



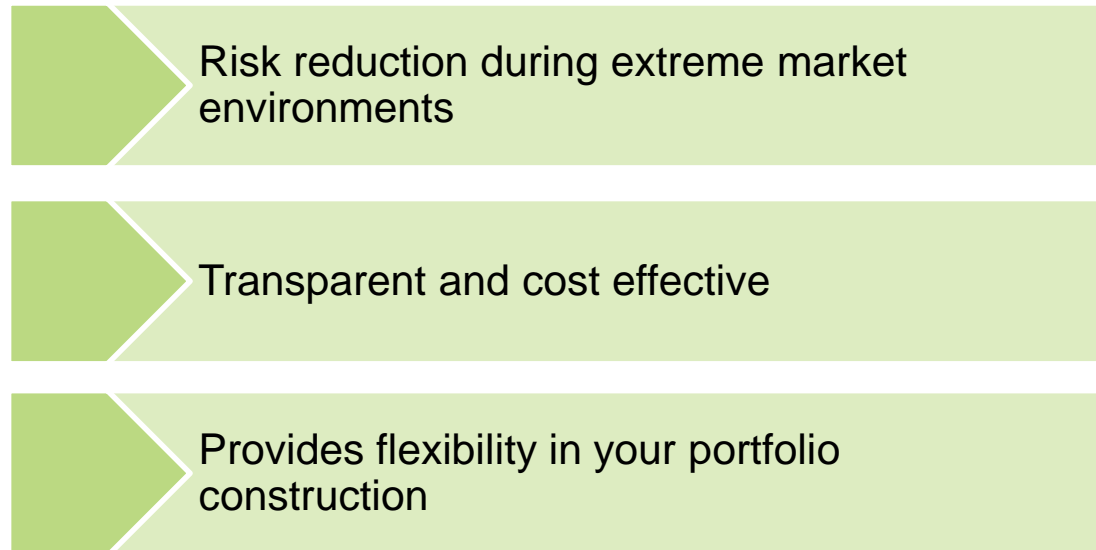
Decoding The Risks and Benefits of Low Volatility Equity

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13 September 2017
CFA Society Austin
Not for further distribution
All opinions and expression are as of 9/13/2017 and are subject to change.

