

The Future of Data in CRE



THE
GREEN
CITIES
COMPANY

REDEFINING MULTIFAMILY INVESTMENTS THROUGH DATA-DRIVEN INNOVATION

In today's evolving landscape of technological transformation, staying ahead of the curve has never been more critical, especially with the rapid advancements in artificial intelligence. The recent emergence of the Chinese company Deep Seek's open-source AI model, R1, is disrupting industries worldwide, fundamentally reshaping how we approach data, innovation, and decision-making. Technology advancements once projected to take a decade are now materializing in half the time, with more efficient and arguably superior models becoming available to all industries, including CRE investing.

Simultaneously, the real estate market faces significant headwinds, including heightened interest rate volatility and historically low transaction volumes throughout 2023 and 2024. These challenges highlight the growing need to harness new data-driven insights to drive the best use of capital.

Green Cities is leveraging this opportunity and redefining multifamily investing through a revolutionary data-driven approach that goes beyond traditional market strategies. At the core of this innovation are two proprietary tools—the Machine Learn Growth Predictor (ML-GP) and Heat Map Index (HMI)—which unlock powerful insights and drive alpha by combining cutting-edge technology with systematic market analysis. Developed in-house through advanced AI, machine learning, and quantitative modeling expertise, the ML-GP and the HMI were designed and fine-tuned over the past several years to ensure we stay ahead of market trends and adapt to an evolving investment landscape.

The Machine Learn Growth Predictor (ML-GP) uses advanced machine learning to assess and assimilate mass data to pinpoint growth opportunities with precision, empowering Green Cities with better insights and, in kind, allocating resources strategically. Meanwhile, the Heat Map Index (HMI) provides a dynamic framework that synthesizes key market indicators, layering external data gauges of growth prospects, pricing and risk with local market intelligence to reveal undervalued opportunities that conventional methods often miss.

By integrating these tools with decades of team industry expertise, Green Cities achieves a strategic advantage in sourcing and underwriting multifamily investments while identifying value in market inefficiencies. We believe this forward-thinking investment strategy not only delivers superior outcomes but also challenges industry norms, setting a new benchmark for data-driven investment management.

The Machine Learn Growth Predictor (ML-GP) is a cloud-based model built on “CatBoost”¹ architecture, consolidating over 20 years of MSA-level data with national economic trends to identify markets with the strongest potential for rent growth. It integrates factors such as supply, employment, demographics, and

¹ “CatBoost” is a moniker for ‘Categorical Boosting’, a machine-learning framework using gradient boosting to manage categorical and numerical features as well as various techniques to improve output through measures like tree boosting, ordered boosting and randomization.

macroeconomic trends while accounting for lag effects and non-time-series data to provide deeper insights. Offering three-year rent growth forecasts for 17 key MSAs, the ML-GP has been rigorously validated through back-testing and Mean Absolute Scaled Error (MASE) scores to ensure predictive reliability. Markets with higher projected growth and with predictive confidence are prioritized, allowing Green Cities' team to allocate resources more efficiently to identify and underwrite the best deals in the most promising markets. By highlighting MSAs with rent growth projections exceeding market benchmarks, the ML-GP is used by the Green Cities team to generate alpha and we believe is a key driver for superior investment outcomes.

The Heat Map Index (HMI) synthesizes over 10,000 data points across multifamily fundamentals, pricing, and risk metrics across the Top-50 US MSAs. This comprehensive tool evaluates market opportunities and risks on an MSA-by-MSA basis, identifying relative value prospects while steering underwriting guidance and tactical allocation decisions. It weighs prospective NOI growth against market pricing and risks—including market and multifamily fundamentals, macro considerations, liquidity, climate and regulatory factors—identifying the most attractive risk-adjusted return prospects by MSA. The HMI informs acquisitions, portfolio adjustments, and deal screening, enabling Green Cities to align capital with the most attractive opportunities in the best-performing markets.

