

WSTO Internal Equity Management

AUGUST 31, 2021

WYOMING STATE TREASURER'S OFFICE



WSTO Equity Allocation

Sub-Asset Class	6/30/2021 NAV	% Allocation
Large Cap US Equity	1,818,785,494	28.4%
Small Cap US Equity	469,965,473	7.3%
MLPs	1,082,373,302	16.9%
International Equity	2,876,820,176	44.9%
Preferred Stock	158,206,393	2.5%
Total	6,406,150,837	

- We manage \$150MM in internal equity funds within the Large Cap US Equity and Small Cap US Equity sub-asset classes, with near-term plans to increase this amount to \$200MM. This only represents approximately 3% of our equity exposure.
 - No additional cash will be allocated to these strategies over the next year and not until our risk-adjusted return objectives are met.

Why Internal Equity Active Management?

- Ability to achieve consistent alpha
- Obtain broad exposures to US stocks that are differentiated from passive indexes and from externally managed active strategies
- Implement these strategies at lower costs than external providers (no management fee)
- Efficient cash / liquidity management (no need for external coordination)
- Transparent risk measures and management
- Employ systematic investment strategies with greater flexibility compared to off-the-shelf products available in the market

Traditional Quantitative Equity Strategy

- Our traditional quantitative equity strategy is systematic, disciplined, and risk-controlled. It exploits alpha factors related to various market anomalies such as momentum, quality, value, etc.
 - The equity market is not efficient, and there are many market anomalies
 - Some anomalies can be explained by investors' systematically irrational behaviors
 - Some alpha signals are derived from the quantification of the bottom-up fundamental investment process
- Selected alpha factors are uncorrelated or minimally correlated with each other
- Selected alpha factors complement each other and deliver consistent returns

Traditional Quantitative Equity Strategy, cont.

- Factor-based strategies (smart beta) experienced tremendous growth over the past decade (notably in ETFs)
- The increased popularity of smart beta is linked to a general desire for portfolio risk management and diversification along factor dimensions, as well as achieving risk adjusted returns in excess of market cap-weighted indices

Investment Philosophy and Process – Quantitative Equity

The Quantitative strategies will target the momentum, quality, and value factor groups using related metrics available through FactSet. The factor groups are associated with equity risk premiums which have historically added value compared to a standard capitalization weighted benchmark, such as the MSCI USA, Russell 1000 or S&P 500. The long-term returns for these groups, as expressed by the MSCI suite of indexes, is displayed in the following chart.



Systematic Quantamental Strategy

- Fundamental Equity Research and Management
 - Fundamental portfolio management requires a large team of analysts—something we don't have—in order to assess company financial statements, competitive advantages, macroeconomic drivers, and industry trends
 - Unlike quantitative strategies, fundamental management focuses on long term alpha and generally results in longer investment horizons

