

Going Beyond Style Box Investing

NCPERS

Presented by

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Session Description

Going Beyond Style Box Investing

While the advent of the style box in the 1990s has provided a useful framework for constructing a diversified equity portfolio, investing strictly within the style box framework may create portfolio gaps that can lead to unintended consequences. This presentation aims to help plan sponsors think about 1) how they can go beyond the confines of style boxes to help participants achieve a secure retirement; 2) how outcome-oriented approaches can help balance between maximizing total return and minimizing volatility; and 3) what they should look for when evaluating outcome-oriented strategies.

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- Key takeaways

How We Got Here

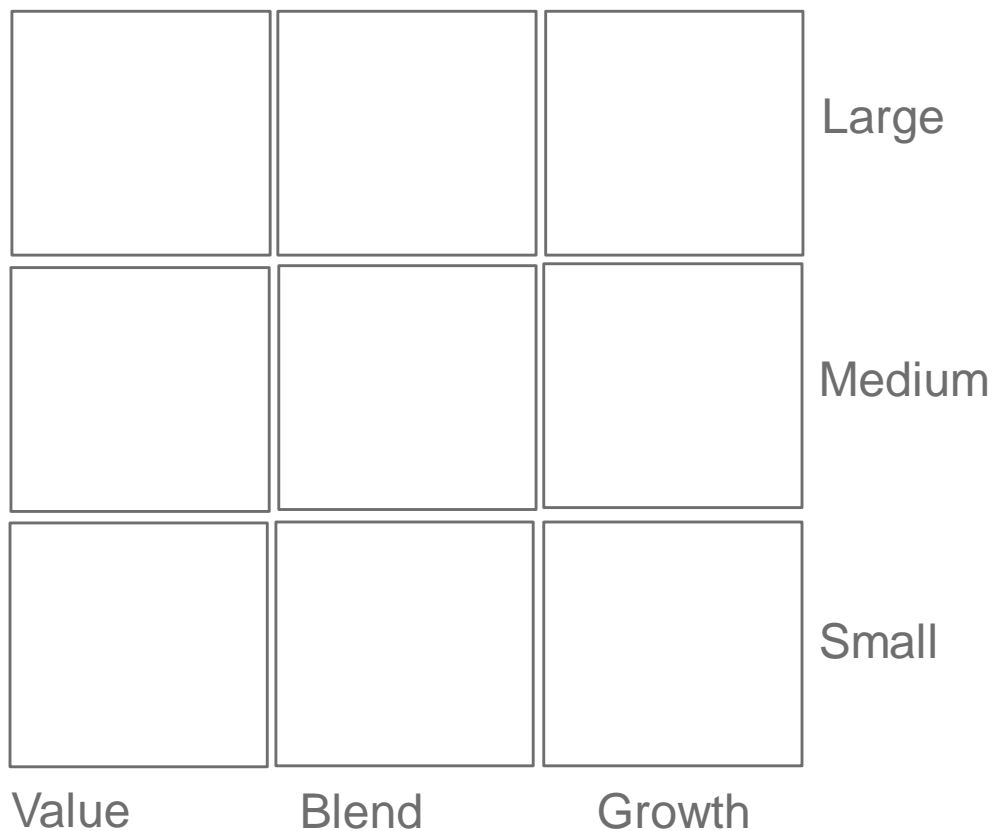
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History of The Style Box Approach

