

The background of the entire page is a grayscale aerial topographic map. It shows a complex network of rivers and streams, with a prominent, winding river channel running from the upper right towards the lower right. The terrain is depicted with various shades of gray, indicating elevation and land features.

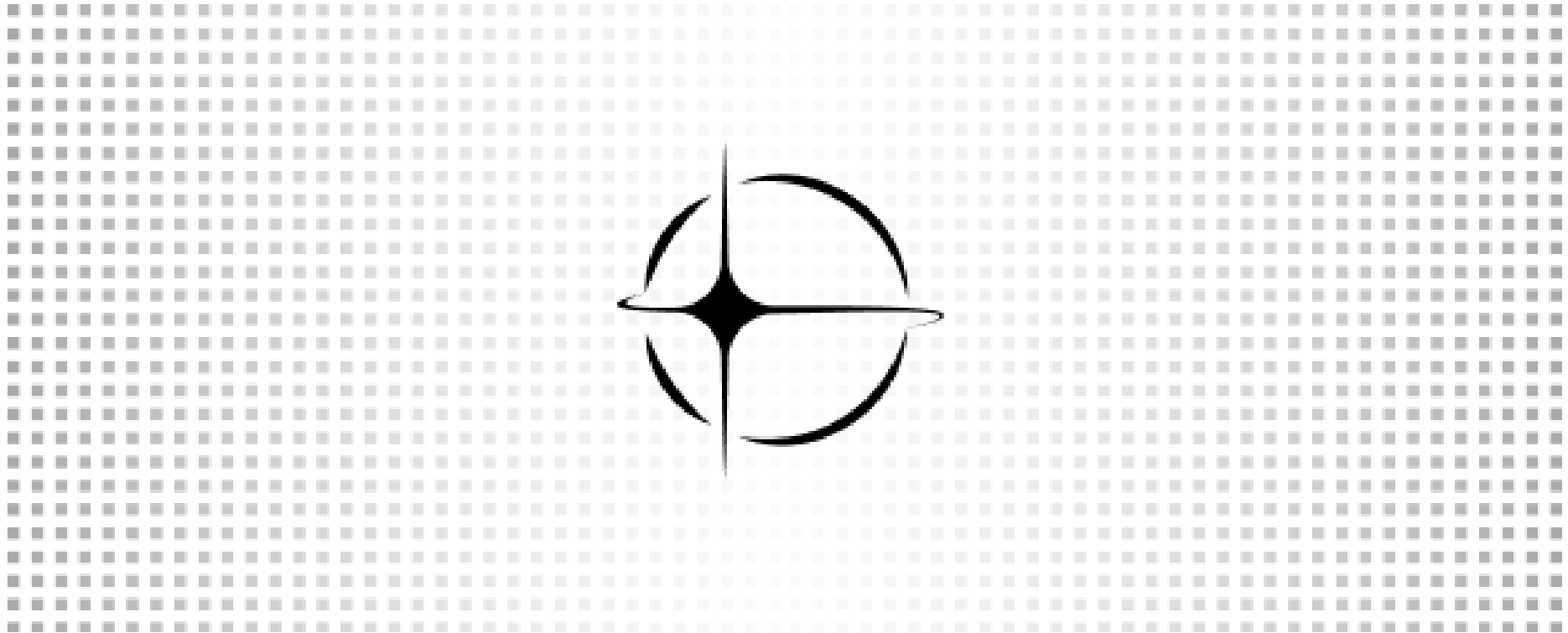
AlphaGe

GeoSense

Making sense of the world through the lens of geography

October 2024
Volume 1, Issue 8

The GeoSense Market Tracking Index



