



# The CIO and the data scientist: commercial real estate's new power partnership

*A Q&A with BGO's Steve Reents, CIO & Managing Partner,  
and Chris Liedtke, Managing Director & Chief Data Scientist*

## Strategic rationale and investment philosophy

### *What motivated BGO to begin using quantitative research to guide investment strategy?*

**Reents:** It wasn't a reaction to any one thing. It was a deliberate, strategic choice to give us an advantage. The first generation of our models was about giving our investment judgment a second, independent lens, a way to pressure-test our thinking rather than rely on it alone. We made a conscious decision to operate on the premise that better information, applied consistently, could give us a durable edge.

**Liedtke:** The deeper motivation is the nature of the asset class. We saw an opportunity to use best-in-class quantitative and statistical methods to identify better investments and to measure risk by analyzing markets from multiple angles at once, exploiting statistical patterns in the data that aren't obvious to a deal team.

Cause-and-effect relationships exist in this data, and they remain poorly understood and underutilized throughout the private equity real estate industry. Real estate markets are often inefficient, and at BGO's scale that inefficiency becomes an advantage; we can connect data sources from across the enterprise with external market data, and we lean on a strong information technology organization, which enables us to reach better decisions. The quantitative lens doesn't replace the qualitative craft – it adds another, multifaceted perspective on a very complex set of problems.

### *What should investors understand about BGO's data-driven investment philosophy, and why is this approach particularly important in today's market environment?*

**Reents:** Investors should understand that this is a deliberate, disciplined approach, not a gadget. We use it across the whole investment process to be more rigorous.

Why it matters now comes down to two key factors. First, it's an intensely competitive environment so a genuine informational edge is a differentiator for our investment performance. Second, the macro backdrop has changed. When you had falling rates and broad rental growth tailwinds, you could invest into almost any market and do relatively fine – beta performed well. That era is over, and when the tailwinds disappear you get a huge dispersion in outcomes, so you have to be far smarter about market, submarket, asset and credit selection. You also have to be very focused on operational performance, including when to sell. The data is simply more available as well, and the computing power is more accessible, than they were even ten years ago. We'd have loved to do this a decade earlier; now we actually can.

**Liedtke:** One way I think about it is the cap rate itself, which you can decompose into the risk-free rate, NOI growth, the risk premium and execution. For years, a large percentage of returns came from cap rate compression driven by falling rates. With that tailwind gone, returns increasingly have to come from high-growth NOI markets and from execution – and those upstream, market-level growth dynamics are exactly what our models are built to detect. The point investors should keep in mind is that we believe better information supports better decisions and stronger risk management.

## Practical application across the investment process

### *How is BGO applying quantitative methods to support investment selection and portfolio construction?*

**Liedtke:** We understand the world at three levels of abstraction – macro, meso and micro – and we bring evidence-based quantitative tools to each. We use macroeconomic models to build a perspective on sector tailwinds and headwinds, national demand drivers, and the relationship between public and private markets in terms of REIT pricing, public and private cap rate compression and decompression, the risk-free rate, the risk premium and growth. Real estate is, in effect, cap rate arbitrage, so we need an informed macro view before doing any market- or deal-level work.

At the meso level, which is the level of markets, we use machine-learning models for large-scale pattern recognition. The meso level is where the scale of the problem becomes clear, with roughly 400 U.S. markets, 40,000 zip codes and somewhere between two and three thousand distinct submarkets. The key question at this level is historical:

## Inside BGO's Data Science Program

**BGO's** data science team sits inside investment and portfolio management and is embedded with the firm's investors on virtually every deal. Its models read markets at three levels – macro, meso and micro – combining macroeconomic analysis, machine-learning pattern recognition across thousands of U.S. submarkets, and four decades of the firm's own deal history. Now in its sixth generation, the program is extending from market and rent-growth selection to incorporate a quantitative assessment of risk at the individual investment level with a clear objective: identifying the best opportunities while systematically avoiding investments unlikely to deliver.

how have supply and demand interacted within a market to produce outsized rental growth that isn't yet priced into the cap rate? At the micro level, we mine the hundreds of deals BGO has underwritten during the past four decades to understand what actually drove deal risk and deal success.