Morningstar Style Box TM

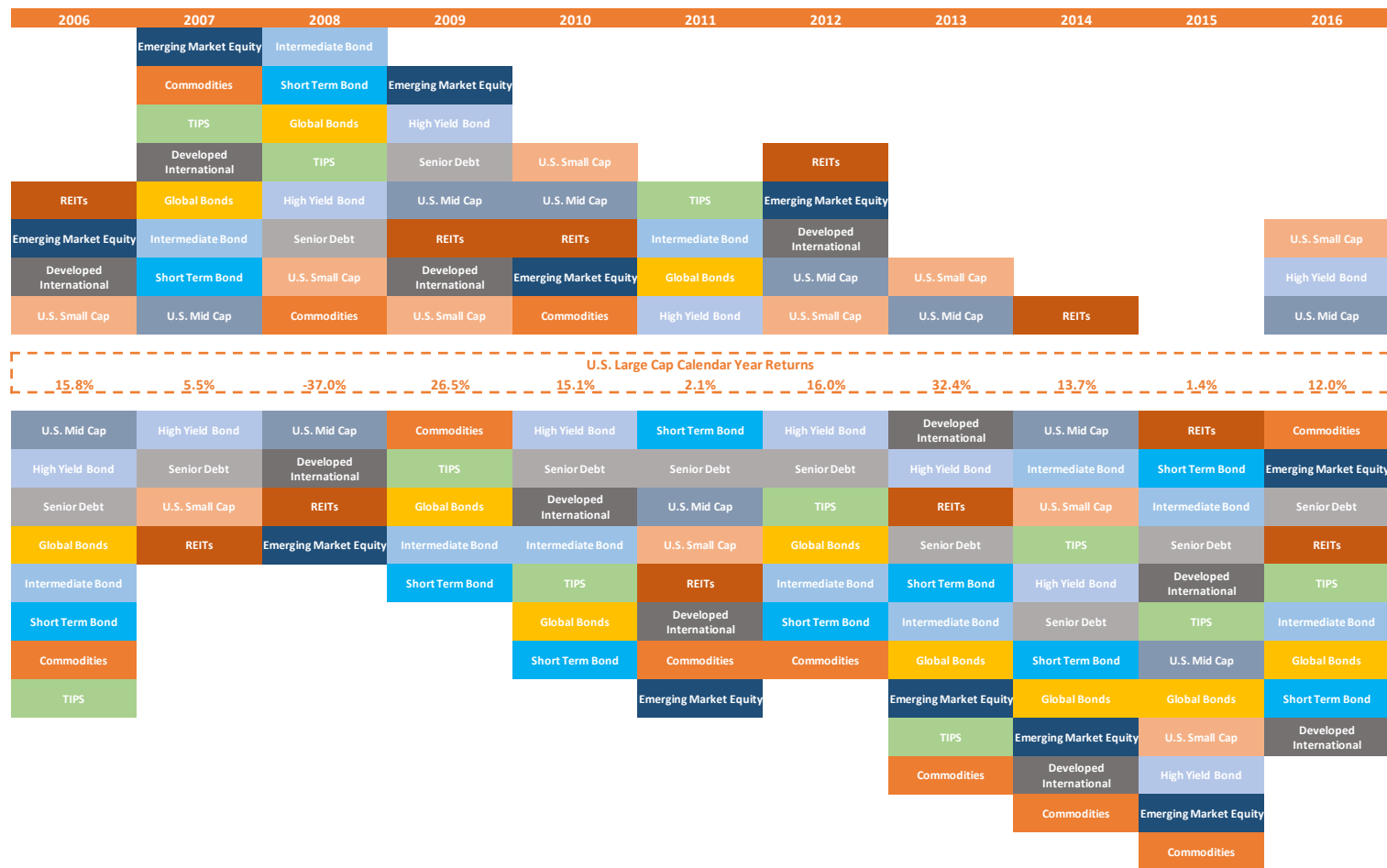


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A Strong Case for Diversification



Source: Morningstar Direct.

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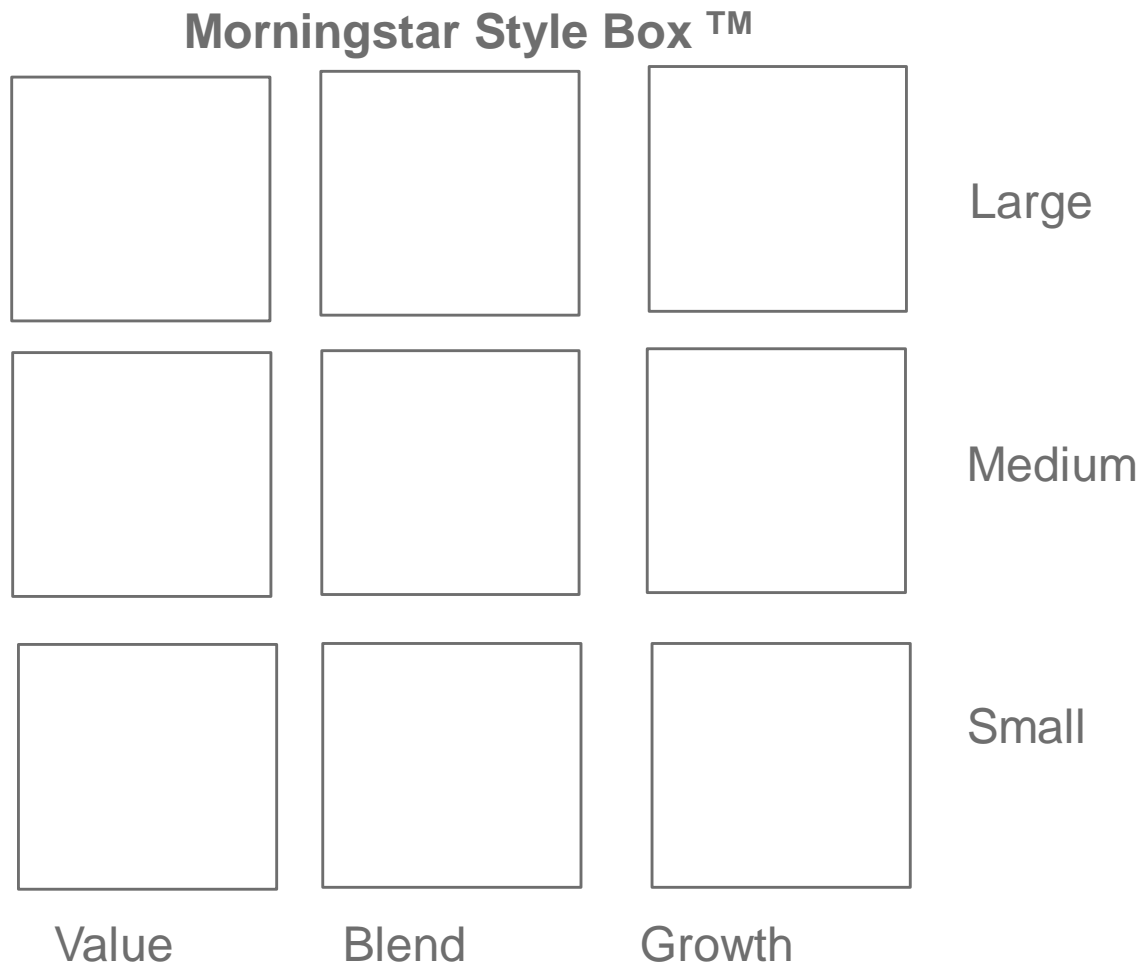
Why We Need to Think Outside the Box

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A Slightly Different Perspective on the Style Box



