

*Webinar*

# What Matters in Multi-Factor Investing?

*Presenter*



**Vitali Kalesnik**, PhD  
*Director of Research for Europe*

*Host*



**Joe Steidl**, CFA, FRM  
*Vice President, Europe*

# Webinar Series Outline

1. What Matters in Multi-Factor Investing?
  - Business case for multi-factor investing – academic framework
  - Critical review of evidence for popular factors
2. Ignored Risks of Factor Investing
3. Multifactor Design, Part 1 – Mixing vs. Integrating
4. Multifactor Design, Part 2 – Keep a Handle on Trading Costs
5. Issues in ESG Integration



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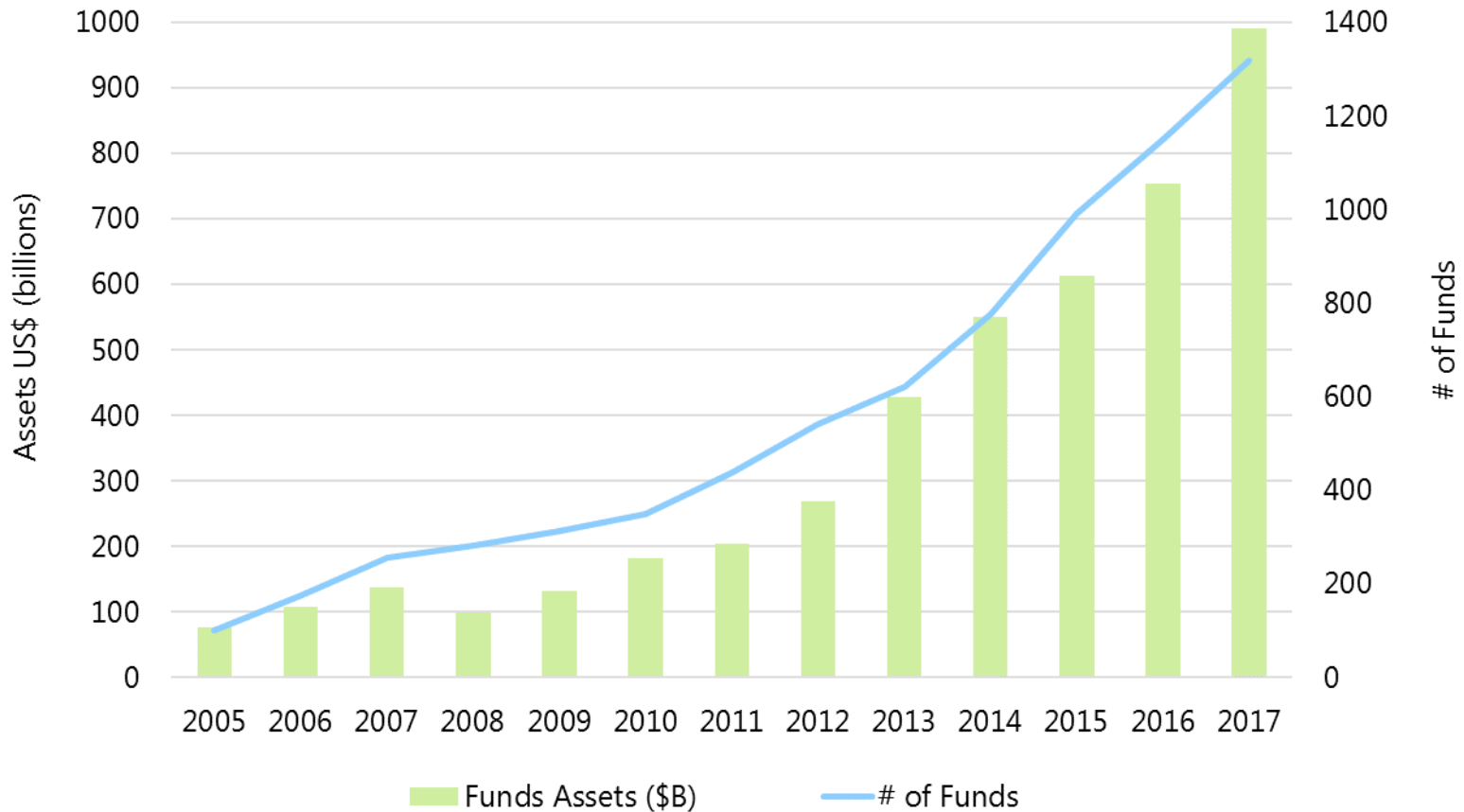


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# What Matters in Multi-Factor Investing?