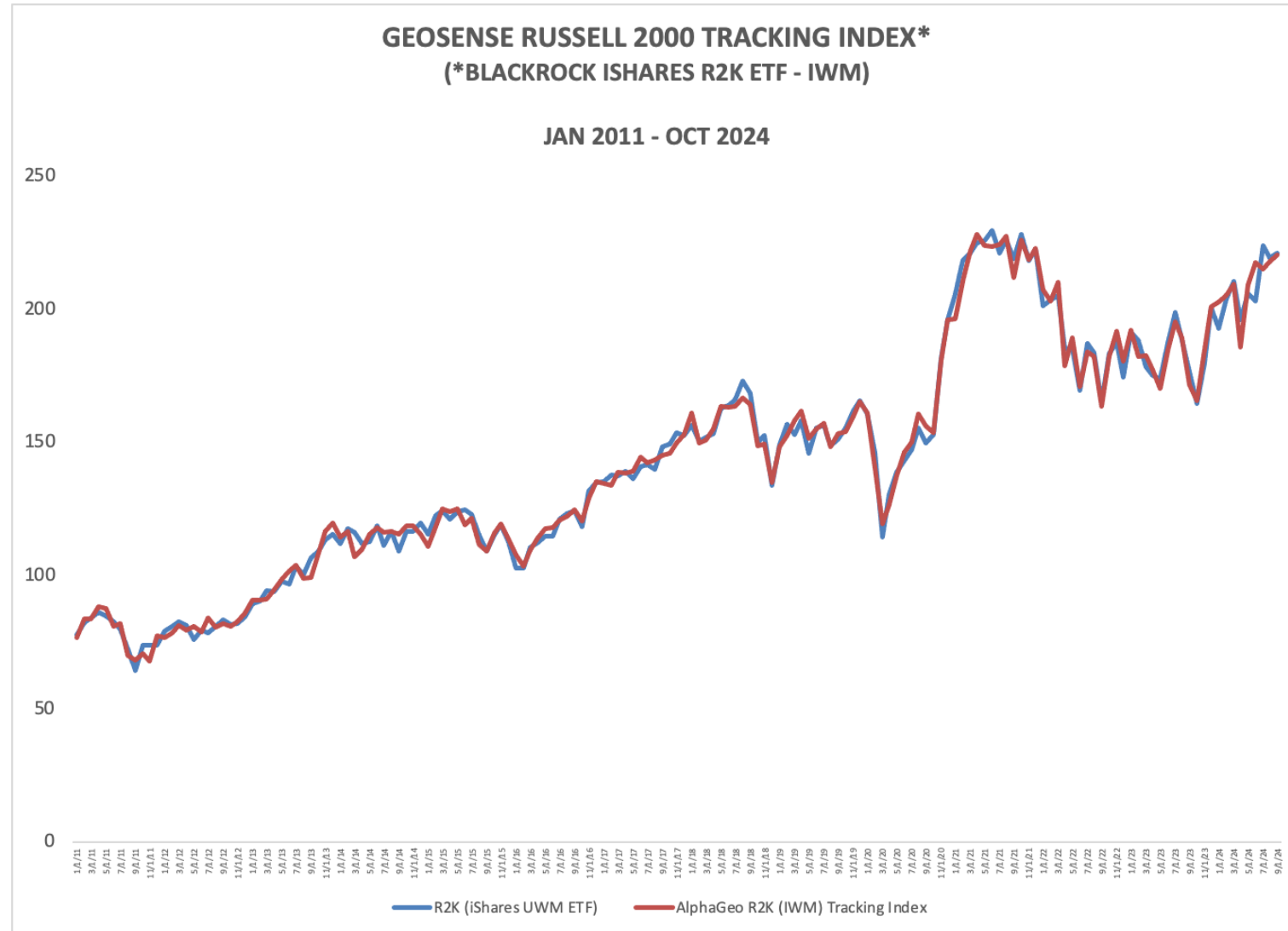
GeoSense's Russell 2000 Market Tracking Index

Uncertainty ahead of the US Presidential election has not phased investors as the market continues to perform despite nervousness as we approach November. The Russell 2000 benchmark (IWM) finished the month slightly higher than the previous month, and the GeoSense tracking index again continued to capture this market sentiment with forward model projections essentially mirroring the benchmark index activity.