Challenges Facing Plan Sponsors in Today's World

The Search for Yield

Volatility

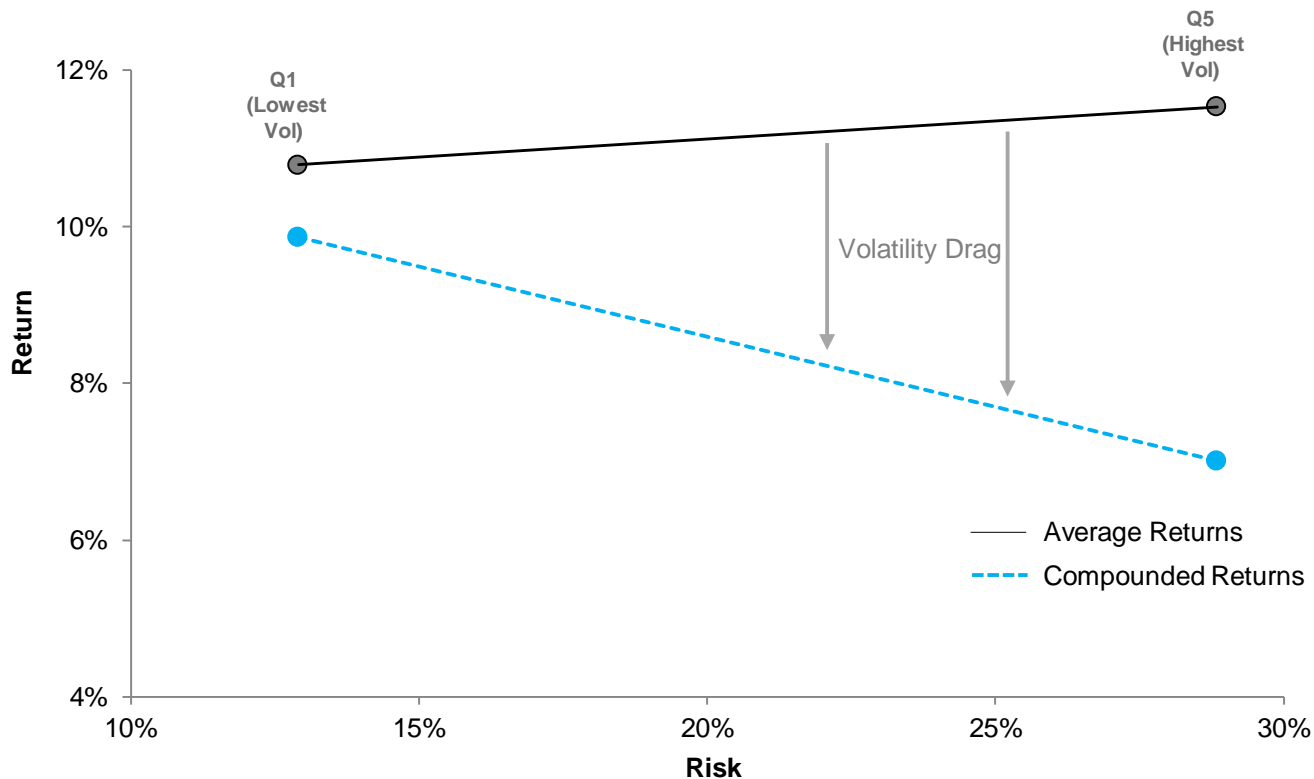
Interest Rate Risk

Fiduciary Responsibility

Volatility: why do we care?



Compounded returns for high volatility stocks are dramatically lower



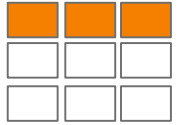
For illustrative purposes only. Data shown above represents performance for the Russell 1000 Index from 1/1/97 – 12/31/15. Past performance is no assurance of future results. Source: Voya IM and FactSet.

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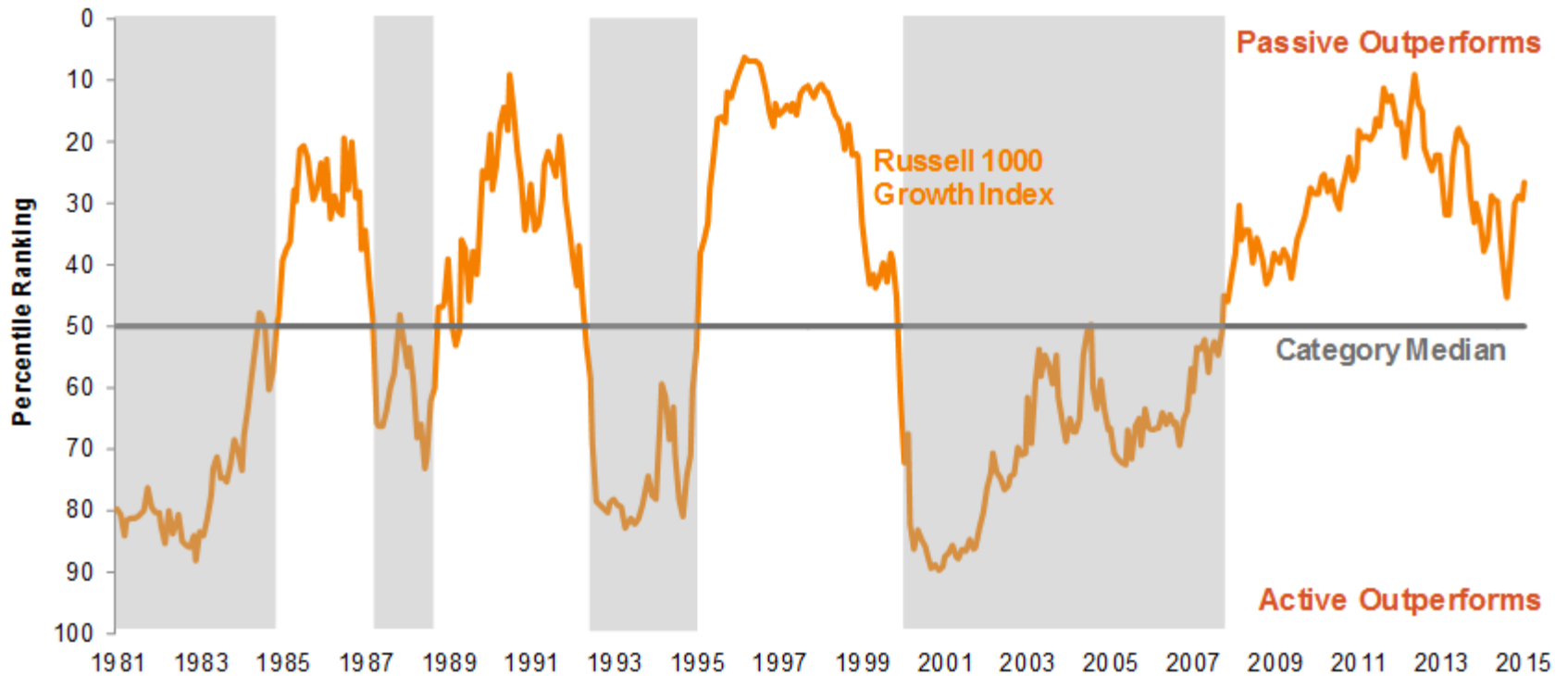
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Fees



Active vs. Passive Management



For illustrative purposes only. Source: Voya Investment Management and Zephyr Style Advisor. Category median represents the 50th percentile breakpoint for the Morningstar Large Cap Growth category at the end of each rolling 3-year period as calculated by Zephyr Style Advisor. Rolling 36-month data from December 1961-December 2015 completed monthly. Performance is no guarantee of future results.