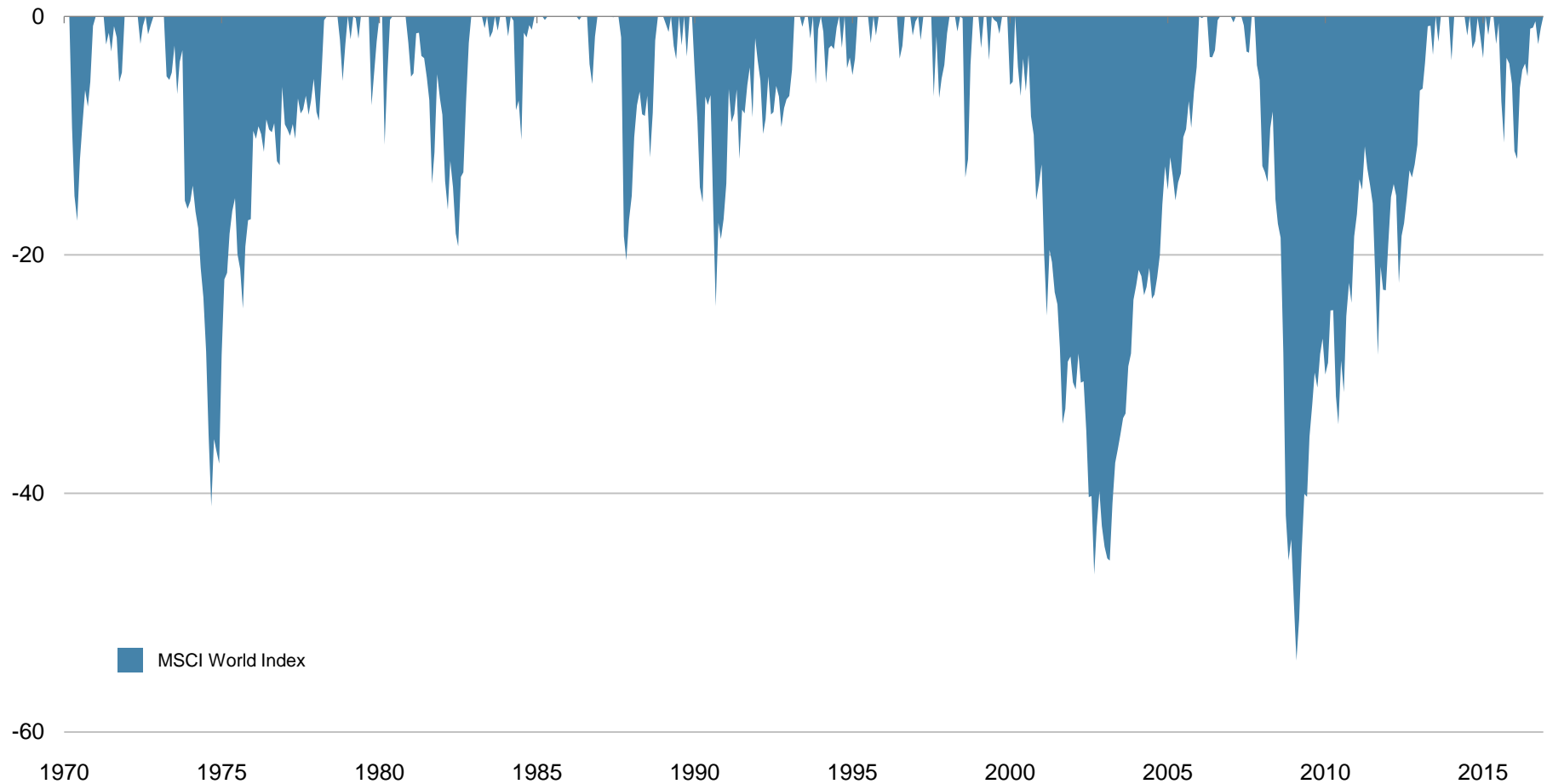
Low Volatility — Benefits

There is a Strong Case for Owning Low Volatility Equities



Benefits — Risk Reduction

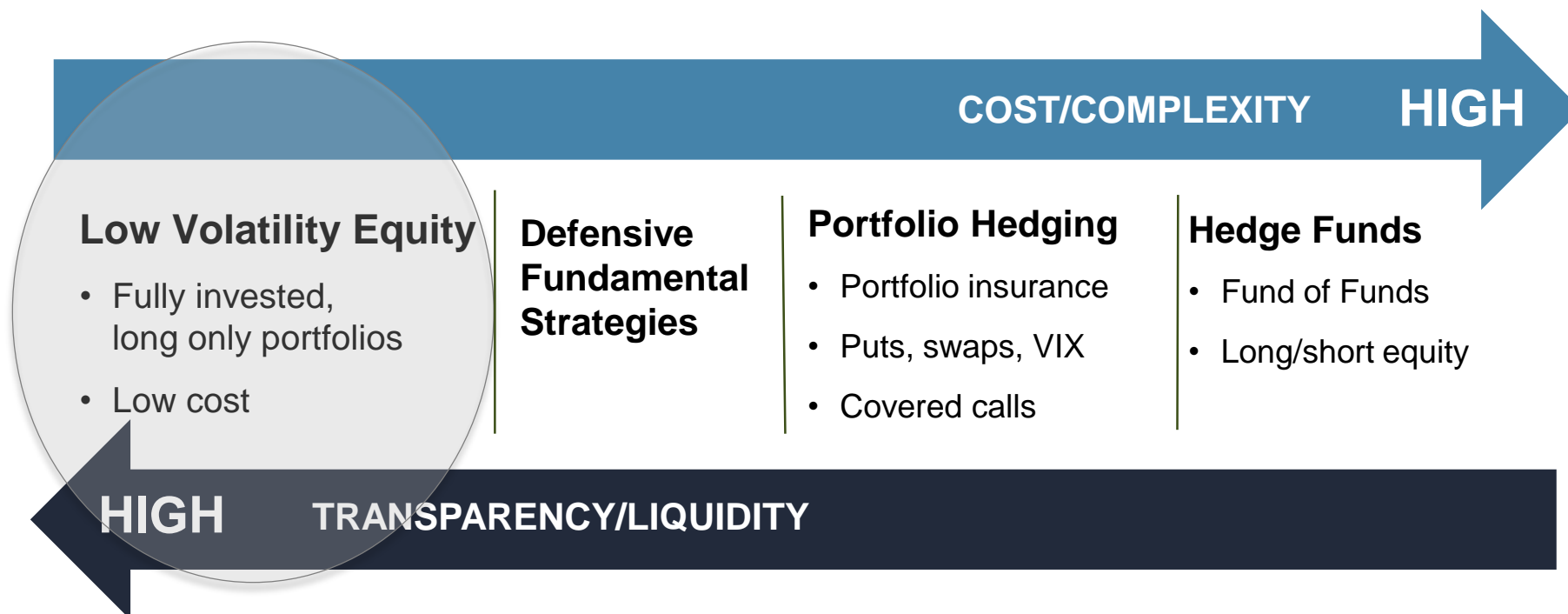
Equity Market Drawdowns: Jan 1970 – December 2016 (%)