For portfolio construction specifically, the macro view sets our sector conviction; we then use portfolio optimization tools – thinking about the correlation of markets and sectors and how to properly barbell a portfolio – and our market and submarket models to find where we can express that conviction with the best risk-adjusted profile.

### ***How does data science support more effective capital deployment, as well as more systematic decision-making at scale?***

**Liedtke:** At each level of abstraction the analytics translate directly into a decision. At the firm-strategy level, the models help set our degree of sector conviction and inform portfolio optimization – how markets and sectors correlate, and how to barbell the book. At the market level, we think probabilistically about the range of scenarios for a market going forward, bringing a capital-markets lens that uses risk premia, REIT data and public-versus-private appraisals to answer one crucial question: is the NOI growth we're forecasting for a market already embedded in the cap rate, especially once you control for the risk premium, both within the market and across its sector? That's how we identify genuine mispricing rather than consensus.

And at the deal level, we run a specific deal's characteristics and underwriting through our framework to understand its unique thesis and how it stacks up against historical investments. Doing this consistently – the same way, on every opportunity – is what makes the decision-making systematic and scalable rather than ad hoc.

### ***How does BGO narrow a complex universe of hundreds of U.S. markets into actionable investment priorities?***

**Liedtke:** Once we've set our sector conviction, it's relatively straightforward to take those roughly 400 markets and sort them into buckets by construction pipeline, by growth potential, and by how mispriced the cap rate appears, which narrows the strike zone for our investment teams. We look at every market through probabilities: the probability of upside and the probability of downside, each the output of a statistical model. That lets us ask what the Sharpe ratio looks like at the market level, and build an efficient filtration process that radically reduces the number of markets a team needs to focus on.

The discipline this imposes is really about salience – sharpening focus and measuring what truly matters. Rental and NOI growth, for example, turns out to be a major determinant of deal-level success or risk, so a genuinely contrarian, well-supported view there is worth far more than reacting to the considerable noise in our business. It's easy to get excited about a market even when there's no there there; the models keep us anchored to the signal.

**Reents:** The other thing the models counter is recency bias, which is just human nature. You read a research report or a headline about a market or a sector, or you see an uptick in

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– Steve Reents

leasing, and you start reacting to the most recent data point instead of the trend. The analytics gives us a more historical, holistic look, and helps us decipher genuine fundamentals. The data keeps our attention on what matters.

### ***How do you mitigate risk when employing a quantitative strategy?***

**Liedtke:** Risk mitigation is really the heart of the philosophy. The goal isn't only to find great investments, but to avoid bad ones. A couple of things make that work. First, we've built a dataset of hundreds of realized BGO investments going back decades, spanning different market regimes and asset types, specifically to understand what drove investment-level risk and success over time. That work points consistently to the same forces – the market cycle, the construction pipeline and rental growth dynamics – which is exactly what we're now turning into a risk overlay on our predictive framework and, ultimately, a deal-level scorecard.

Second, the models actively guard against the most common and most dangerous bias in our industry, which is momentum. Investors repeatedly pile into hot, oversupplied markets after cap rates have already compressed to reflect a very optimistic outlook on rents. When you enter a market that's already priced for perfection, the risk is asymmetric. The upside is capped, but if the NOI thesis is even slightly wrong, the losses run well beyond it. By being disciplined about those momentum-driven, oversupplied markets, we've become far more aware of the traps that often catch a lot of capital.

**Reents:** From my seat, the most valuable thing the models do is force me to validate my initial conclusions. They make me reconsider the markets we think are good, and the markets we think we don't like that keep showing up in the data. That willingness to be challenged, and to be contrarian when the evidence supports it, is itself a form of risk management.