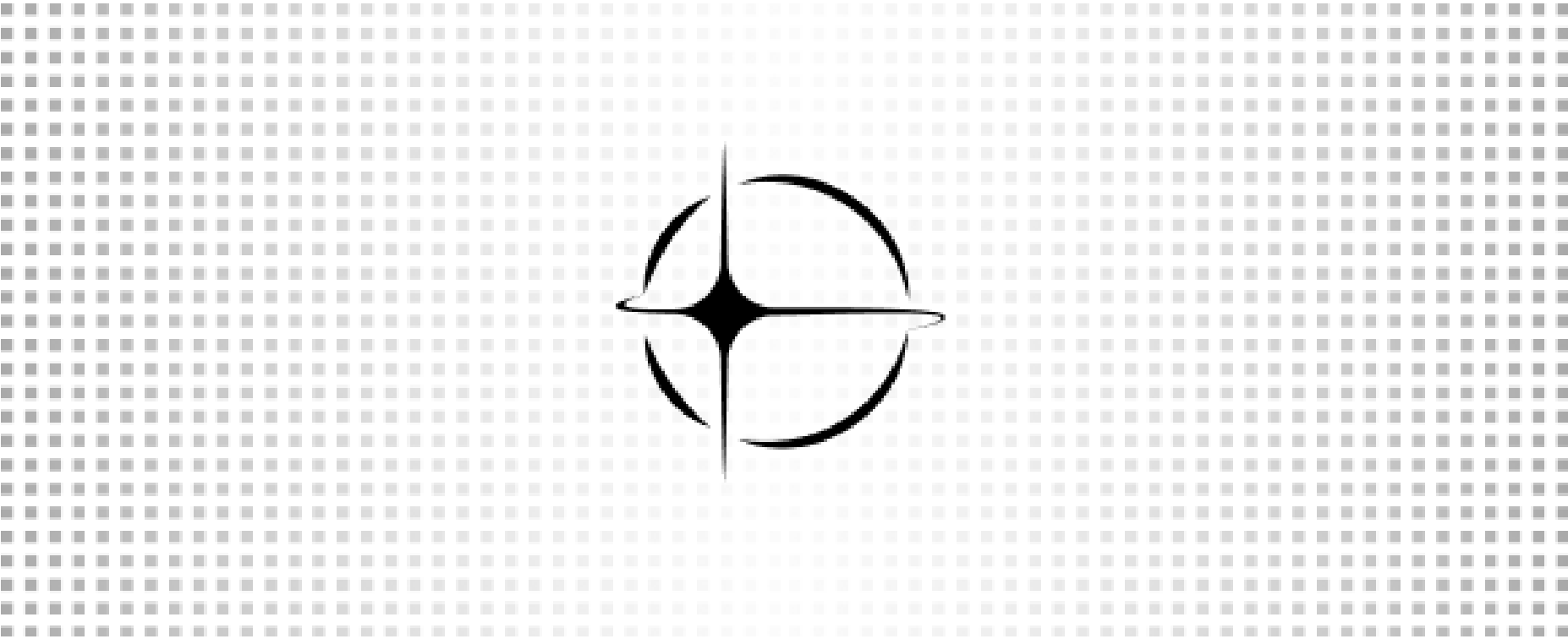
The feature selection process is routinely highlighting both market and non-market variables as precursors to equity behavior; the most recent model update weighed the following parameters more heavily:

- Energy inputs (natural gas as a leading indicator)
- Currency strength (Dollar/Yuan)
- Metals (gold, silver, copper)
- Agriculture & livestock (maize, chicken, sunflower oil)
- Materials (plywood, urea, potassium chloride)

Our tracking index selects predominantly data points with p-values below 0.05; this month the mean absolute percentage error (**MAPE**) decreased further to **2.04%** for in sample statistics, as compared to 3.5% in the previous month. Although this is a guide, these statistics allow us to view model projections with higher confidence.