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Thinking Outside the Box

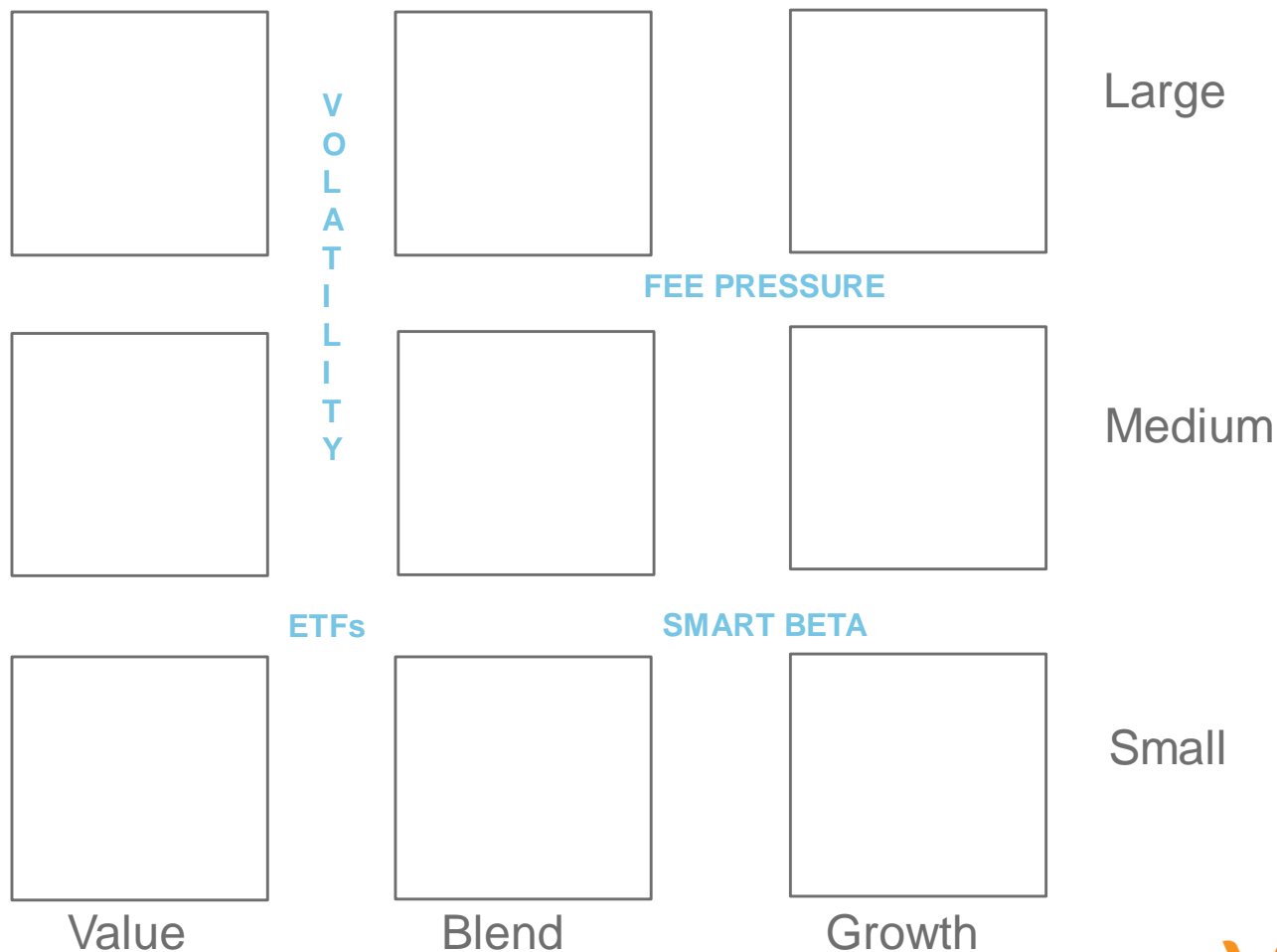
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How to Identify and Fill the Gaps: A New Paradigm

Morningstar Style Box™



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Building Blocks for Delivering Cost-Effective, Custom Solutions

Thinking “outside the box”

Willingness to consider a solution that does not fit in a style box and hire a manager based on back-tested results

