

**NEW YORK CITY POLICE PENSION FUND
COMMON INVESTMENT MEETING – INVESTMENT RECOMMENDATIONS
MARCH 2, 2018
PUBLIC AGENDA
9:00AM**

Public Session

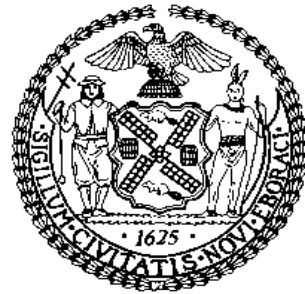
9:00am – 9:05am **Welcome and Opening**
(5 Minutes)

9:05am – 9:50am **Strategic Initiatives Update**
(45 Minutes)

9:50am – 10:00am **Intro to Smart Beta**
(10 Minutes)

LOCATION:
Office of the New York City Comptroller
1 Centre Street, 10th Floor - Northside
New York, NY 10007

Smart Beta/Alternatively Weighted Index Information Session



THE CITY OF NEW YORK
OFFICE OF THE COMPTROLLER

March 2, 2018

Introduction

□ This presentation covers:

- Description of Smart Beta and Alternatively Weighted Indexes
- Potential benefits of Smart Beta and Alternatively Weighted Indexes
- How they can be used
- Pros and cons
- Next steps



What are Factors?

Academic research has identified several factors Value, Size, Momentum, Quality, Profitability, and Volatility whose behavior has been consistent across various market cycles.

In the past several years, investment products have been created that explicitly provide exposure to these factors.



Description: Smart Beta Products

- Smart Beta products typically look to provide higher portfolio returns versus passive indexes but with a same or lower risk profile by investing in factors which have the following characteristics:
 - ✓ Higher Returns Over Time: Certain risk factors (such as value, size, momentum, quality/profitability, and low volatility/risk) have been found to provide strong returns over time.
 - ✓ Robust and Pervasive: While there are many factors that can be used to describe stock returns, only a handful have been shown to have their performance replicated across various market conditions and time periods.
 - ✓ Have plausible explanations for their continued existence: These factors typically have behavioral, structural and/or risk-based explanations for their continued existence.



Description: Alternatively Weighted Indexes

- Alternatively Weighted Indexes weight stocks based on something other than market capitalization.
 - ✓ The intuition for using an alternative weighting is that cap-weighted indexes overweight all overvalued stocks while they underweight all undervalued stocks.
 - ✓ Examples of alternatively weighted indexes include:
 - Equal weighted indexes
 - Indexes based on statistical properties (e.g. those that minimize volatility or maximize Sharpe ratio)
 - Indexes weighted by company financial statement metrics such as revenues, dividends, book value, and/or cash flow.
 - ✓ Indexes based on financial statement metrics are often referred to as “fundamental indexes”. Fundamental indexes often have inherent exposures to the same factors that be found in Smart Beta products.



Description: Smart Beta and Alternatively Weighted Indexes

- ❑ Smart Beta and Alternatively Weighted index strategies are:
 - “Active” strategies
 - With some of the beneficial characteristics of passive cap weighted strategies
 - ✓ Use of a rules-based stock selection and weighting approach
 - ✓ Broad stock, sector and economic diversification
 - ✓ Institutional capacity and scale
 - ✓ High levels of liquidity
 - ✓ Low fees and trading costs compared to many other active managers
 - Some important differences vs traditional active strategies
 - ✓ Excess Return not driven by idiosyncratic risk
 - ✓ Use historical data versus forward looking forecasts



Portfolio Placement

- ❑ Smart Beta and Alternatively Weighted Index products can be used to:
 - Replace or complement Active products
 - ✓ Capture factor returns (similar to active managers) but in a more systematic, consistent and less expensive manner. This could be particularly useful in highly efficient markets like US Large Cap.
 - Replace/complement cap weighted passive products to reduce risk and improve risk adjusted returns.



Caveats

❑ General observations about markets also apply to factors:

- Individual factors can be expensive or cheap at any given time.
- Factor values, like markets, can stay irrational longer than you can remain solvent.
- We don't want to chase good performance (or run from bad performance) in the guise of "factors" and make the same old mistakes in new ways.
- Factors are primarily backward looking.
 - ✓ Active managers (stock pickers with high active share) are primarily forward looking.
 - ✓ Active managers' forward looking perspective should benefit from insightful research and analysis.
 - ✓ Factor based strategies should benefit when markets recognize that expectations priced into particular stocks were optimistic.



Preferred Product Types

- ❑ We prefer multi-factor products with alternative weighting schemes vs. single factor products because:
 - Individual factors can be expensive or cheap at any given time and are no easier to time than the market in general.
 - Factor values show low correlation to each other.
 - Just because a factor worked in the past is no guarantee that it will work in the future.



Next Steps

- ❑ Identify Multi-Factor products we believe can add value.
- ❑ See if/how they complement each other and existing managers.
- ❑ Recommend portfolio of Smart Beta/Alternative Index product to Boards.



Smart Beta and Alternatively Weighted Indexes

Questions?

