

## MICRO-CAP STRATEGY

Denver Investments' Micro-Cap investment philosophy is based on the belief that inefficiencies in the micro-cap universe are best exploited through a disciplined quantitative approach. The team's approach is grounded in sector specific modeling, which it believes more effectively identifies attractive stocks than traditional "one-size-fits-all" models. The team constructs portfolios through an optimization process designed to pursue consistent, repeatable performance while mitigating risk in a variety of market conditions.

### HIGHLIGHTS

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The Micro-Cap team aims to exploit the inefficiencies in the market caused by the lack of analyst coverage, as one or fewer sell-side analysts is covering 60% of the constituents of the Russell Microcap® Index.

#### **Sector-specific proprietary modeling**

Unlike traditional quantitative products, the team works closely with the firm's fundamental analysts to gather insights which inform the sector-specific models. By customizing the models for each sector, the team is able to use only what it believes to be the strongest predictive factors for each sector. The team develops a thesis for each sector model before testing begins, which it believes leads to more stable models and helps to avoid factor and sector crowding. The quantitative analysts do not mine for data, but rather develop a thesis for the inclusion of factors in a model and then check that thesis in a robust and scientific manner. Factors used in the models include valuation, management behavior, earnings quality, earnings momentum, sustainability, timing, and industry-specific factors.

#### **Quantitative portfolio construction**

The team chooses to own close to the entire top decile of the screened universe and to let its optimizer weight stocks and sectors from that top decile. The team holds a high number of names, not to limit risk, but to seek to capture the available alpha in the top-ranked stocks in the universe. The team believes that limiting the size of the portfolio to a size smaller than the top decile means that there is a higher risk to the variability of actual client portfolio returns relative to predicted returns.

#### **Unbiased market assessment**

The team is not "married" to a set of individual factors, nor does it make changes at the spur of the moment, or even on a set schedule. The team changes factors when new information is found, and in a way that is consistent with the thesis of what makes attractive companies in a specific sector. New factors are found most often when new data sets become available for testing. Models and factors are consistently monitored, and the reason for each factor's/model's success or underperformance is discussed and analyzed, as is its potential future impacts.

## INVESTMENT PROCESS

### IDEA GENERATION

- Initial universe of approximately 2,500 names including all U.S. exchange-traded securities with a price above \$1.00, an average daily trading volume of \$400,000 or more, and a market capitalization within 10% of the highest market capitalization in the Russell Microcap® Index rebalance at the time of reconstitution.
- All ideas generated through the team's rigorous quantitative screening.

### QUANTITATIVE & MODELING

Use proprietary research and risk assessments to create model.

- Modeling for the product is performed by the portfolio managers, with input from a team of fundamental analysts.
- Utilize deep research expertise from fundamental analysts for further discussions during the model construction and testing phase.
- Team creates a model utilizing 16 unique sector-specific models. Customizing the model by sector allows the team to use only the strongest predictive factors for each sector.
- Models are reviewed quarterly.
  - Models are tested using one in-sample and two out-of-sample periods, in order to minimize fitting.
  - During testing, only "point-in-time" data is used in order to avoid "look-ahead" and "survivor bias."
- The output of the modeling process is a set of alpha values for each stock in the universe.

### PORTFOLIO CONSTRUCTION

- The team uses the Northfield Open Optimizer to construct the portfolio. Inputs include the alpha values and the team's proprietary risk models.
- Employ screens to account for potentially impactful recent news.
- Typically 150 to 200 stocks.
- Maximum initial position size 85 bps.
- Sector weights are generally constrained to approximately +/- 3% of the benchmark weight.
- Rebalance monthly or as cash flows necessitate.

### RISK MANAGEMENT

- The Optimizer seeks to minimize the non-systematic risk of economic and fundamental factors.
- Employ a set of "blow-up" screens which can either eliminate buys or force sells for securities that have been identified as having a high probability of failure over the next six to nine months.
- Periodically use Northfield Analytics and FactSet for analysis of the portfolio and potential risk.

### SELL DECISION

Individual buy/sell decisions are primarily the result of the Optimizer.

- Security outgrows appropriate market capitalization range
- Security fails a proprietary screen, which indicates a high probability of failure in the next six to nine months.
- Better investment opportunity.
- Unfavorable projected risk associated with owning the security.

## INVESTMENT TEAM

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### Paul A. Kuppinger, CFA

Vice President, Portfolio Manager, Quantitative Analyst

2006 to Present: Denver Investments  
2003 to 2006: Rocky Mountain Wealth Advisors, Principal  
2002 to 2003: Curian Capital, Vice President of Research  
1998 to 2002: Prima Capital, Director of Research  
1997 to 1998: KPMG, Research Analyst  
1993 to 1995: Westcap Investors, Trader  
1990 to 1993: Wilshire Associates, Supervisor of Performance Measurement

Education: BA – Colorado College; MBA – University of Colorado  
Member of CFA Institute and CFA Society Colorado

## MICRO-CAP EQUITY STRATEGY

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### Representative portfolio guidelines:

#### ■ MICRO-CAP

- Benchmark: Russell Microcap® Index
- Universe: All dividend-paying public companies in market capitalization range of Russell Microcap® Index
- Stocks: Approximately 150 – 200

The Micro-Cap product is available through our family of mutual funds.

The guidelines listed are representative of the product, but are not considered restrictions. Specific client guidelines may differ.

## FIRM OVERVIEW

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Denver Investments is a research-driven organization founded on the belief that independent research is the key driver of value-added management. Since the inception of our investment management services in 1958, proprietary fundamental research has been at the core of our investment approach. Our approach is implemented across value, core, growth, and international equities, as well as core and non-core fixed income strategies.

As a firm, we are in one business: serving our clients as a fiduciary in the management of their investment assets. This allows the firm to focus its resources on one goal: the pursuit of superior investment returns for our clients. We believe that our independence (100% employee-owned) helps align our interests with our clients which enhances our ability to promote their investment success.

FOR MORE INFORMATION ABOUT OUR INSTITUTIONAL OFFERING, PLEASE CONTACT:

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