# “Smart Beta” and “Factor Investing” Are Not a Fad

## Smart Beta Equity Fund Growth (2005–2017)



Source: Research Affiliates, LLC, based on data from Morningstar. Funds include ETFs and open-ended mutual funds.

# A Review of Our Smart Beta Research

<p>The RAFI™ Fundamental Index™ Approach</p>	<p><b>“Fundamental Indexation”<sup>1</sup></b> Arnott, Hsu, Moore <i>Financial Analysts Journal</i> March 2005</p>	<p><b>“An Overwrought Orthodoxy”</b> Arnott <i>Institutional Investor</i> December 2006</p>	<p><b>“Institutionalizing Courage”</b> Arnott May 2012</p>
<p>Smart Beta Strategies and Factor Exposures</p>	<p><b>“A Survey of Alternative Equity Index Strategies”<sup>2</sup></b> Chow, Hsu, Kalesnik, Little <i>Financial Analysts Journal</i> September 2011</p>	<p><b>“The Surprising Alpha from Malkiel’s Monkey...”<sup>3</sup></b> Arnott, Hsu, Kalesnik, Tindall <i>Journal of Portfolio Mgmt.</i> August 2013</p>	
<p>Robustness of Factors</p>	<p><b>“Finding Smart Beta in the Factor Zoo”</b> Hsu, Kalesnik July 2014</p>	<p><b>“Will Your Factor Deliver?...”<sup>4</sup></b> Beck, Hsu, Kalesnik, Kostka <i>Financial Analysts Journal</i> September 2016</p>	
<p>The Effects of Valuations on Smart Beta</p>	<p><b>“How Can ‘Smart Beta’ Go Horribly Wrong?”</b> Arnott, Beck, Kalesnik, West February 2016</p>	<p><b>“To Win with ‘Smart Beta’ Ask If the Price Is Right”</b> Arnott, Beck, Kalesnik June 2016</p>	<p><b>“Timing ‘Smart Beta’ Strategies? Of Course! Buy Low, Sell High!”</b> Arnott, Beck, Kalesnik September 2016</p>
<p>The Impact of Implementation</p>	<p><b>“The Market Impact of Index Rebalancing”</b> Aked, Moroz January 2016</p>	<p><b>“The Dirty Little Secret of Passive Investing”</b> Aked January 2016</p>	<p><b>“Cost and Capacity: Comparing Smart Beta Strategies”</b> Chow, Li, Pickard, Garg July 2017</p>

1. 2005 William F. Sharpe Indexing Achievement Award for Best Index-Related Research Paper.
2. 2012 *Financial Analysts Journal* Graham & Dodd Scroll and Finalist of the Whitebox Selected Research Best Financial Research Paper of 2011.
3. 2014 Bernstein/Fabozzi/Jacobs Levy Award for Outstanding Article.
4. 2016 Graham and Dodd Scroll Award of Excellence.



# Academic Evidence on Fund Selection

- » Carhart (1997): Three sources of persistence in mutual fund performance:
  - Factor exposures
  - Transaction costs
  - Management fees
  
- » Poor timing from manager rotation is one of the biggest detractors to investor returns<sup>1</sup>