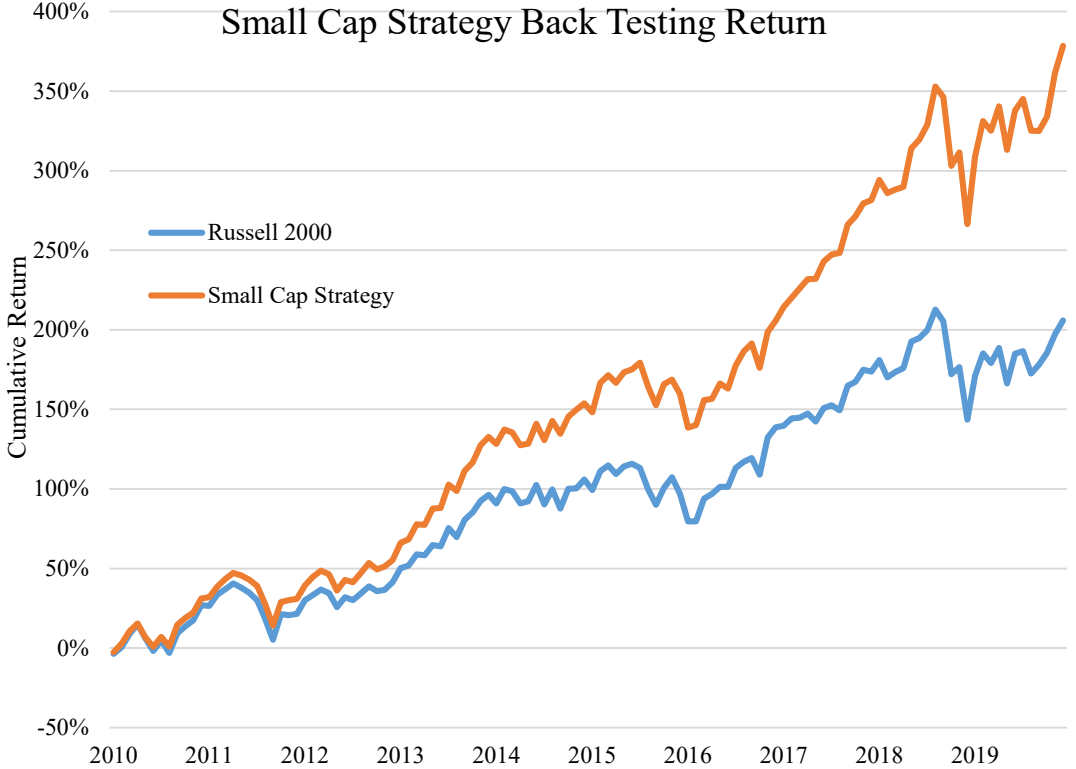
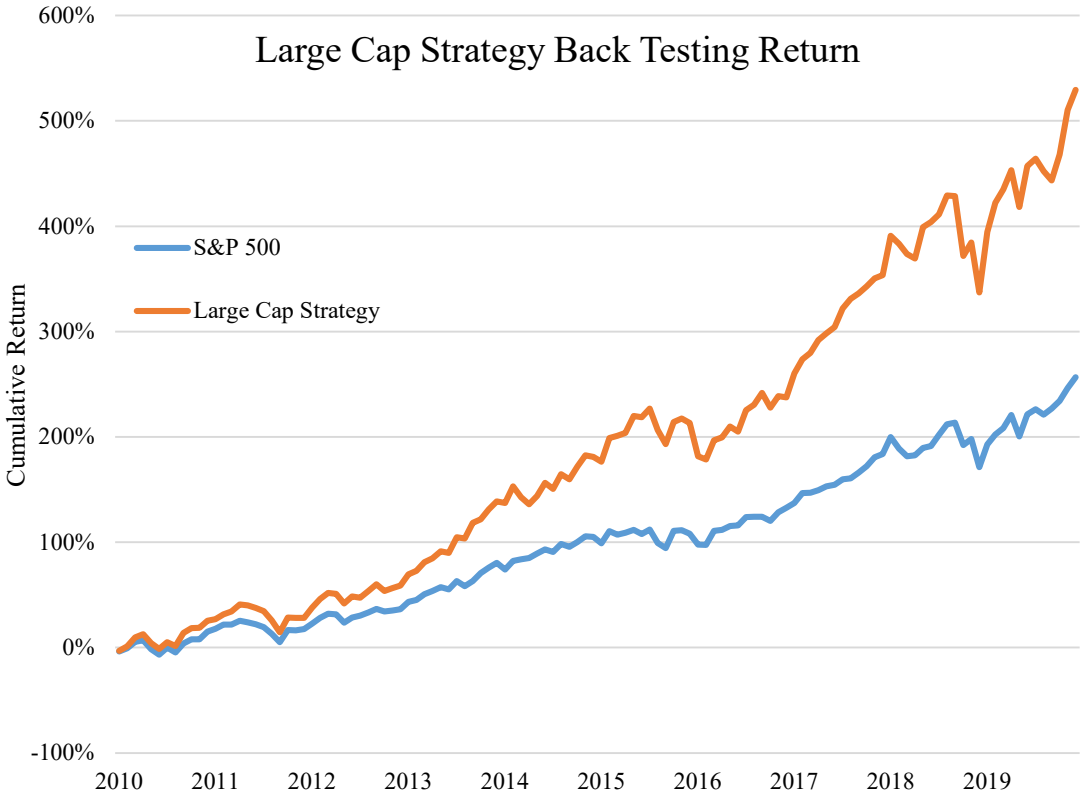
Systematic Quantamental Strategy, cont.

- Our quantamental strategy offers a systematic way of analyzing the fundamental attractiveness of each stock based on the characteristics of holdings and trading of top tier fundamental equity long short hedge funds
 - A systematic method to capture elements of traditional fundamental alpha from multiple top managers in a single long-only portfolio
- Fundamental alpha is minimally correlated with our quantitative alpha

Systematic Quantamental Strategy, cont.

- Baskets of premier managers are identified by an internal screening process of the broad universe to identify top performing hedge funds with fundamental approaches
 - This screening process favors drawdown mitigation characteristics conditional on adequate upside capture as well as consistency and time-dispersion of long term alpha
 - The constituency of this basket is reviewed regularly
 - Searchable universe size
 - Large cap: ~300 fundamental funds
 - Small cap: ~200 fundamental funds
- Starting with the 13F-reported holdings as our universe, securities are selected based on various factors (weights, trading activities, growth, value, dividends, min-vol, etc.) as well as their diversification benefit provided by portfolio inclusion
- The proposed strategy is fundamental in nature yet systematic in approach

Quantamental Strategies Back Testing



Summary Statistics			
Beta	Alpha	Tracking Error	Information Ratio
1.15	4.80%	6.50%	1.1

Summary Statistics			
Beta	Alpha	Tracking Error	Information Ratio
0.9	6.00%	3.60%	1.4

Summary

- The internal strategies are weighted 50/50 between quantitative and quantamental approach
 - This means there will be four different internal US equity strategies
 - Two for large cap and two for small cap
 - Three are currently live
- Our expectation is to produce significant alpha more cost effectively
- In the future we will extend these internal approaches into other sub-asset classes, notably international equity