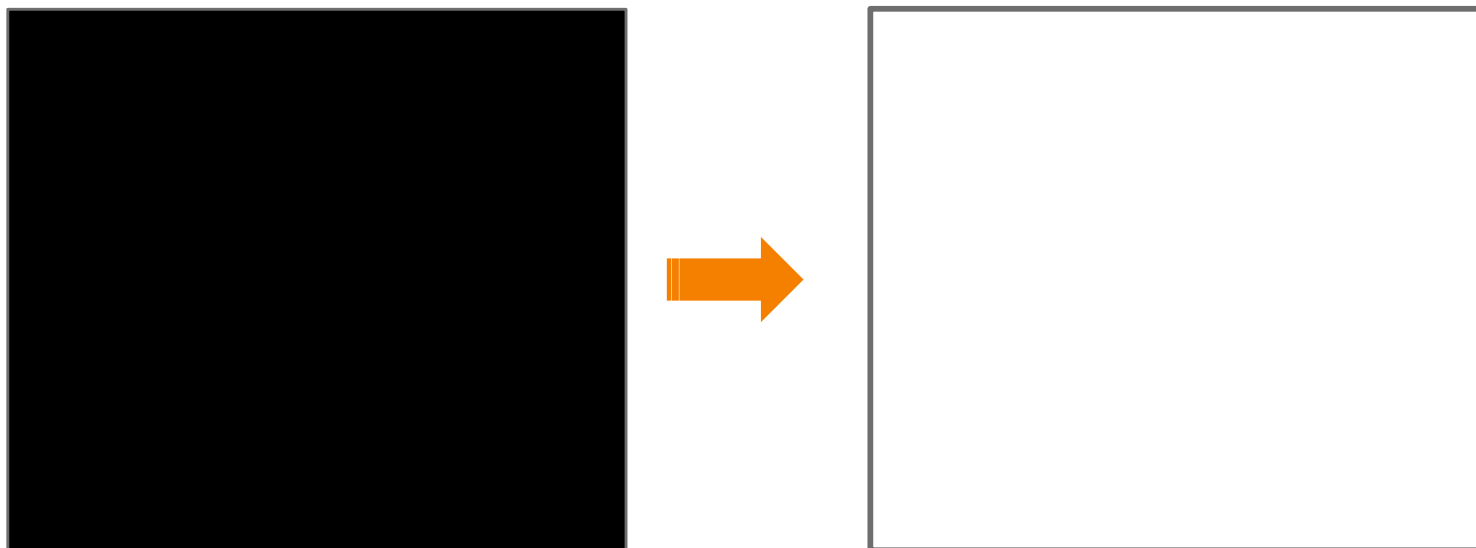
Collaboration

Partnership between plan sponsor and manager

Analytics

Deeper due diligence and analysis on how a manager will fit into the overall portfolio

Back-testing: De-Mystifying the Black Box



Look for managers that:

- Provide transparency around methodology and results
- Avoid “look ahead” bias, survivorship bias, and data mining
- Use multiple factors, test the efficacy of factors over a range of market environments, and look for factors that have low correlation to one another

Assessing Multiple Factors Over a Range of Market Environments

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Earnings momentum	0%	0%	0%	15%	17%	11%	5%	0%	0%
Earnings growth	2%	0%	7%	0%	0%	0%	0%	0%	0%
Price Momentum	2%	0%	1%	0%	0%	0%	0%	0%	0%
Cash to EV	1%	0%	0%	0%	0%	0%	0%	0%	0%
Tangible Book Yield	12%	25%	25%	16%	1%	6%	0%	7%	1%
Dividend Yield	17%	5%	4%	10%	21%	12%	9%	11%	10%

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Thinking Outside the Box: A Case Study

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Case Study: Building a Portfolio to Meet a Style Box Gap - Volatility

Plan Sponsor Objectives

- Generate income
- Low volatility and strong downside capture (lower risk)
- Maximize total return

“Off the Shelf” Solutions

Large Cap Value (Style Box Solution)

Low/Min Vol ETF (Passive Solution)

Unintended Consequences:

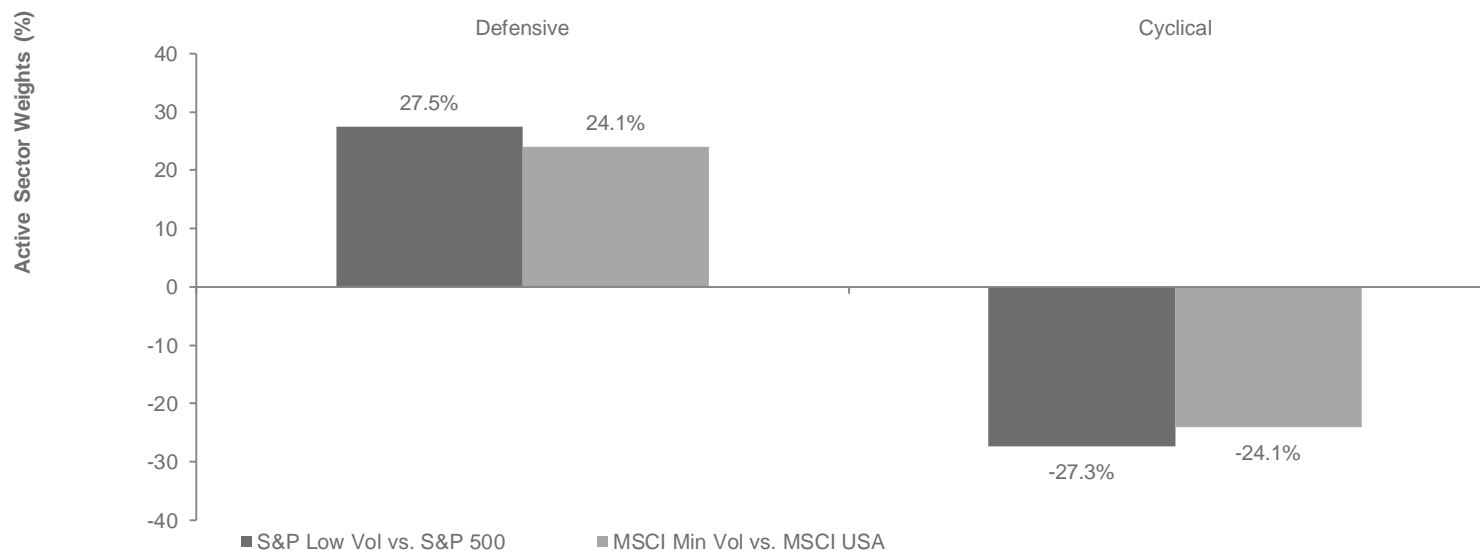
- No explicit beta target
- Overexposed to sectors that are interest-rate sensitive

Custom Solution

- **Sector-neutral**
- **Low beta**
- **Robust alpha source**
- **Above-benchmark dividend yield**

Case Study: Pitfalls of “Off the Shelf” Solutions

Sector crowding



For illustrative purposes only. Source: Voya IM and FactSet. Data as of 1/1/98 -12/31/15. **Past performance is no assurance of future results.** Interest rate sensitivity measures the sensitivity of returns to the change in 10-year bond yields.