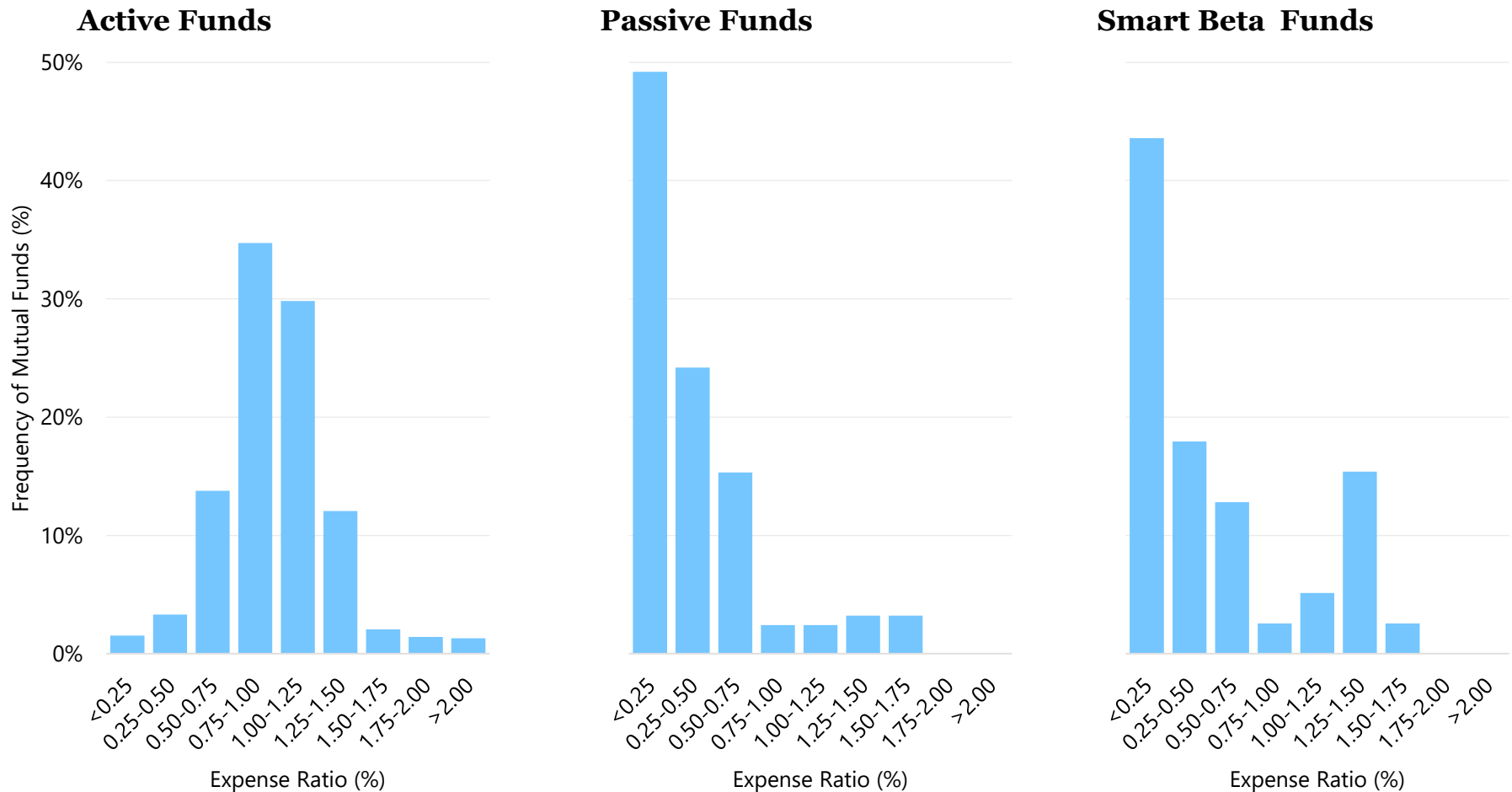


# Business Case for Multi-Factor Investment

## Academic Research-Based Framework

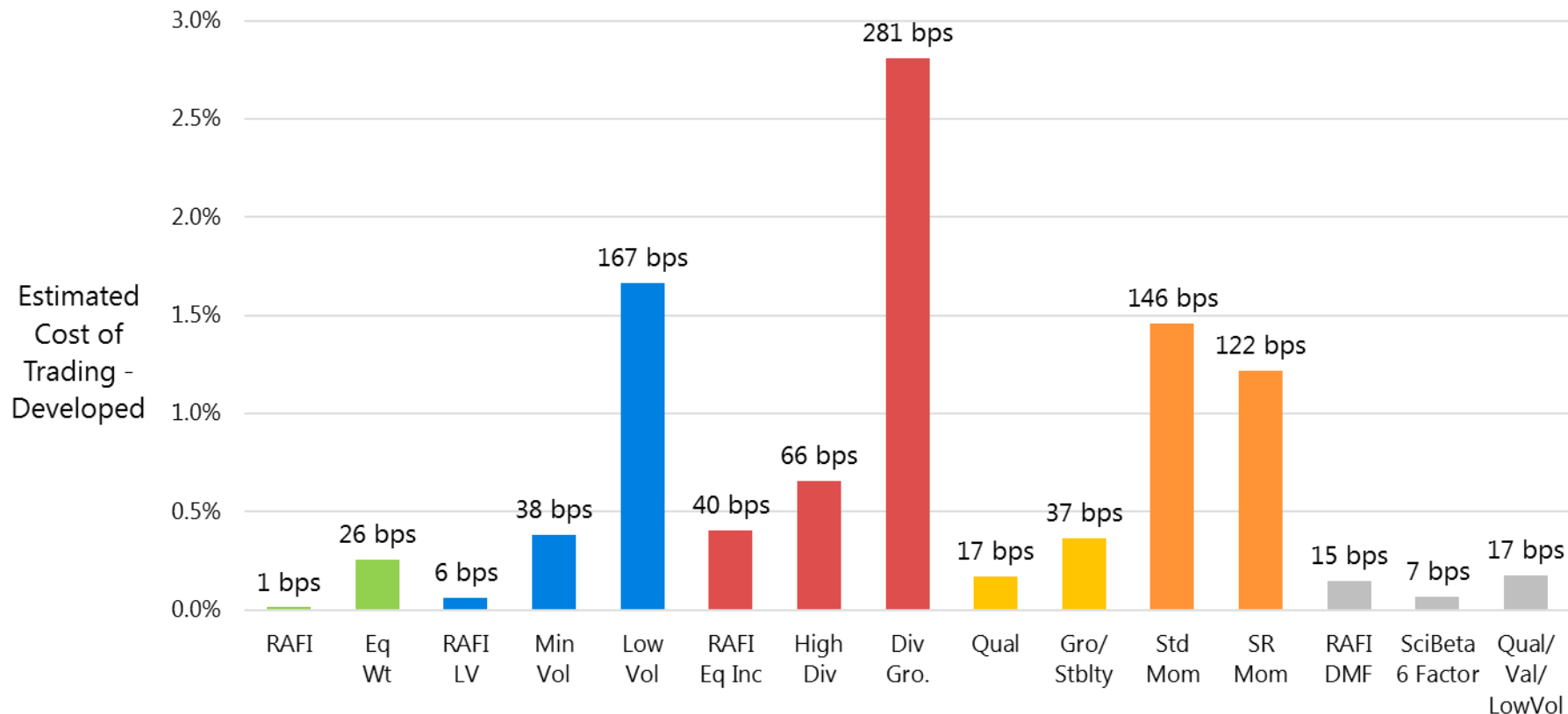
Key Attributes	Problem Solved	Important Elements
Exposure to robust factors	Maximize performance to satisfy investor-specific risk/return preferences	<ul style="list-style-type: none"> <li>• Understand the source of return and who is on the other side of the trade</li> <li>• Efficient portfolio rebalancing to capture source of return</li> </ul>
Low transaction costs	Lower transaction costs with efficient capture of factor exposures	<ul style="list-style-type: none"> <li>• Both external transaction costs and implicit market impact costs</li> <li>• Liquidity and capacity are essential for success in smart beta</li> </ul>
Low management fee	The investor, not the providers, captures most of the return	<ul style="list-style-type: none"> <li>• Low TER fee</li> </ul>
Simplicity and transparency	Investors lose 2% on average because of poor timing in active manager solution – simplicity and transparency can increase the holding power for investors	<ul style="list-style-type: none"> <li>• Transparency and rules-based</li> <li>• Trusted providers and implementers</li> <li>• Ongoing customer support (especially through periods of underperformance)</li> </ul>

# Avoid the Smart Beta Wannabes



Source: Distribution of Fund Expenses by Morningstar Category, 2016.

