



Public Market Signals for Private Real Estate Investors Part II: Risk Assessment

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Key Insights

- Real estate investors and managers frequently rely on qualitative market risk assessments but, in many cases, do not give appropriate consideration to quantitative assessments that are readily available.
- Put and Call options on REITs provide forward-looking risk indicators that incorporate both historical property sector trends and views on the outlook.
- Public markets currently suggest that net lease retail is less risky than apartments, even though investors are accepting lower yields for apartments.

Introduction

In *Moneyball*, author Michael Lewis discusses the “tools” available to baseball scouts evaluating young players. “A guy who could run had ‘wheels’; a guy with a strong arm had a ‘hose’. Scouts spoke the language of auto mechanics.”

In many ways, the private real estate sector today shares elements with Major League Baseball in the 1990s, when qualitative traits frequently trumped quantitative evaluations. This is especially true when it comes to **risk assessment**. For example, how much additional yield should an investor demand today for purchasing an office building versus a logistics warehouse?

In our last *Public Market Signals* report, we argued that private real estate investors are underutilizing the information pouring out of public markets. We pointed out that corporate bond yields and short-term Treasuries could be used **to anticipate changes in real estate pricing**.

Specifically, we reached the conclusion that private markets were, at the time, priced slightly too aggressively, and that transaction cap rates as measured by the NCREIF Property Index would rise by 30 basis points (bps) during the quarter. While it will take several years to truly evaluate the quality of our cap-rate forecast model, the benchmark 2Q25 NCREIF transaction cap rate did reflect our expected rise (Exhibit 1).

Exhibit 1 | NCREIF Cap Rates

Quarter	Classic NPI Equal Weight	Classic NPI Value Weight	Expanded NPI Equal Weight	Expanded NPI Value Weight	Average
1Q25	5.78%	5.75%	5.65%	5.66%	5.71%
2Q25	6.07%	5.91%	6.11%	5.92%	6.00%
Difference	0.29%	0.16%	0.46%	0.26%	0.29%

Sources: MIM, NCREIF. 2Q 2025.

In this follow-up to *Public Market Signals*, we’ll expand beyond Treasury and corporate bond yields to show how private real estate investors can use **REIT Put and Call options pricing** to evaluate the riskiness of various property types, and thus, how much extra yield should be required for moving up the property-type risk spectrum. Combined with our cap-rate model, this analysis provides a useful framework for evaluating risk-adjusted returns.

What Is Risk Assessment?

The Capital Asset Pricing Model (CAPM) provides a practical toolkit for sizing **how much extra return investors should expect** when they step into riskier territory. CAPM suggests that the return from an investment should start with a risk-free rate such as the 10-year Treasury, plus a premium that reflects how much riskier the investment is compared to the market.

The problem real estate investors face is that there is no simple way to estimate relative risk (i.e., the potential range of upside and downside outcomes from base-case underwriting) across property types. There are two primary reasons why this is a difficult exercise:

- **A long list of variables determines investment outcomes.** Investors must, in theory, forecast 1-, 2-, and 3- standard deviation scenarios for rent growth, occupancy, operating expense growth (including taxes and property insurance) and one time capital expenditures. Forecasting performance is typically done for a basecase scenario, but that alone is a full time job. Few investors also have the resources to model the required upside and downside scenarios for a CAPM analysis.

- **Emerging institutional property types with limited data availability.** Historical performance of sectors like industrial, office, retail and apartments are likely documented enough to be used as a starting point, with NCREIF records dating back 30 to 40 years. But what about data centers, single-family rentals or other segments that have only barely seen a full cycle? There are over 20 institutional property types with meaningful differentiated risk/return profiles, but almost none of them have detailed performance histories dating back to the Global Financial Crisis (GFC), or to periods like the 1970s when inflation was running hot.