### ***How is BGO turning quantitative insight into a repeatable investment discipline at the deal level?***

**Reents:** It started with market selection. We built a tool to rank markets and rent growth. From there we applied the same discipline across all of our decision-making: acquisitions, dispositions, asset management, hold-and-sell decisions. The next step, which we're building now, is to go beyond market and rent growth ranking and create a quantitative risk assessment of the overall investment, grounded in what we've learned from 40 years of our own performance – relative pricing and relative value across markets, plus market performance itself. The point is to make the same rigor repeatable on every deal rather than applying it unevenly.

**Liedtke:** Concretely, that means every deal runs through a consistent framework. In the near term we're rolling out a risk overlay that buckets deals by risk, indexed heavily on where cap rates currently sit in that market and what the construction pipeline looks like. In the medium term it becomes a deal scorecard that runs a deal's characteristics and underwriting against our historical dataset, so a team can see how a given investment's thesis stacks up against decades of comparable deals. That's how an insight becomes a discipline – the same evidence-based test, applied the same way, every time.

*"Execution is where most of the alpha is generated, and that's a deeply human activity."*

– Chris Liedtke

## Human judgment, leadership, and collaboration

*How has the relationship between investment leadership and data science evolved at BGO over time, and how do the CIO and data science teams work together in practice when evaluating opportunities?*

**Liedtke:** The most important structural point is that the data science team reports into investment and portfolio management. There's no firewall and there's no ivory tower. We're truly embedded with the investment professionals. In practice that means we sit in on pipeline conversations and on investment committee meetings, we present frequently, and we have rapid back-and-forth dialogue with investment leadership on virtually every deal.

The relationship has evolved a great deal. We started by building with technology and academic theory, but across six model iterations we've effectively converged with how the investment team actually thinks about the world. That convergence runs both ways: our data scientists have become genuinely educated about the investment process, so that knowledge gets embedded in the intelligence of the models, while we work on quantitative education across the investment team so they can see the world through a data scientist's lens. The dashboards and models are a shared, living tool we iterate constantly with their feedback.

**Reents:** From the investment side, it's a highly collaborative process and it's fundamental to what we do. We're using it across acquisitions, dispositions and our hold-and-sell decisions. It isn't a separate research function we consult occasionally; it's incorporated into the decision-making itself.

*Where does human judgment remain essential, even in a highly data-driven investment process?*

**Reents:** In a lot of places. We still validate the models' findings with our own sensibility – we go to the market, we walk the assets. Two buildings in the same submarket don't always perform the same way, and judgment is what tells you which one is preferable. There's also real value the algorithm will never capture: how you source a deal, how you structure it, how you negotiate it, how much you pay for it. A stronger entry basis is part of your alpha. And there's vision: a senior colleague can stand on a piece of land or in front of a building and see what it could become, how to improve occupancy or reposition it. That's something an algorithm will never do. Even liquidity is a judgment call: you can buy a vacant building, fix it up and lease it, but if there's no buyer when you go to sell, you never created the alpha. We never want to give the impression that we're just an algorithm trader – each side complements the other.

**Liedtke:** I'd frame it as a division of labor. By quantifying and controlling for the market's headwinds and tailwinds – the things that are hard for any individual to see – the models free our investment teams to spend their time where they're uniquely positioned to add value: being creative in their investment theses, engaging with partners, and executing. Execution is where most of the alpha is generated, and that's a deeply human activity. On the macro inputs, too, judgment is essential. Our senior investment leaders and chief economist build the forward view on the rate environment together. The models inform that view; they don't dictate it.

*How is BGO marrying intuition and human expertise with data science?*

**Reents:** The honest answer is that the two genuinely check each other. Our intuition checks the models – we validate what the data is telling us against decades of experience and what we see on the ground. The best decisions come when a strong quantitative signal and seasoned investment judgment point in the same direction; when they diverge, that disagreement is a prompt to dig deeper, and that's often where the most interesting opportunities are.