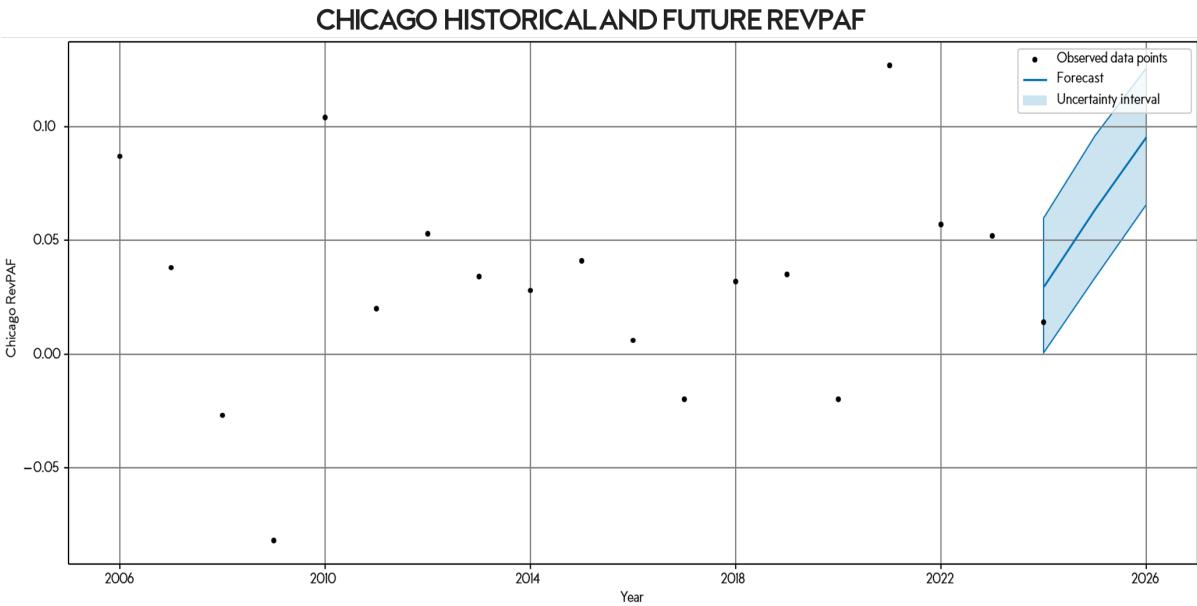
Green Cities' data-driven approach disrupts traditional reactive investment practices by proactively identifying high-potential markets through systematic and unbiased analysis. By leveraging proprietary tools like the ML-GP and HMI, we generate alpha and ensure efficient resource allocation, deeper market expertise, and a strategic advantage in sourcing and underwriting multifamily investments. This forward-thinking approach positions Green Cities as a leader in sustainable, data-driven investment management, setting a new industry standard.

Sample Market: Chicago MSA, Strong Relative Value and Predictive Rent Growth Insight

By integrating insights from our two proprietary tools—the Machine Learn Growth Predictor (ML-GP) and the Heat Map Index (HMI)—we ensure a holistic approach to market evaluation. These tools enable us to assess not only past performance and future growth potential but also to identify the most attractive markets relative to their peers, offering actionable insights for investment strategies. The following visuals illustrate how these aspects work together to guide our investment focus and reinforce the strong relative value and growth prospects of the Chicago MSA.