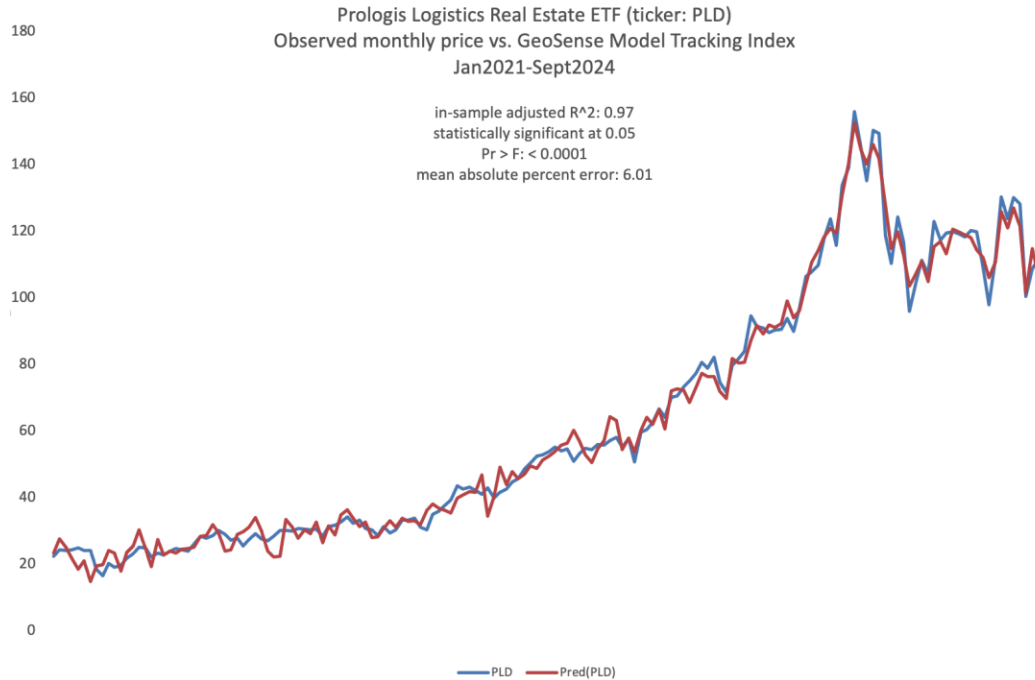


GeoSense Real Estate/Public Market Trackers



GeoSense REIT/Public Market Discussion

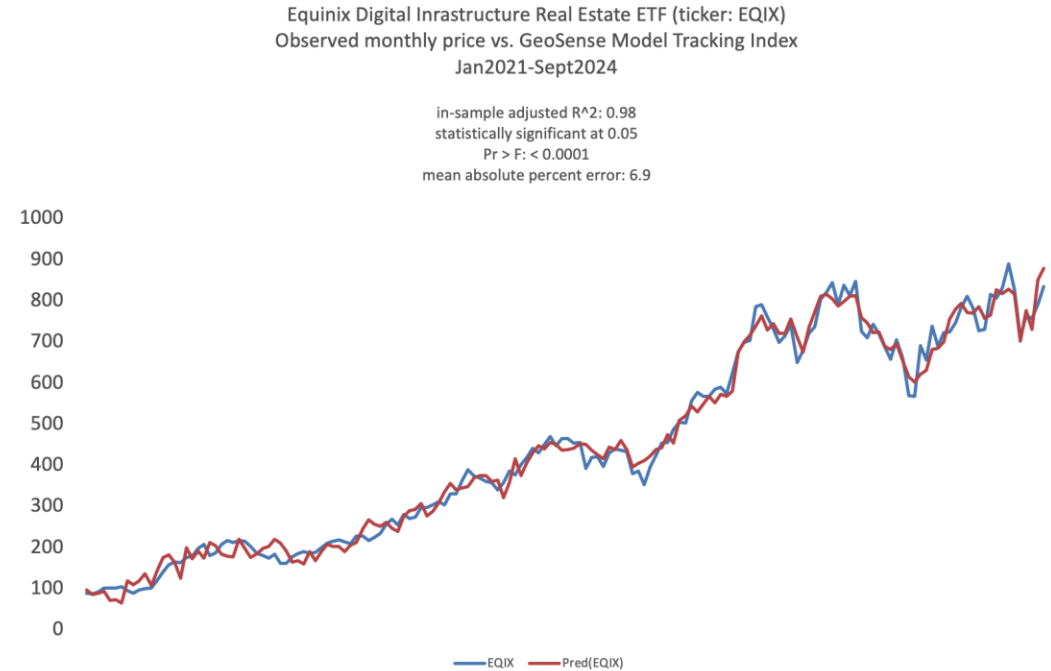
GEOSENSE MONTHLY REAL ESTATE TRACKER



In this month's discussion, we are building on our core platform and examining the construction of tracking index creation and performance in the Real Estate sector.

