

# Quantitative Active Equity

## Investment Philosophy & Approach

We believe that markets are not 100% efficient and pricing inefficiencies exist even in competitive equity markets, primarily due to investor behavior.

We believe in a systematic approach based on fundamental insights is likely to generate consistent performance.

## Differentiated Approach

Geode's unique investment approach consists of a systematic process built upon three key components.

Stock Selection	Factor Timing	Factor Tilting
Alpha Identification Model (AIM)	Optimal Exposure Management (OEM)	Dynamic Factor Allocation (DFA)
<p>Model consists of a Broad set of specialized and traditional factors</p> <p>We can expect a more diverse and stable alpha source, by incorporating information from multiple resources</p>	<p>Factor combination methodology that reacts to change in factor correlations</p> <p>Structurally identical risk and alpha models allow for real-time application</p>	<p>Recognizes the inherent links between some quantitative factors and the market environment</p> <p>We exploit long-term cycles with factor returns by rotating each factor's exposure</p>

## Dedicated Research

- ◆ Research focused on the development of advanced quantitative investment techniques and effective methodologies for implementing those techniques into the portfolio management process.
- ◆ The research team is involved in each aspect of the investment process, from signal generation to portfolio construction.
- ◆ We believe that a collaborative effort between research and portfolio management—throughout the investment process—helps to deliver a consistent result.

## TEAM AT A GLANCE

- ◆ ~\$12 billion in Quantitative Active Equity assets
- ◆ Managing Quantitative Active Equity strategies since 2001
- ◆ Benchmark-specific risk controls
- ◆ Team-based approach
- ◆ Portfolio Managers have 17 years average industry experience

## ABOUT GEODE

- ◆ Systematic global investment solutions across multiple asset classes
- ◆ Founded in 2001
- ◆ Located in Boston, MA
- ◆ Employee Ownership

## ASSETS UNDER MANAGEMENT\*

- ◆ \$425 billion

<b>Equity Index</b>	\$406 B
<b>Quantitative Active</b>	~\$12 B
<b>Commodities</b>	~\$6 B
<b>Absolute Return</b>	\$1.1 B

<b>Investment Professionals</b>	36
Portfolio Management	24
Research	8
Trading	4
<b>Total Firm Headcount</b>	<b>95</b>

\*Includes AUM of Geode's institutional equity and alternative investment strategies, as well as wealth management solutions

# Quantitative Active Equity Strategies

Strategy	Benchmark	Universe	# of Holdings	Expected Turnover (%)	Targeted Excess Return (bps)	Targeted Tracking Error (bps)	Inception Date
U.S. Large-Cap Core	S&P 500 <sup>®</sup>	1,200	150–300	50-80	100+	100-200	12/31/03
U.S. Large-Cap Value	Russell 1000 <sup>®</sup> Value	1,300	150–300	50-80	100+	100-200	12/31/03
U.S. Large-Cap Growth	Russell 1000 <sup>®</sup> Growth	1,300	150–300	50-80	100+	100-200	12/31/04
U.S. Mid-Cap Core	Russell Mid-Cap <sup>®</sup>	1,800	200–400	70-100	150+	200-300	12/30/05
U.S. Small-Cap Core	Russell 2000 <sup>®</sup>	1,900	300–500	80-100	200+	200-400	12/31/03
U.S. Flexible Alpha	S&P 500 <sup>®</sup>	1,300	300–500	90-110	200+	200-300	12/30/05
International Core	MS EAFE	1,000	150–300	50-80	100+	100-200	9/30/04
U.S. Large-Cap Core ex Financials	S&P 500 <sup>®</sup> ex Financials	1,200	150–300	50-80	100+	100-200	12/31/14
Japan Core	TOPIX	1,600	500–1,000	50-80	50+	50-150	6/30/09

## Geode Advantages

**EXPERIENCE** Geode recognizes that the most sophisticated systematic processes benefit from applied fundamental insights. Our investment professionals are experienced in each of their disciplines, and work collaboratively to share expertise for the enrichment of our investment processes.

**RISK MANAGEMENT** Client portfolios are constructed in a disciplined manner with a focus on managing and controlling risk-exposures in an effort to produce optimal risk-adjusted returns.

**INSTITUTIONAL INFRASTRUCTURE** A state-of-the-art trading platform and robust operational infrastructure create efficiencies and help to provide scale across investment disciplines.

**RESEARCH** Dedicated to advanced techniques for uncovering alpha sources, Geode's research team is constantly looking for new and repeatable methods of transforming idea flow into applicable investment processes. This centralized research approach helps to ensure that the best ideas are efficiently implemented across investment strategies.

## Team Leadership



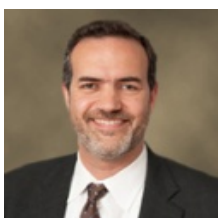
**Max Kaufmann**  
*Senior Portfolio Manager*  
 24 years industry experience  
 9 years with firm



**Nick Panitsas**  
*Portfolio Manager*  
 13 years industry experience  
 4 years with firm



**Shashi Naik, CFA**  
*Portfolio Manager*  
 13 years industry experience  
 8 years with firm



**Tarek Eldin**  
*Head of Research*  
 25 years industry experience  
 8 years with firm

## CONTACT INFO

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