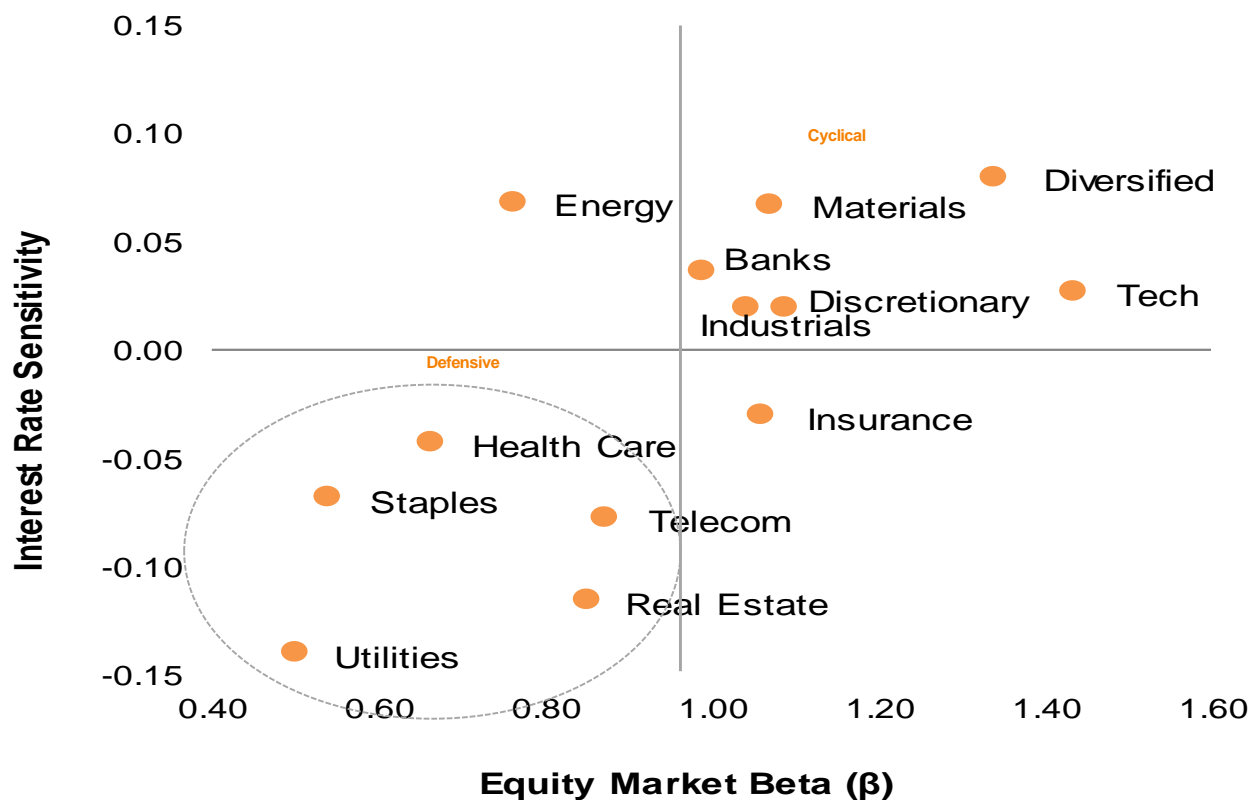
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Case Study: Pitfalls of “Off the Shelf” Solutions

Correlation to interest rates



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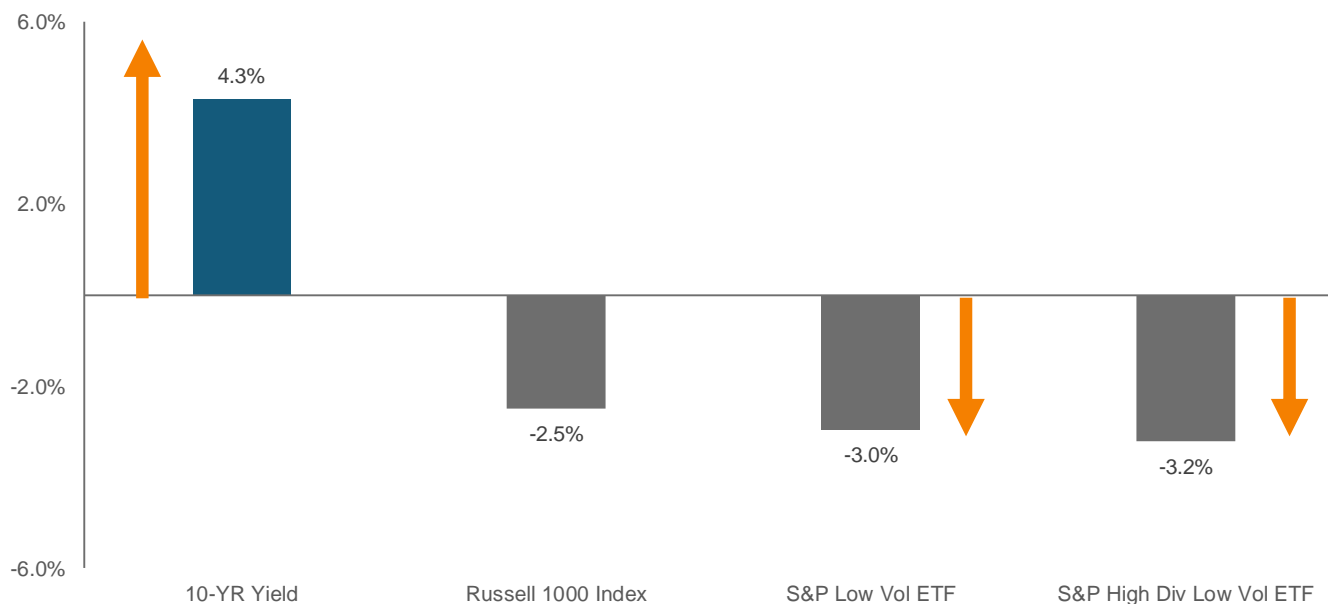
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Case Study: Pitfalls of “Off the Shelf” Solutions