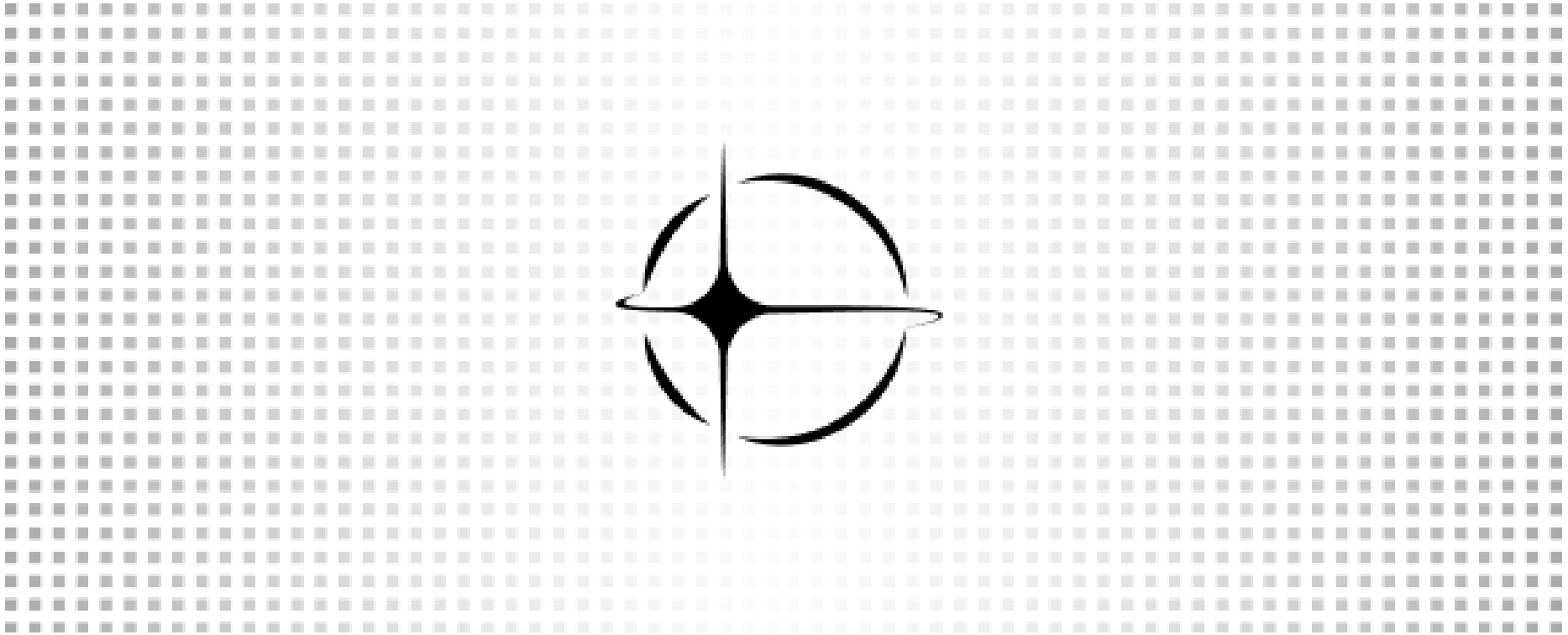
We selected two real estate investment vehicles to track: the Prologis REIT ETF (**PLD**), whose holdings concentrate on high growth logistics real estate, and Equinix (**EQIX**), a digital infrastructure company whose real estate assets are tied to their data center footprint.

GEOSENSE MONTHLY REAL ESTATE TRACKER



Using a multifactorial approach similar to that which AlphaGeo applies towards the construction of real asset and public market equity tracking indices, our model aims to capture forward price moves ahead of the market by blending climate and macroeconomic data to project price behavior on a 1m, 3m and 6m forward basis. As the charts above show, our approach has been successful in capturing the major market inflection points and price appreciation over the last decade plus, most notably those associated with the post-COVID rally.