## Decision quality and differentiated insights

*Does quantitative analysis change the kinds of questions investment teams ask before committing capital?*

**Liedtke:** Yes, meaningfully. Because we've been able to distill the handful of factors that drive most of the risk and return in a deal, the conversation before we commit capital has shifted. Instead of debating surface-level narratives, most of the questions now hover around why our analytical perspective is what it is. What are the specific, often idiosyncratic, model drivers behind a bullish or bearish view of a market? It moves the discussion toward evidence and away from anecdote, and it makes disagreements more productive, because they're anchored to identifiable drivers we can examine empirically.

*Can you share an example of a situation where quantitative research surfaced a risk or opportunity that traditional underwriting might have missed?*

**Liedtke:** There are honestly too many to count, but a couple of patterns illustrate it. On the opportunity side, the models often give us the conviction to underwrite growth that a traditional read wouldn't support, because they detect growth characteristics in a market that simply aren't reflected in the current cap rate.

On the risk side, the models are built to flag emerging risk earlier than the fundamentals alone would reveal. We can detect upstream demand drivers beginning to waver while construction permits and the supply pipeline climb, which gives us an early, well-supported view that cap rates are likely to expand if supply outpaces demand. We pair those signals with classical real estate cycle frameworks to characterize exactly what phase of the cycle a market is in. Underwriting naturally starts from where a market is today; the models add a forward lens built with the intention to catch the inflection before it arrives.

### CONTRIBUTORS



**Steve Reents**

**Chief Investment Officer  
Managing Partner**

Steve Reents is a Managing Partner, Deputy Head of U.S., and U.S. Chief Investment Officer at BGO. Steve has held various leadership roles during his 23 years at BGO and its predecessor companies. Steve currently serves on BGO Global Management Committee and US Management Committee, as well as various BGO US Investment Committees. Steve is active in ULI and other real estate organizations, and prior to his real estate career, spent 6 years working in the international aerospace industry.



**Chris Liedtke**

**Managing Director  
Chief Data Scientist**

Chris Liedtke is Managing Director and Chief Data Scientist at BGO, where he builds the analytics systems that inform investment decisions across the firm. He previously founded the data science function at Putnam Investments, spanning sales and investment verticals.

Prior to investment management, Chris spent six years in the U.S. Navy as a search-and-rescue swimmer and acoustic intelligence analyst, earning the Navy Commendation Medal for bravery under direct enemy fire. He holds an MBA from NYU Stern and an MS in Analytics from NC State, with doctoral coursework in AI/ML at George Washington University.

### *Is there an example or case study which corroborated your instincts or assumptions about a deal?*

**Liedtke:** This links closely to how we use submarket data. We've made multifamily investments in markets such as Nashville and Miami where our metro-level read and our submarket-level read didn't fully agree. When the deal teams studied the specific submarkets and assets, they identified characteristics that were genuinely distinct from the broader metro, and the submarket model bore that out.

Because we maintain an independent, multiperspectival view of both the metro and the submarket, we can do two things: when a strong submarket sits inside a strong metro and the signals align, we can express real conviction, and when a genuine pocket of growth exists at the submarket level inside an otherwise softening metro, we can find that point of light. Nashville and Miami are good examples of that dynamic, where the data and the deal teams' on-the-ground instincts ultimately reinforced one another.

### *Have you and your teams had any revelations or biases challenged because of your application of quantitative methods and AI?*

**Liedtke:** The biggest is momentum bias. It's a deeply ingrained habit in real estate to chase markets where demand is surging and prices are already rising. Using a classic cycle framework (recovery, expansion, hypersupply, recession), the ideal investment strategy is to buy as a market comes out of recession, when cap rates have expanded, then ride the cycle up through the compression and look to exit as the market moves toward hypersupply. Yet you repeatedly see investors – frankly, much of the industry – buying in the hypersupply phase, after cap rates have already compressed and the market has priced in heavy NOI growth. That herd behavior is what creates the structure of boom-and-bust cycles. Learning to recognize an oversupplied, momentum-driven market for what it is, and to step back from it, has been a genuine revelation in how much risk it lets us avoid.