# Poor Index Design Can Lead to High Cost



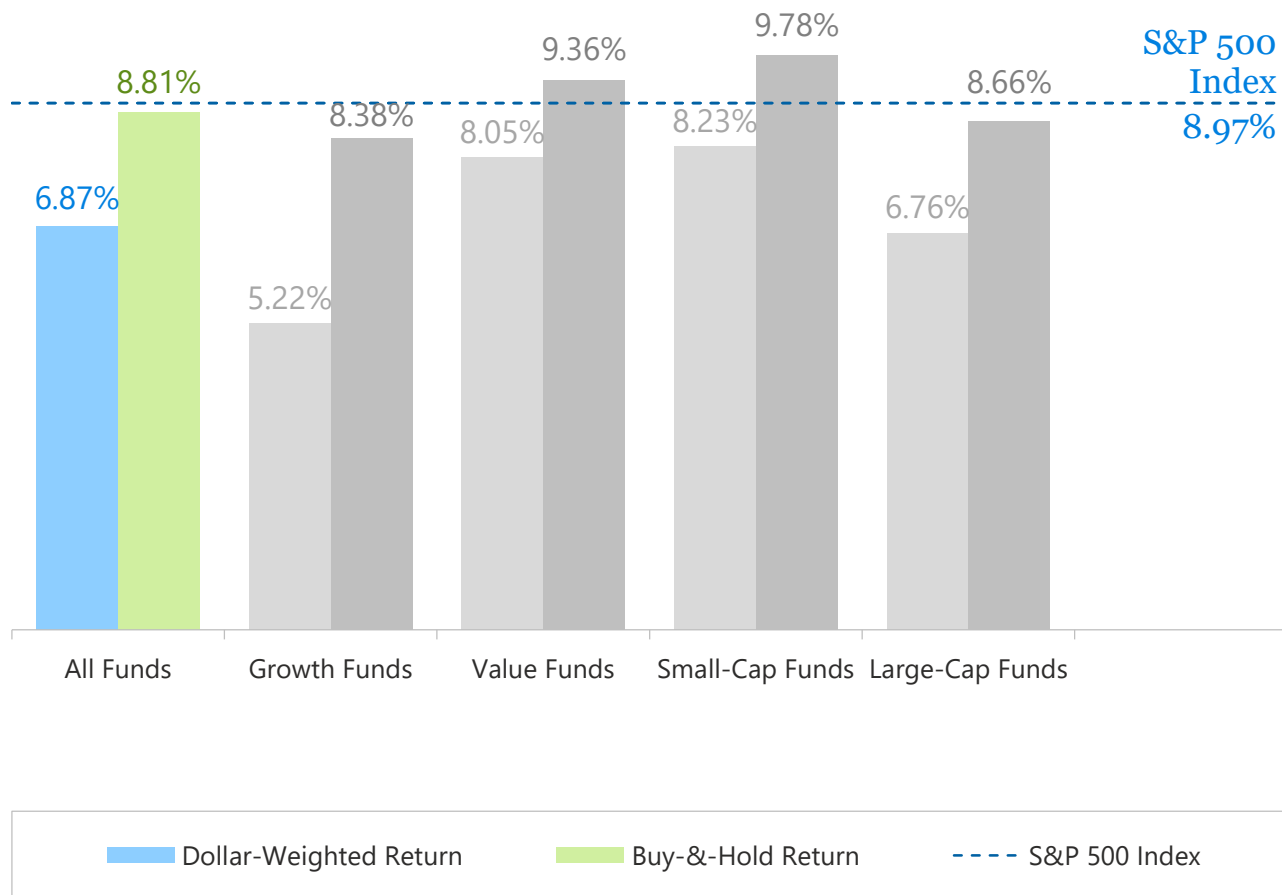
<https://interactive.researchaffiliates.com/smart-beta.html>

Note: All data presented herein and on the Smart Beta Interactive website are estimates and are based on simulated portfolios computed by Research Affiliates, LLC, and do not reflect the performance of any product or strategy. The data are based upon reasonable beliefs of Research Affiliates, LLC, but are not a guarantee of future performance. Forward-looking statements speak only as of the date they are made and Research Affiliates, LLC, assumes no duty to and does not undertake to update forward-looking statements. Forward-looking statements are subject to numerous assumptions, risks, and uncertainties, which change over time. Actual results may differ materially from those anticipated in forward-looking statements. Please refer to disclosures.

Source: Research Affiliates, LLC, using data from the Smart Beta Interactive website. Data as of 6/30/2018. Annualized trading costs are estimated as the market impact of transactions, assuming \$10B in AUM for US and Developed portfolios and \$1B in Emerging Markets.

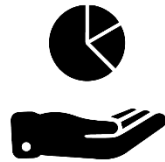


# Transparency Prevents Trend Chasing



Source: Hsu, J., B. Myers, and R. Whitby. 2016. "Timing Poorly: A Guide to Generating Poor Returns While Investing in Successful Strategies." *Journal of Portfolio Management*, vol. 42, no. 2.

# Will Your Factor Deliver?



## VALUE

### Problems with Common Definition

Price-to-book can overexpose to companies on the brink of default.

### Definitions that Work

Buys what is cheap and sells what is expensive on multiple metrics.

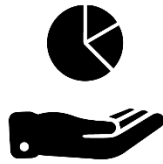
### Who Is on the Other Side of the Trade?

The Performance Chaser

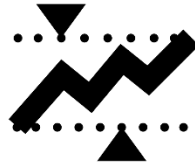


Source: Beck, N., J. Hsu, V. Kalesnik, and H. Kostka. 2016. "Will Your Factor Deliver? An Examination of Factor Robustness and Implementation Costs." *Financial Analysts Journal*, vol. 72, no. 5.

