goals of construction or retrofit
6. Commissioning report (for high-performance building systems and/or solar photovoltaic systems)
7. Tenant leases
8. Incentives (such as property tax rebates, utility rebates or incentives: public sector, private sector or utility)
9. Financing benefits/burdens
10. Operating expenses

The objective of the checklist is to standardize the communication of green and/or high-performing features of commercial properties. Identifying the features provides a basis for comparable selection and analysis of the features. The checklist will assist the client in extracting the documents necessary to expedite the appraisal process by having a better understanding of the special property features. This will assist the client in securing an appraiser with knowledge and experience in the property type.

The RICS *Red Book* provides guidance to the valuer to consider the impact of any significant sustainability factor:

1. The terms of engagement must include any requirements in relation to the consideration of significant sustainability factors.
2. Requirements may include sustainability matters that relate to the activities of the valuer, such as the incorporation of sustainability considerations into inspection and investigation. They may also include resources such as sustainability performance data, sustainability risk assessment and relevant cost information that may be required from the client and/or additional experts commissioned in accordance with PS 2 paragraph 2.4. Such resources must be considered in the same way as referred to in VPS 1 paragraph 3.2(j); in each case, the valuer must judge the

extent to which the information to be provided is likely to be reliable, being mindful to recognize, and not exceed the limitations of, their qualification and expertise in this respect. Where the valuer does not have the qualification and expertise to judge the reliability of sustainability resources provided that may be relevant to the valuation (such as, in some cases, cost information), this must be considered as part of the limitations referred to in VPS 1 paragraph 3.2(i), with appropriate limits on liability as referred to in VPS 1 paragraph 3.2(r).

3. The valuation must consider the potential impact of significant sustainability factors on value, to the extent that such factors are reasonably identifiable and quantifiable. The level of sustainability consideration will be commensurate with the type of asset or liability, location and purpose of the valuation. Upon consideration, there may not be any significant sustainability factors that impact the valuation, in which case, this must be stated, along with appropriate justification.
4. Relevant limitations on sustainability considerations must also be clarified at this stage, such as, but not limited to, clarifying that the valuation does not constitute a sustainability risk assessment or sustainability rating.
5. Any client requirement to consider sustainability matters, including specific measurements and strategies that are applicable and/or relevant only to the client, must be identified and agreed upon in the terms of engagement or as a separate instruction. These requirements must be considered in a way that is appropriate to the basis of value and any special assumptions.
6. Examples of sustainability factors are included in *IVS 104 Data and Inputs: Appendix*. The relevance of these will differ depending on the valuation task being undertaken.

CONCLUSIONS AND RECOMMENDATIONS

The process of revising the initial study, which began in 2004, has been exhaustive, and ultimately beneficial for both the appraisers and the asset managers on the



research team. Over the past 21 years, there have been significant advancements in this subject, as evidenced by the interviews conducted, which clearly indicate a strong conviction that the built environment needs to decarbonize at an accelerated pace, despite current challenges. It was evident in all conversations with stakeholders and in all reviewed literature that there is a need to understand how to best capture sustainability elements and climate risks in year-end valuations.

The first finding of the research indicates that all market participants must collaborate to expedite efforts to decarbonize the built environment:

- ✓ Asset owners, fund managers, GPs and LPs, tenants and lenders
- ✓ Appraisers
- ✓ Standard setters and pathway developers
- ✓ Certifications and ratings providers
- ✓ Policy makers

The research generally found that all market participants either already contribute or are keen to contribute to the decarbonization of the built environment. It is particularly notable that real estate owners, tenants and lenders are pivotal in driving the market and accelerating the transition. Despite the diversity of opinions surrounding decarbonization and the current challenges in certain jurisdictions, the research indicates that many Canadian and US jurisdictions are committed to their sustainable real estate initiatives and, in many cases, are accelerating their efforts.

It is interesting to note that the research found that significantly more resources and attention are allocated to underwriting climate risks and sustainability factors at the time of investment purchase than to clearly defining the framework for capturing these same elements in year-end valuations. One of the explanations is the calculation methodology of

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target rates of return (discount rates), which can use data from other capital markets in the absence of comparable evidence in the real estate market. This is encouraging, as it demonstrates the commitment of asset owners and lenders to the business case for sustainable investment, asset management and financing.

The second conclusion concerns the level of proficiency of appraisers and professionals involved in valuing commercial property. While there is a significant amount of thought leadership, standards, guidance notes, courses and books available on the subject, the recommendation is that appraisers collaborate with sustainability experts when analyzing the subject property and the comparable evidence, in the same way they would engage or refer to an environmental consultant or a lawyer to provide specific expertise in their respective fields. The research demonstrated that sustainability has evolved into an intricate domain of expertise, accompanied by inherent risks associated with climate and sustainability. Consequently, it is advisable to seek the counsel of relevant experts to provide an accurate assessment of value, particularly in a market that remains somewhat opaque regarding these matters.

The third and significant conclusion concerns the lack of comparable transaction evidence. In view of the likelihood of interest rates falling within the next 12 to 18 months, albeit at a more moderate pace than over the last 12 months, it is reasonable to predict an increase in transaction volume and there is some evidence that the level of transaction activity is already picking up since the first

quarter of 2025. This will result in more assets with sustainable features or climate risks being transacted. Transparency will be pivotal in capturing these elements as values. Some of the political uncertainty that characterized the first quarter of the year in Canada has also been addressed with the election of a new leader and a new term for the governing federal Liberal party, the re-election of a majority Conservative government in Ontario, and the introduction of some major clean energy programs by the new Federal government led by Prime Minister Mark Carney. A renewed focus on eliminating interprovincial trade barriers and prioritizing major infrastructure projects deemed to be in the national interest is also helping to mitigate some of the negative impacts of tariffs in Canada. It is recommended that market participants share their achievements and findings with the wider market as a general business practice. In the event of greater transparency, it is probable that 'green premiums' will be more straightforward to evaluate. This would constitute a more suitable incentive than the current approach of discounting building projects due to 'brown' features.

The final conclusion of this study is that research on this subject should continue from stakeholders across all five categories mentioned above. Whether a standard setter, a professional association, a large asset owner or an international organization takes the leadership, the research shows that a continuous improvement approach is needed in order to constantly refine the methodology used and help appraisers in their efforts. ■

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