The GeoSense Industrial Renaissance Tracker (IRT)

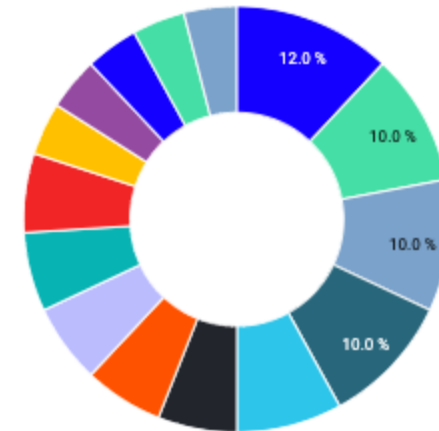


The Industrial Renaissance Tracker (IRT)

AlphaGeo continues to highlight where and how capital can be opportunistically deployed with the global energy transition as a primary thematic market catalyst. To capitalize on a once in a generation investable opportunity, our proprietary Industrial Renaissance Tracker (IRT) was developed to guide investors by:

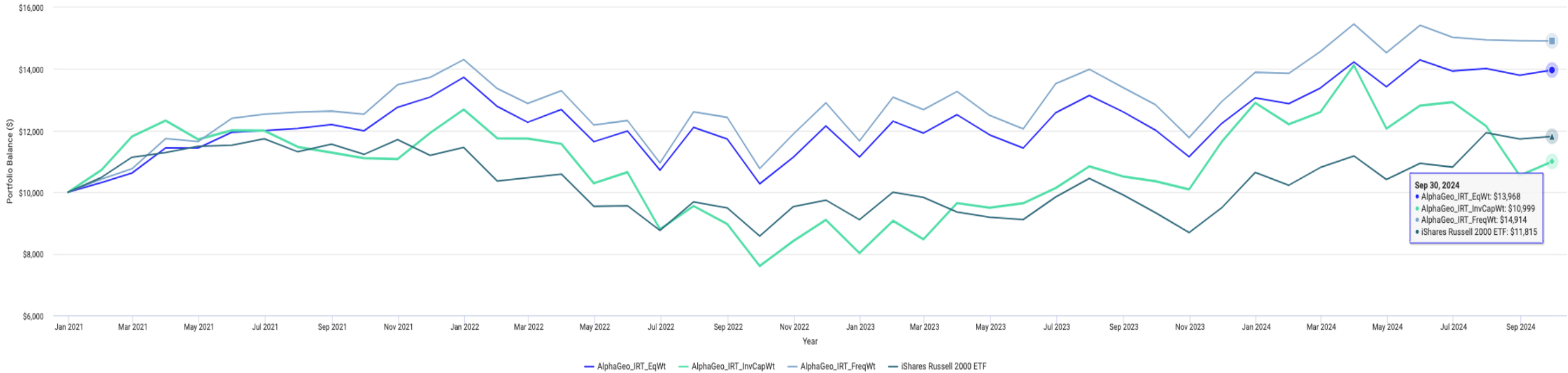
- (a) following announcements and capital flows resulting from legislation or innovation tied to the energy transition,**
- (b) identifying the locations that are poised to benefit and appreciate from these emerging economic opportunities,**
- (c) correlating these geographies to AlphaGeo's proprietary spatial index of risk and resilience indicators, and**
- (d) mapping assets and companies that are most likely to be the winners from this confluence of sustainability drivers.**

Readers can view the IRT portfolio as a "hypothetical ETF" that uses the AlphaGeo investment process to help identify geographically-referenced signals that map to the names that will be leading this transition. Past reports have looked at this portfolio through an equal weighted lens; in July we add a weighting scheme which will allow us to identify and manage assets through an active approach. The new weighting scheme that we are experimenting with is shown below:



The Industrial Renaissance Tracker (IRT)

Portfolio Growth



We continue to display the expanded IRT weighting schemes, depicting the following three categories:

1. *Equal Weight*
2. *Invested Capital-Weighted*
3. *Frequency-Weighted*

Please see our Insights [post](#) which describes the weighting schemes and portfolio rebalancing assumptions.

The chart above begins the IRT performance comparison after the initial 2020 COVID market disruption and follows through to the end of the last full trading month (now Sept 2024). We can see that the IRT hypothetical portfolio under all three experimental weighting schemes outperforms the selected benchmark (the BlackRock iShares Russell 2000 ETF) over this period while largely minimizing drawdowns in a diverse and low-concentrated portfolio. The AlphaGeo Invested Capital weighted portfolio suffered from recent drawdowns, while the other two AG weighting schemes exhibited drawdowns in line with our benchmark, while outperforming the benchmark index through the end of last month.