# Will Your Factor Deliver?



**VALUE**



**LOW  
VOLATILITY**

## Problems with Common Definition

Price-to-book can overexpose to companies on the brink of default.

High recent returns is not a sign of long-term alpha. Beware of expensive low vol companies.

## Definitions that Work

Buys what is cheap and sells what is expensive on multiple metrics.

Invest in low risk companies with low perceived upside.

## Who Is on the Other Side of the Trade?

The Performance Chaser

The Gambler



Source: Beck, N., J. Hsu, V. Kalesnik, and H. Kostka. 2016. "Will Your Factor Deliver? An Examination of Factor Robustness and Implementation Costs." *Financial Analysts Journal*, vol. 72, no. 5.

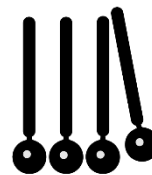
# Will Your Factor Deliver?



**VALUE**



**LOW  
VOLATILITY**



**MOMENTUM**

## Problems with Common Definition

Price-to-book can overexpose to companies on the brink of default.

High recent returns is not a sign of long-term alpha. Beware of expensive low vol companies.

High turnover. Investing in the late part of the momentum cycles leads to mean-reversion.

## Definitions that Work

Buys what is cheap and sells what is expensive on multiple metrics.

Invest in low risk companies with low perceived upside.

Buys winners and sells losers from unaware investors.

## Who Is on the Other Side of the Trade?

The Performance Chaser

The Gambler

The Uninformed Investor



Source: Beck, N., J. Hsu, V. Kalesnik, and H. Kostka. 2016. "Will Your Factor Deliver? An Examination of Factor Robustness and Implementation Costs." *Financial Analysts Journal*, vol. 72, no. 5.

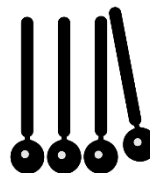
# Will Your Factor Deliver?



VALUE



LOW  
VOLATILITY



MOMENTUM



QUALITY

## Problems with Common Definition

Price-to-book can overexpose to companies on the brink of default.

High recent returns is not a sign of long-term alpha. Beware of expensive low vol companies.

High turnover. Investing in the late part of the momentum cycles leads to mean-reversion.

Datamining is a serious issue. Many definitions don't work:

- Leverage
- Earnings growth, etc.

## Definitions that Work

Buys what is cheap and sells what is expensive on multiple metrics.

Invest in low risk companies with low perceived upside.

Buys winners and sells losers from unaware investors.

Invest in profitable companies who allocate capital conservatively.

## Who Is on the Other Side of the Trade?

The Performance Chaser

The Gambler

The Uninformed Investor

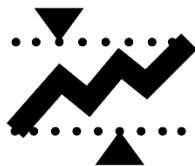
The Empire Builder



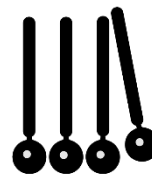
# Will Your Factor Deliver?



**VALUE**



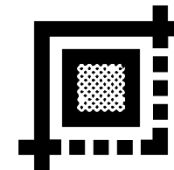
**LOW  
VOLATILITY**



**MOMENTUM**



**QUALITY**



**SIZE**

## Problems with Common Definition

Price-to-book can overexpose to companies on the brink of default.

High recent returns is not a sign of long-term alpha. Beware of expensive low vol. companies.

High turnover. Investing in the late part of the momentum cycles leads to mean-reversion.

Datamining is a serious issue. Many definitions don't work:

- Leverage
- Earnings growth, etc.

Much of the documented small-cap premium is due to delisting return bias.

## Definitions that Work

Buys what is cheap and sells what is expensive on multiple metrics.

Invest in low risk companies with low perceived upside.

Buys winners and sells losers from unaware investors.

Invest in profitable companies who allocate capital conservatively.

Harvests return premiums in the small company space.

## Who Is on the Other Side of the Trade?

The Performance Chaser

The Gambler

The Uninformed Investor

The Empire Builder

All Factors



Source: Beck, N., J. Hsu, V. Kalesnik, and H. Kostka. 2016. "Will Your Factor Deliver? An Examination of Factor Robustness and Implementation Costs." *Financial Analysts Journal*, vol. 72, no. 5.

# Conclusion

- » Costs matter – in all forms!
  - Low transaction costs – both explicit and implicit
  - Low fees
  - Avoid the return gap – simple and transparent
- » Thoughtful design just as important
  - For smart beta, liquidity and capacity are crucial
  - Ensure the resulting strategy does what it says on the tin

# Thank You



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