UBS Asset Management

# Quantifying carbon and climate risk

*Global undersupply of green assets creates intriguing opportunity for real estate investors*

**Chase McWhorter,** Institutional Real Estate, Inc.'s managing director, Americas, recently spoke with **Olivia Muir,** head of sustainability, Real Estate & Private Markets, with UBS Asset Management. Following is an excerpt of that conversation.

*While reducing carbon emissions is a crucial aspect of ESG, what are other important factors to consider for real estate investors?*

Many of the issues we are tackling ultimately come back to carbon. Loss of biodiversity, for example, is an increasingly important topic for real estate investors to consider. But if we didn't have the massive carbon emission problem we have and the resulting global warming, we probably wouldn't be seeing this scale of habitat and biodiversity loss. Another important factor to consider in the near term is physical risk. This is not a new issue, but it is becoming more important not just to measure, which most people are doing now, but also to act to mitigate that physical risk where it can be mitigated, and to reconsider exposure, where it cannot be mitigated. Climate resilience and adaptation will also be an important issue, which the industry is not really talking about at the moment. As the Migration Policy Institute (MPI) highlights, millions of people are already being forced to relocate due to natural disasters and climate change. But from an institutional real estate perspective, we don't seem to be talking about that adaptation. The climate is clearly changing, and we're not going to manage to stop that despite the massive mitigation efforts now starting – and the consequence of that is relocation, the need for resilience and the need to adapt. We must continue to focus on emissions without question, but we also need to prepare for a warming world. Crucially, that hasn't really started playing out in economics in some markets, but it will play out sooner or later, which adds a social angle.

*Would you say there's been any improvement in the past five years in tools to measure the social aspect of ESG? Or is it still more anecdotal?*

There has been progress, and there are more companies and teams within existing environmental or sustainability consultants that are focused on the social aspect. But, still, the metrics are difficult to define and measure. So, while there has been progress, the social aspects are still a long way behind the environmental factors because of that challenge around measurement and verification, in particular.

*Are niche real estate subsectors emerging within sustainable strategies?*

There are niche subsectors that are focused on sustainability, but they are swiftly becoming less "niche." Life sciences is one example. It has been a subsector in the United States for years, but in Europe, it is a relatively new asset class. That will change quite quickly, as the sector becomes better known and understood, and the fact that it is quite established in the United States will translate over to Europe quickly. Another strategy focused on sustainability that might be considered niche right now in real estate involves a "brown to green" transition, and we are seeing lots of funds coming to market now with this green-renovation focus. Additionally, social-impact plays, including residential or even retail, are coming to the market. The assets aren't necessarily niche, but the focus on a sustainability or social problem is. They're taking that problem – whether it be high-emission office in need of a brown-to-green transition, or an empty high street in the heart of U.K. towns – and they are looking to build a financially profitable and environmentally or socially additional solution to that problem. That's not niche; that's just business. Investors might need some time and education to understand that strategy versus a core balanced fund, but these strategies are here to stay. With so much of the office stock in such urgent need of upgrade during the next few decades, for example, I don't think that can be considered niche for any time at all. But that is how they are often being categorized at the moment.

*How is environmental risk calculated into your portfolios?*

Quantifying climate risk into a single financial number is fraught with challenges. A number of third parties have been offering that kind of tool in the past few years, but in practice, at least based on what we've seen, that number, that climate value at risk or climate estimated loss, is always going to be inaccurate because of the many assumptions that go into it and the many unknowns. A number of regulations are starting to require that number, which does put some pressure on the industry to make sure those approaches can be made more accurate. But for now, we've not found a solution that adequately or accurately quantifies that risk in a dollar or percentage term. Consequently, we are building it into our process in other quantitative ways across multiple environmental risk metrics, but not in that simple dollar term. Ultimately, the key thing is always to ensure your decision makers are informed of the risk profile of whatever they're looking at, because that's been the problem historically, that it simply either was completely missing or was very qualitative and not useful in the decision process. That's our immediate goal: to make the climate-risk information "decision useful," to make sure it is informing the decision makers in the not-too-distant future with that accurate dollar value, which then truly can build into the financial modeling and cash flows.

One of the other things we're looking at is the application of some sort of carbon tax or carbon penalty in underwriting and, then, in future cash flows. It's a far-from-perfect tool, but it is one of the ways you can quantify risk and ensure it hits that bottom line in the forecasted return for investments and portfolios. Decision makers are still very focused on that ultimate projected IRR, so as soon as you can get climate risk into that in a sensible way, it starts to influence the decision making. But getting that dollar number is challenging, as I've said, and if decision makers have a quantitative single climate risk metric that is inaccurate because of missing items and incorrect assumptions, it's almost more dangerous that decision makers *think* they are informed when they might not be.