Using Options Pricing to Estimate Risk

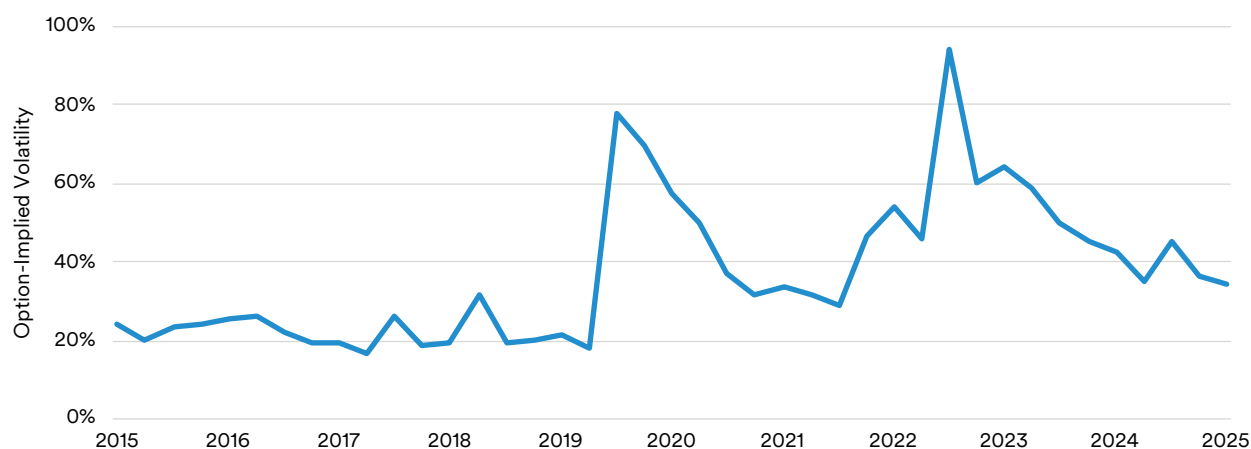
To address these challenges, investors can turn to REIT options pricing as a forward-looking proxy for property-type risk. Although the REIT price-to-net-asset-value (P/NAV) ratio is a commonly used metric, we believe option pricing can be a more useful way to understand volatility and estimate risk-adjusted returns.

Implied volatility is a key metric derived from options pricing and represents the market’s forecast for the magnitude of future price fluctuations over the life of the option. Unlike historical volatility, which simply records past price swings, implied volatility is embedded within the prices of options contracts and is thus forward looking.

By examining the implied volatilities of REITs that specialize in specific property types, whether office, industrial, retail or newer categories, like data centers and single-family rentals, investors can extract quantitative estimates of risk that capture the market’s anticipation of future turbulence. This approach offers a real-time alternative to the constraints of historical analysis that don’t incorporate new information we know about the future (like how tariffs might impact the industrial sector, how immigration restrictions might impact apartments, or how quickly remote work might be reversing and the subsequent implications for offices).

Take, for example, the chart below, which represents the implied volatility for office REIT SL Green. Prior to COVID, SL Green’s implied volatility hovered around 20% (annualized predicted standard deviation of the share price, see Exhibit 2). It rose to 95% during the peak of the work-from-home downturn for the office sector. It has been recovering more recently, reflecting improvements in the office sector, but is still elevated relative to pre-COVID.

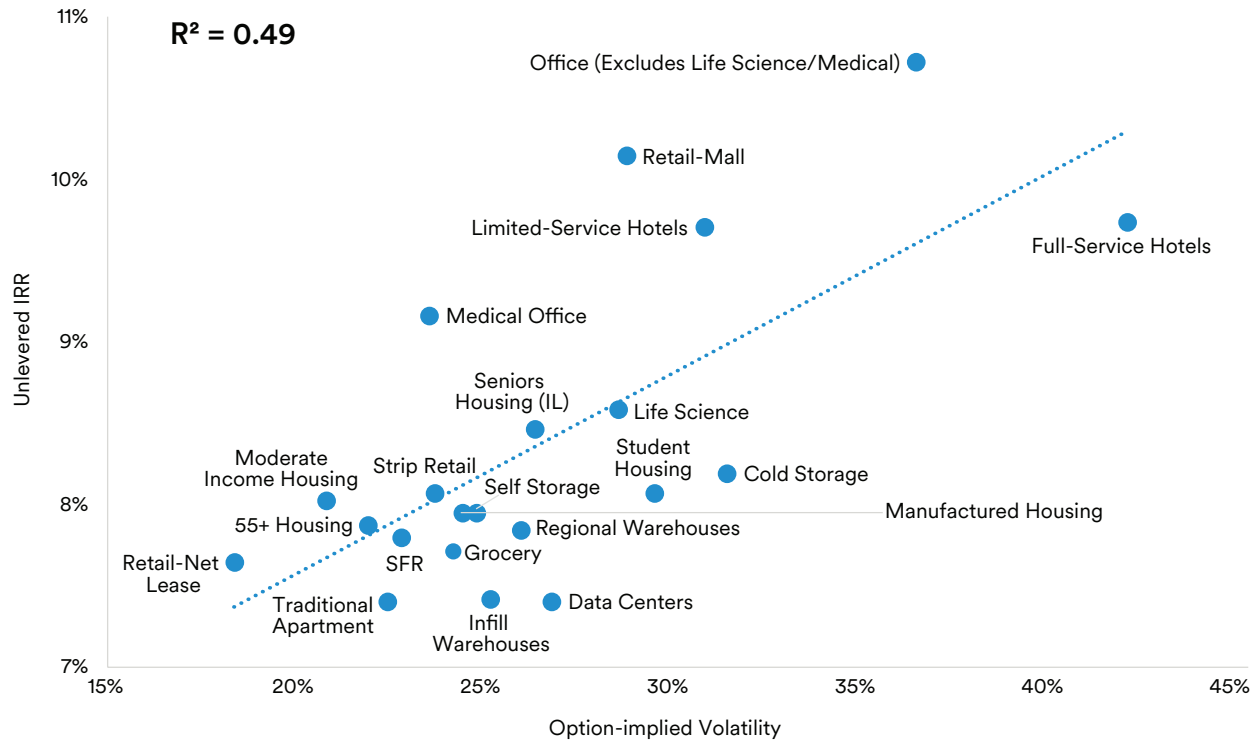
Exhibit 2 | SL Green Option-Implied Volatility