The Market Has Experienced At Least A 10% Drawdown Every Five Years

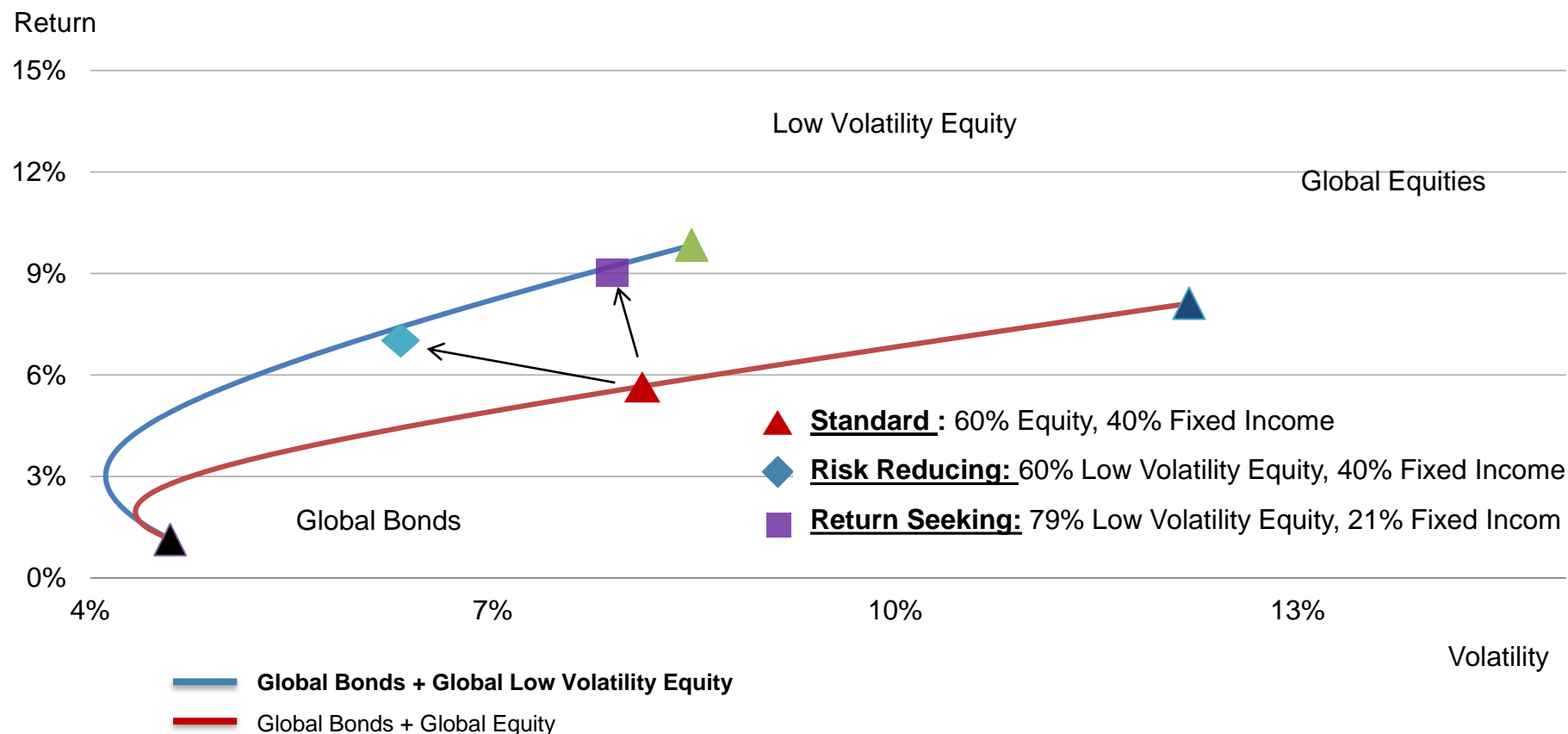
As of 31 December 2016
The performance quoted represents past performance. Past performance is not a reliable indicator of future results.
Source: Lazard , MSCI

Benefits — Transparency



We believe low volatility equity is the low cost / transparent option

Benefits — Flexibility in Portfolio Construction



Better Sharpe Ratios Can Help Improve Portfolio Efficiency

For the period January 2010 to June 2017

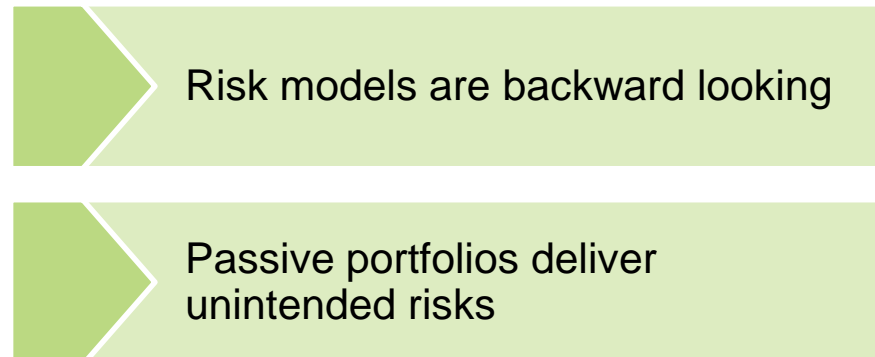
Not intended to represent any product or strategy managed or offered by Lazard. "Standard," "Risk Reducing," and "Return Seeking" are synthetic, hypothetical portfolios, composed solely of index returns, and used for illustrative purposes only. The indices listed herein are unmanaged and have no fees. It is not possible to invest directly in an index.