In terms of how we would price such a carbon tax or penalty, the voluntary carbon market is new, untested and challenged. But there are not many alternatives at the moment, so it's as good a place as any to start. We are running scenario analyses on today's carbon price as x, but in the future, the best estimates are that it will be eight times that. We should be looking at that over the

hold period, considering the carbon price going up eightfold in the future and informing today's decisions accordingly.

*What are the most important factors in ESG measurement?*

In ESG measurement, it comes down to data and the accuracy of that data. It's as simple as that. Data was a big focus for us in 2023, and it's still our main focus for 2024, because data is the foundation to everything we're doing. If we have incorrect or incomplete data, then everything we build based on that data could be a waste of time and a waste of money. Getting the data and making sure it's accurate is everything if you want to measure anything in ESG.

Net-zero carbon emissions is top of most investors' minds globally, and transition-pathway planning is on every real estate sustainability team's plate. Let's say a building has a recommendation for LED lighting or a boiler change. If the data in that plan is incorrect, all of those recommendations could be incorrect. And then you start down a path changing your lights, but you get into the building and realize they're all LED already. Or the boiler was just changed last year. You have to have the right data to build on; you need a solid foundation or else the whole thing will fall down around you, sooner or later.

*What should investors pay attention to specifically in the office sector, as the future of work post-COVID evolves and green refurbishment costs become necessary?*

The office sector right now is a little scary, in my opinion. Last year, we saw repricing globally in offices, and we expect capital values to bottom out fully this year. In some parts of the office sector, though, I think there is still more distress to come from a pricing perspective. Refinancing is coming due. Leases are expiring and, on top of that, you have the refurbishment costs associated with making these buildings attractive and green places for employees to return to work and, thus, tenants to demand space. Properties that aren't green are at risk of becoming illegal to transact or uninsurable or unleasable, as climate risk for insurers increases and regulations in different countries evolve.

The necessity of incurring those refurbishment costs just to enable assets to be leased or to give them a good commercial chance of attracting a tenant or future buyer is new in the past few years — so a new challenge for the market that already has so many challenges. And those refurbishment costs, in general, are still massively underestimated, in my opinion, leaving a liability that a lot of groups aren't fully pricing. When you have a fund that says it will be net zero by 2050, you have to determine whether they have done the work to actually understand what liability that is putting over their balance sheet for the next 26 years. Becoming net zero means ensuring maximized energy efficiency, minimized energy demand or procuring renewable supply, which may require putting renewables on site or procuring off site, and finally, offsetting anything that's left. That is a huge cost that will be incurred to do all those things. Have they actually assessed the price of that? Have they put that in their future cash flows, in their balance sheets? Some groups have done that, but many have not, and that is yet another thorn in the office sector's side right now.

*Can institutional investors ignore sustainable investing?*

No, not if they want to fulfill what most institutional investors have as their primary fiduciary duty, which is to deliver risk-adjusted financial returns for their clients. You have to consider sustainability because it is impacting values and future cash flows. If you are concerned about capital values, rents, returns and income, you have to take into account sustainable investing regardless of your philosophical stance — it is a question of financials, and most institutional investors I know aren't ignoring financials!

*Is there still a green premium in property? Will a green premium deliver higher returns?*

What we call a green premium or a brown discount is, fundamentally, pricing reflecting the sustainability characteristics of a building. And so, yes, the pricing should, does and will continue to differ between green versus brown. I don't see that changing because of the fundamentally different future cash flows of those two types of assets. The upcoming regulation will hit all sectors, and the tenants who have made net-zero commitments are across all sectors — and those are two big drivers that I believe will support this trend, these differentiated cash flows, and prices between brown and green. Fundamentally, though, right now there is a massive undersupply of so-called green assets. Demand is going one way, so that undersupply, that mismatch, is only going to get more extreme.

That is the huge opportunity the market has right now — and we as investors, our clients and our competitors have today. We know tenants want green buildings for the potential for better employee performance and staff retention, and for net-zero commitments some of them have made publicly. And we know regulators are tightening the screws in terms of minimum standards. We see that in New York and London very clearly. We know future buyers will want green assets. All of those factors and all the important stakeholders are pushing in the same direction, while supply is actually shrinking because every year the standards tighten. And if you have that sort of supply/demand dynamic in any market, it only means one thing for prices.

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