Sources: MIM, Bloomberg. September 2025.

To compare implied volatilities across property types, MIM grouped REITs into 21 property type categories, with boundaries based on where segments may perform materially differently. These definitions do not exactly match those used by industry groups such as CREFC and NCREIF. For each property type, we model volatilities against assets in MIM’s acquisition pipeline, as well as against a monthly yield survey that MIM’s acquisition teams complete. The results of that analysis are below:

Exhibit 3 | Sector Option Implied Volatility vs. Unlevered IRR



Sources: MIM, Bloomberg. Year-to-date average through September 2025.

Exhibit 3 shows the relationship between private sector yields and public market sector risk as measured by option-implied volatility. Specifically, the analysis implies that one additional percentage point of implied volatility requires 10 bps of unlevered IRR. In other words, moving from an implied volatility of 20% to an implied volatility of 30% should equate to moving from an 8.0% unlevered IRR to a 9.0% unlevered IRR.

This analysis also allows investors to begin making relative value decisions. For example, strip retail centers offer roughly a 40-bp yield premium over traditional apartments today, yet public markets suggest strip retail is slightly less risky.

Drawbacks of Options Pricing Analysis

While option-implied analysis is a powerful tool that investors can use to examine relative value across property types, there are several factors to keep in mind.

Lack of pure-play REITs in several sectors. MIM’s model makes adjustments to account for sectors like student housing, seniors housing, life science and medical office where there are no pure-play REITs.

Volatility can imply upside or downside risk. High-growth sectors like data centers may screen riskier if markets are pricing the potential for upside earnings surprises. Analysts can consider evaluating Volatility Skew or Risk Reversal to correct for directional bias, but this data is less accessible and could reduce standardization of measurement across property types.

REIT prices are not purely a function of their assets. REIT performance primarily changes as a function of asset performance, but management strategies also present upside/downside volatility. Additionally, the use of leverage differs between REITs and can be challenging to adjust for.

Conclusion

The integration of options pricing analysis into private real estate investment strategies provides a distinct and forward-looking perspective on risk. Unlike traditional real estate risk analysis that relies solely on the rearview mirror of historical performance, option-implied volatility stands apart by blending past trends with fresh market intelligence and investor expectations for the future.

While the relationship between implied volatility and private sector yields opens new avenues for decision-making, it is not without caveats. Imperfect correlations and sector-specific limitations mean investors should use this tool in concert with other approaches. As public and private real estate markets continue to evolve, options pricing analysis remains a powerful addition to the investor's toolkit — one that captures the pulse of markets not only as they have been, but as they are anticipated to become.

Although options pricing is an important tool in MIM's property-type relative value framework, we only issue overweight recommendations when option-implied signals are corroborated by at least one traditional fundamentals-based indicator and a private market relative value measure. Our current overweight sectors include seniors housing, infill warehouses, net lease retail, medical office and manufactured housing.

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