The Industrial Renaissance Tracker (IRT)

Performance Summary

Metric	AlphaGeo_IRT_EqWt	AlphaGeo_IRT_InvCapWt	AlphaGeo_IRT_FreqWt	iShares Russell 2000 ETF
Start Balance	\$10,000	\$10,000	\$10,000	\$10,000
End Balance	📈 \$13,968	📉 \$10,999	📈 \$14,914	📉 \$11,815
Annualized Return (CAGR)	📈 9.32%	📉 2.57%	📈 11.25%	📉 4.55%
Standard Deviation	21.08%	28.59%	22.84%	20.75%
Best Year	37.34%	60.81%	43.07%	16.84%
Worst Year	-18.85%	-36.76%	-18.45%	-20.48%
Maximum Drawdown	📉 -25.20%	📉 -40.06%	📉 -24.73%	📉 -26.94%
Sharpe Ratio	0.39	0.13	0.45	0.18
Sortino Ratio	0.60	0.19	0.72	0.27
Benchmark Correlation	0.83	0.70	0.82	1.00

As we showed last month, while the market tracking period is not very long (2021-present), we can still begin to judge the GeoSense hypothetical portfolio performance against the benchmark fund to assess how deployed capital would have fared in a passive management strategy. Two of the three AlphaGeo weighting schemes represented by the IRT portfolio outperformed the R2K ETF over the testing period. The third AlphaGeo weighting scheme (weighted on IRT invested capital) suffered larger drawdowns over the last two months; given the more volatile nature of this scheme – see best/worst year statistics – we would advise readers to pay closer attention to the other two AlphaGeo portfolios for comparison.

We encourage readers to focus on capital appreciation over the evaluation period, stressing ending balance and CAGR as performance measures. Also, as we are constructing IRT investment ideas around a longer duration thesis that to date has not been actively managed, we advise readers to pay less attention to Sharpe & Sortino Ratio statistics as they are not relevant as performance indicators in a low turnover/long-horizon investment strategy.

Our Team



Dr Parag Khanna

Founder & CEO

GEOGRAPHY and MACROECONOMICS

Scenario-planning and strategy advisor to major financial institutions and governments. Bestselling author of *Connectography* and *Financial Times* Book of the Year *MOVE* on human geography and climate migration. Young Global Leader of the World Economic Forum. PhD from the London School of Economics.



Chris Marlin

Chairman of the Board

REAL ESTATE and GOVERNANCE

Formerly Founding President of Lennar International (NYSE:LEN) and responsible for over \$12b in real estate transactions; significant cross-border real estate fundraising/transaction track record. Former global head of strategy/business ops for CNN Worldwide. Director, The United States Atlantic Council. Former World Economic Forum Future Council on Cities; assisted Forum in founding Centre for Urban Transformation.



Dr. Michael Ferrari

Chief Scientific & Chief Investment Officer

GEOPHYSICS and SPATIAL FINANCE

More than 20 years leadership in climate, data science and investment management. Formerly the Chief Science Officer and Chief Data Scientist at hedge fund Engine No. 1, portfolio investment strategist at Point72, science advisor to the MIT Media Lab, and Head of AI & Data Science at IBM/The Weather Channel and Syngenta.



Abraham Wu

Chief Technology Officer

DATA SCIENCE and CLIMATE MODELING

PhD Researcher at the Singapore-ETH Center Future Cities Lab. Expert in urban data mining and analytics with academic publications in scientific journals on geospatial data and generative AI.



Mark Langan

Chief Operating Officer

TECH and PRODUCT MANAGEMENT

Former Vice President of Hedge Fund Research and PMO to the Chief Data Office at Preqin, a leading data platform for alternative investors, with expertise in SaaS, client relations, process automation, program management, data management and compliance.

Our global team of seasoned professionals spans the US and Asia – and we plan to hire more data scientists, product managers and sales executives in the months ahead.

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AlphaGeo

Contact us

Invest in Resilience

www.alphageo.ai

info@alphageo.ai