**Reents:** For me the revelation is more personal: the models consistently make me question my own biases. They challenge the markets I think are great and surface markets I might have discounted. That's uncomfortable in the moment, but it's exactly what you want. It keeps us honest and leads us to places others aren't looking, where we can find real value.

### **Data relevance in local real estate markets**

#### *In commercial real estate, where markets can be highly localized, how do you ensure data remains actionable rather than merely abundant?*

**Liedtke:** This is critical, because in our business the risk is too much data, not too little. We deliberately collect far more than we need, but the real work is mining that abundance for what has genuinely correlated with success and rental growth over time – what's legitimately predictive and statistically significant across cycles, and durable enough that we can express conviction in it. I think of it as looking for the rhymes of history, the patterns that have repeated reliably, and capturing them. That means throwing away the vast majority of the data we collect.

To give a sense of scale: we'll feed a large-scale machine-learning model something like 32,000 variables, and fewer than 1 percent of them turn out to be predictive for the problem we're trying to solve. Finding that handful is the whole game, which is why we lean on tools from both statistics and machine learning – variable selection, principal component analysis, recursive feature elimination – to pull the few real signals out of an enormous amount of noise. Abundance is just the raw material; actionability comes from the filtering.

### **Investor outcomes and future evolution**

#### *What competitive advantage does data-informed decision-making create for investors, and how can it drive better investor outcomes?*

**Reents:** The advantage is conviction backed by evidence. Because we've stress-tested and back-tested our assumptions, we can take differentiated, contrarian positions and act on them with the confidence to deploy capital, rather than being swept along by consensus. In an environment with so much dispersion in outcomes, that's exactly what separates good results from poor ones: being smarter and more confident about market, submarket, building and credit selection.

**Liedtke:** A great deal of the value to investors is also defensive. The same tools that help us discover mispriced growth help us avoid the deals that quietly destroy returns – the oversupplied, momentum-driven bets that look great until they don't. Sizing risk consistently and refusing to follow the herd compounds over time.

#### *As commercial real estate becomes more complex, how do you see the role of quantitative research evolving over the next five years?*

**Liedtke:** There are several things, all pointing the same way. First, data is becoming increasingly available, which means more of our business problems can be quantified and understood with this lens. That's genuinely exciting. Second, large language models are changing how we build: a growing share of our development work is now AI-assisted, always with a data scientist prompting the model, auditing the output, and independently replicating the results before anything is relied upon. That lets us build, share and iterate far faster than before. Third, the same AI wave is driving more impactful and cheaper computing power. The GPUs behind large language models are exactly what we use for more traditional data science, so we can take on steadily more complex problems. Taken together, the discipline gets broader, faster and more powerful.

**Reents:** And the focus keeps moving down the stack. It's no longer just about submarket selection; increasingly it's about learning from all of our investment decisions and applying that to asset pricing, not only market selection. The next frontier is bringing this rigor to the individual asset, which is precisely where the deal scorecard is headed.

### **COMPANY OVERVIEW**

**BGO** is a leading global real estate investment management adviser, real estate lender, and globally recognized provider of real estate services. BGO serves the interests of more than 750 institutional clients, with expertise in the asset management of office, industrial, multi-residential, retail, and hospitality properties across the globe. BGO has offices in 25 cities across 12 countries, with deep local knowledge, experience, and extensive networks in the regions where we invest in and manage real estate assets on behalf of our clients in primary, secondary and co-investment markets. BGO is a part of SLC Management, the institutional alternatives and traditional asset management business of Sun Life. For more information, please visit [www.bgo.com](http://www.bgo.com).

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