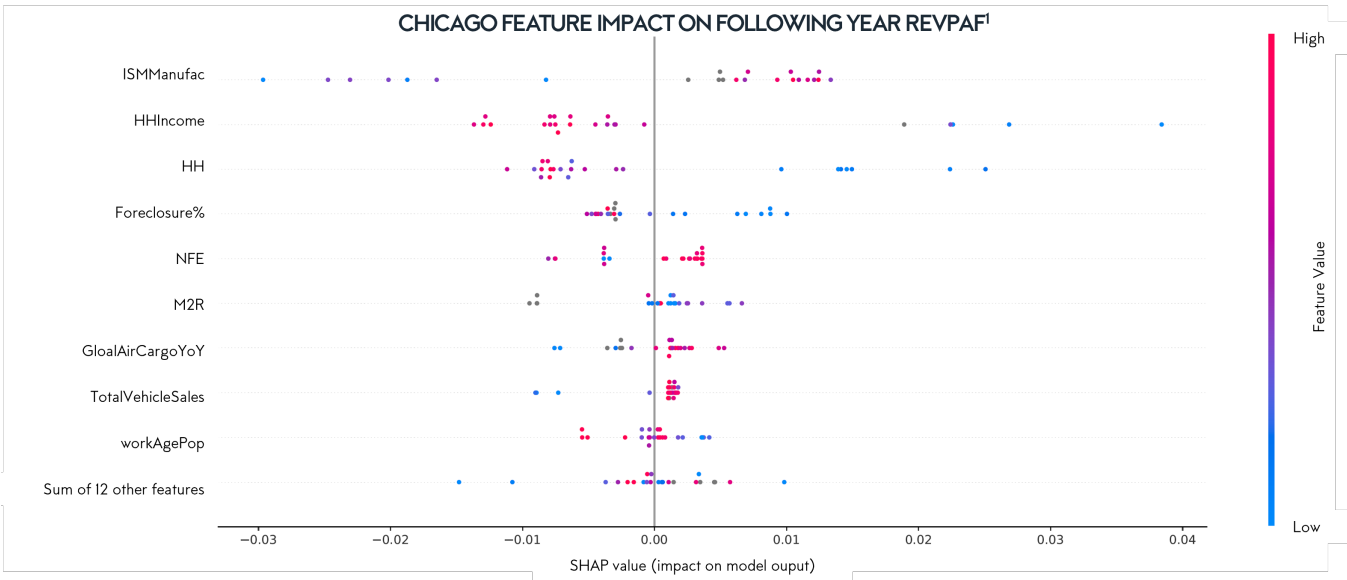


Below graph (ML-GP) plots historical future REV.PAF (rent and occupancy) with future prediction and band of uncertainty.



SOURCE: GREEN CITIES RESEARCH USING HMI DATA, INCLUDING GREEN STREET ADVISORS, COSTAR, FEDERAL RESERVE ECONOMIC DATA, OTHER. US MFAM CPPI FROM GREEN STREET ADVISORS. HMI PRICING INDEX REFLECTS SYSTEMATIC OUTPUT GENERATED USING EMPIRICAL DATA.

Below graph (ML-GP) plots identifies the primary factors in each market that drive the most growth (different market by market).



SOURCE: GREEN CITIES RESEARCH USING HMI DATA, INCLUDING GREEN STREET ADVISORS, COSTAR, FEDERAL RESERVE ECONOMIC DATA, OTHER. US MFAM CPPI FROM GREEN STREET ADVISORS. HMI PRICING INDEX REFLECTS SYSTEMATIC OUTPUT GENERATED USING EMPIRICAL DATA.

The HMI provides guidance on MSA Relative Rankings on the top 50 MSAs in the US.

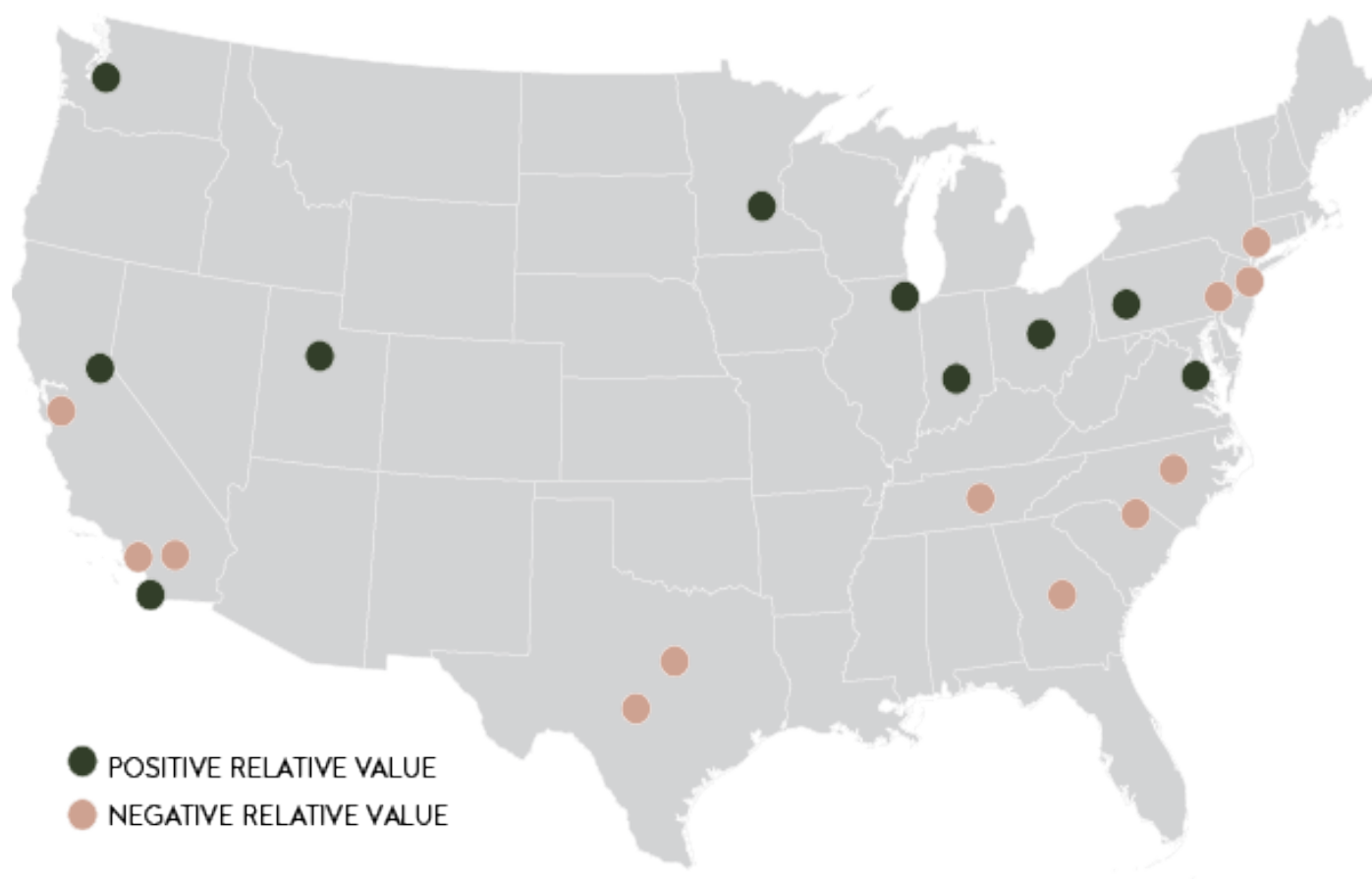
FUNDAMENTALS	MARKET PRICING (i.e. yield)	RISK
▪ Weighs over 60 data metrics across Employment, Supply, Affordability, Demographics, Regulatory Risk and Climate Risk ▪ Differentiates between short- and long-term fundamentals	Comparative assessment of MSA specific market pricing against: ▪ Top-50 US MSAs ▪ Historic pricing (i.e. cyclicalty), including alternatives	▪ Gauge traditional financial risk measures on historic performance ▪ Incorporate forward-looking views on emerging or evolving risks (i.e. regulatory, climate, etc.)
SAMPLE MSA METRICS: CHICAGO		
ABOVE AVERAGE	MORE ATTRACTIVE	LOWER THAN PERCEIVED
RELATIVE RANKINGS, 4Q'24 TOP 50 MSAS		