Managing downside protection



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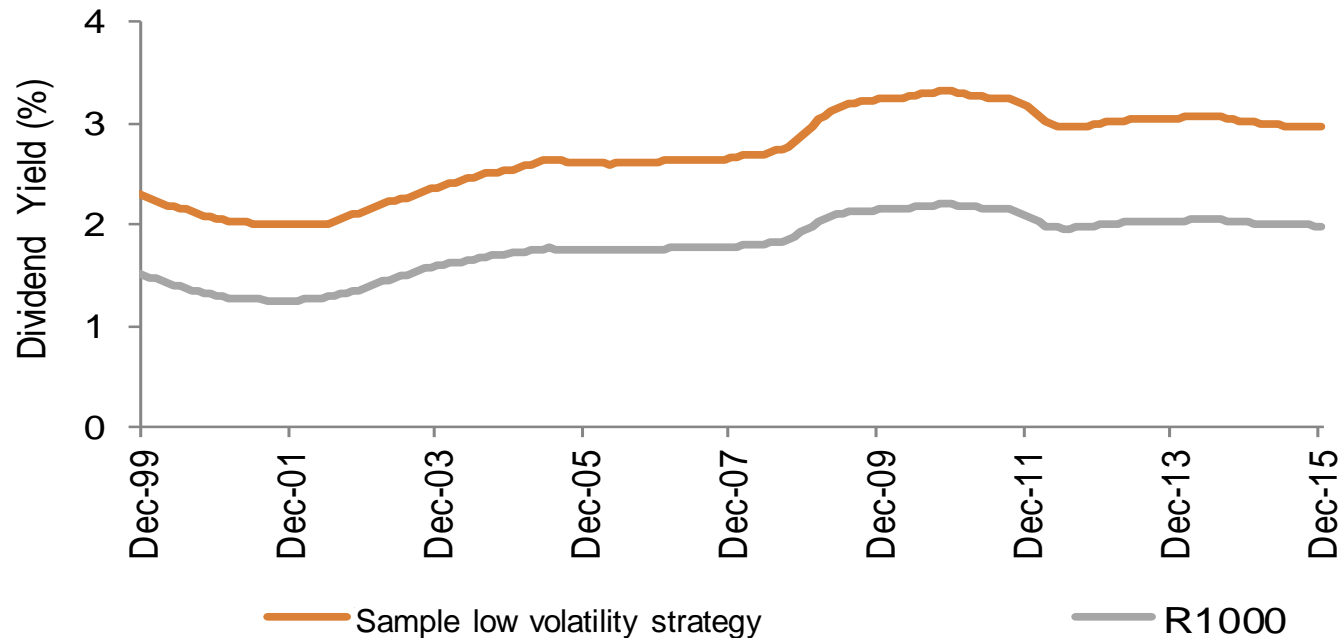
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Case Study: A Different Framework for Evaluating an Outcome-Oriented Mandate, Focused on Desired Outcomes

Higher Income

Rolling 3-Year Average Dividend Yield



Performance data from 01/01/97 – 12/31/15 is based on a simulated portfolio vs. Russell 1000 Index, rebalanced quarterly.
Source: FactSet and Voya Investment Management. **Past performance is no assurance of future results.**

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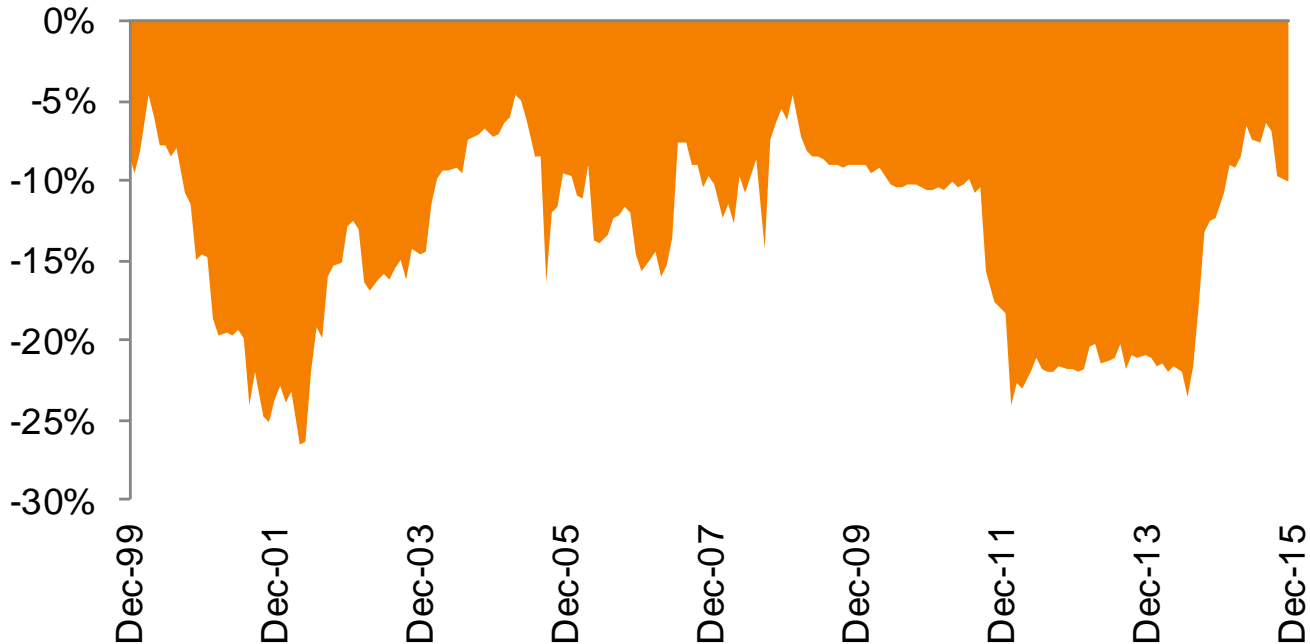