By leveraging these proprietary tools, the Chicago MSA emerges as a top-tier market², distinguished by robust forecasted rent growth, attractive pricing and above average liquidity, and a lower risk-profile than the market credits it with having, combining to produce a high HMI ranking and underscoring its strong relative value. These tools offer precise insights into not only where to invest but also the optimal investment basis.



² Data and ranking as of Q1 2025. There is no guarantee that the trend and ranking outlined above will continue. This material is not intended to be relied upon as a forecast or investment advise and is not a recommendation.

Green Cities Outlook on US Multifamily Markets



SOURCE: GREEN CITIES RESEARCH USING HMI DATA, INCLUDING GREEN STREET ADVISORS, COSTAR, FEDERAL RESERVE ECONOMIC DATA, OTHER. US MFAM CPPI FROM GREEN STREET ADVISORS. HMI PRICING INDEX REFLECTS SYSTEMATIC OUTPUT GENERATED USING EMPIRICAL DATA.

Together, the HMI and ML-GP deliver a comprehensive and complementary analysis. The HMI provides a macro-level overview of the top 50 MSAs, while the ML-GP delivers granular insights into market-specific growth drivers. When combined, these tools ensure a high level of certainty in investment decisions, aligning broad market evaluations with localized, data-driven insights.

The acceleration of AI data models is poised to significantly transform real estate investing over the next few years. From enhanced market analysis to risk assessment, and even eventually enhancing property management. At Green Cities, we are excited about what the future will bring and look forward to continually sharing our experience and analysis with our investor community.

Please reach out to Blake.Phillips@GreenCities.com for more information on Green Cities investment process.



Blake Phillips

ANALYST, CAPITAL MARKETS & STRATEGY

Blake Phillips, Analyst, Capital Markets & Strategy, is responsible for expanding the firm’s capital raising efforts, conducting due diligence on capital strategies, and providing market insights, including asset and portfolio performance reporting, rent and sales comparable analysis, and new supply pipeline.

Blake holds a BSBA with a concentration in Finance from Boston University and an MMH in Real Estate Development and Finance from Boston University.

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ALL DATA AS OF JANUARY 29, 2025, UNLESS OTHERWISE NOTED.