Case Study: A Different Framework for Evaluating an Outcome-Oriented Mandate, Focused on Desired Outcomes

Lower Risk

Risk Reduction versus the Russell 1000 Index

3 Year Rolling Standard Deviation (January 1, 1997 - December 31, 2015)



Performance data from 01/01/97 – 12/31/15 is based on a simulated portfolio vs. Russell 1000 Index, rebalanced quarterly.
Source: FactSet and Voya Investment Management. **Past performance is no assurance of future results.**

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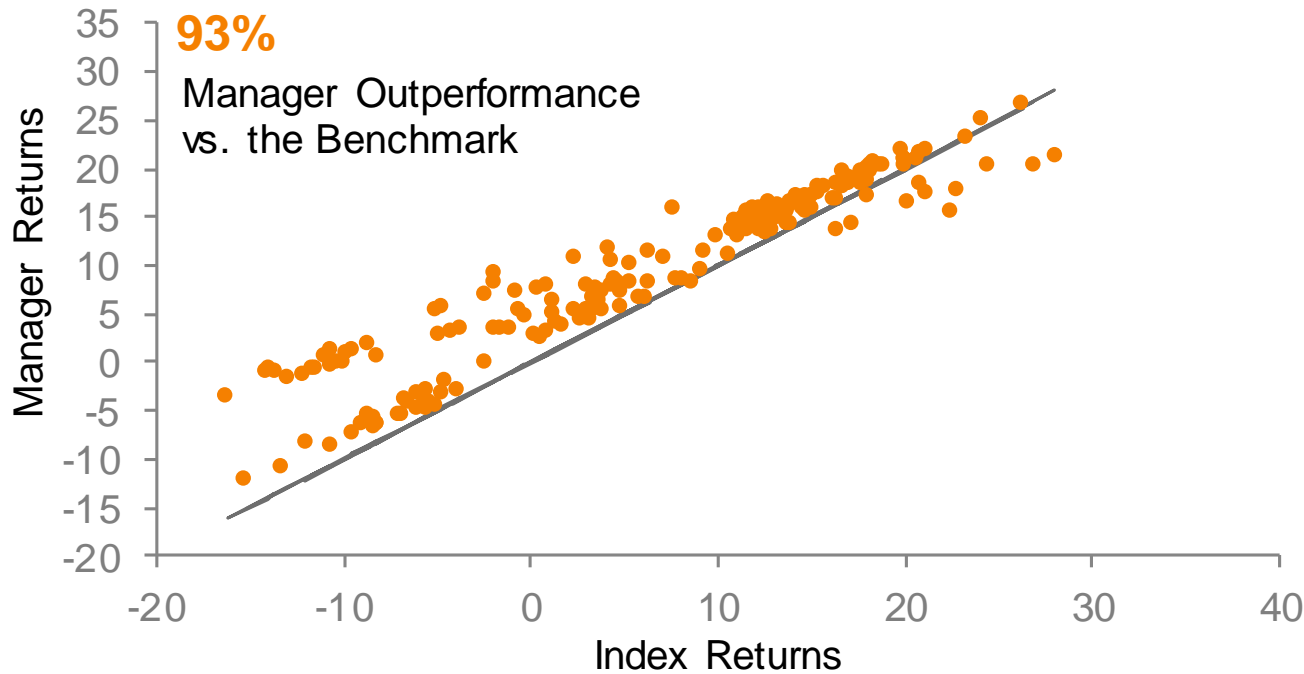
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Case Study: A Different Framework for Evaluating an Outcome-Oriented Mandate, Focused on Desired Outcomes

Maximize Total Return

Sample low volatility strategy vs. Russell 100 Index
3 Year Rolling Returns (January 1, 1997 - December 31, 2015)



Performance data from 01/01/97 – 12/31/15 is based on a simulated portfolio vs. Russell 1000 Index, rebalanced quarterly.
Source: FactSet and Voya Investment Management. **Past performance is no assurance of future results.**

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Key Takeaways

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Why You Need to Think Outside of the Style Box

- 1 Unintended risks of pure style box approach
- 2 Changing market structure
- 3 Benefits of custom solutions
- 4 Last but not least...

The #1 reason we all need to think outside the box



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Appendix

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Past performance is no guarantee of future results.

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Backtested Performance Information

Backtested performance is NOT an indicator of future actual results. The results reflect the performance of a strategy not historically offered to investors and do not represent returns that any investor actually attained. Backtested results are calculated by retroactive application of a model constructed on the basis of historical data and based on assumptions integral to the model which may or may not be testable and subject to losses.

General assumptions include that the firm would have been able to purchase the securities recommended by the model and the markets were sufficiently liquid to permit all trading. Changes in these assumptions may have a material impact on the backtested returns presented. Certain assumptions have been made for modeling purposes and are unlikely to be realized. No representations and warranties are made as to the reasonableness of the assumptions. This information is provided for illustrative purposes only.

Backtested performance is developed with the benefit of hindsight and has inherent limitations. Specifically, backtested results do not reflect actual trading or the effect of material economic and market factors on the decision making process. Since trades have not actually been executed, results may have under- or over-compensated for the impact, if any, of certain market factors may have had on a decision-making process. Further, backtesting allows the security selection methodology to be adjusted until past returns are maximized. Actual performance may differ significantly from backtested performance.

Backtested results are adjusted to reflect the reinvestment of dividends and other income and except where otherwise indicated, are presented gross-of fees and do not include the effect of backtested transaction costs, management fees, performance fees or expenses, if applicable. No cash balance or cash flow is included in the calculation.