All data in USD. Low Volatility Global Equities = MSCI World Minimum Volatility Standard (Large+Mid Cap); Global Equities = MSCI World Standard (Large+Mid Cap); Global Bonds = Bloomberg Barclays Capital Global Aggregate Bond Index

Source: MSCI, Barclays, Bloomberg

Low Volatility — Risks

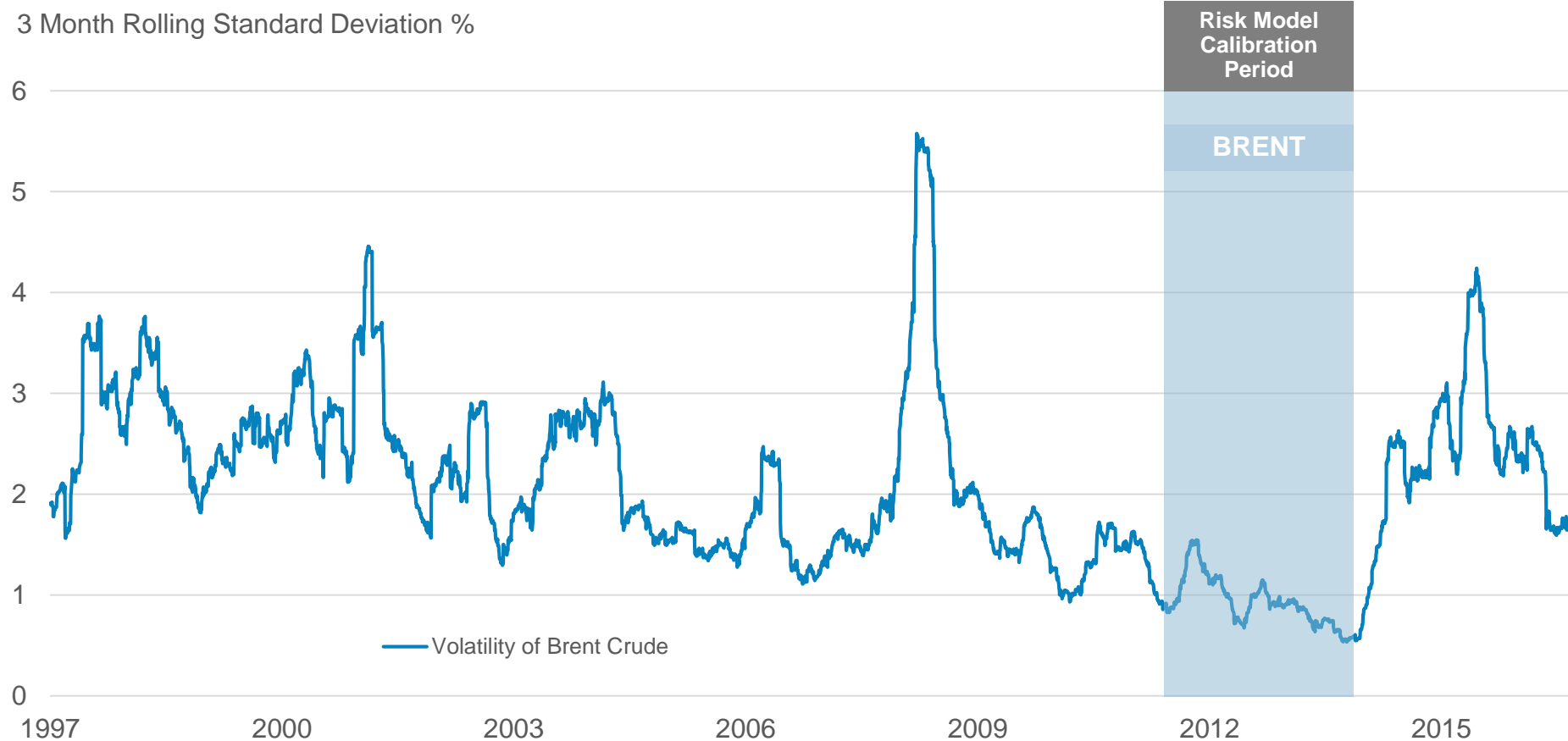
The Benefits of Low Volatility Come with Some Risks*



*The list provided above is non-exhaustive.

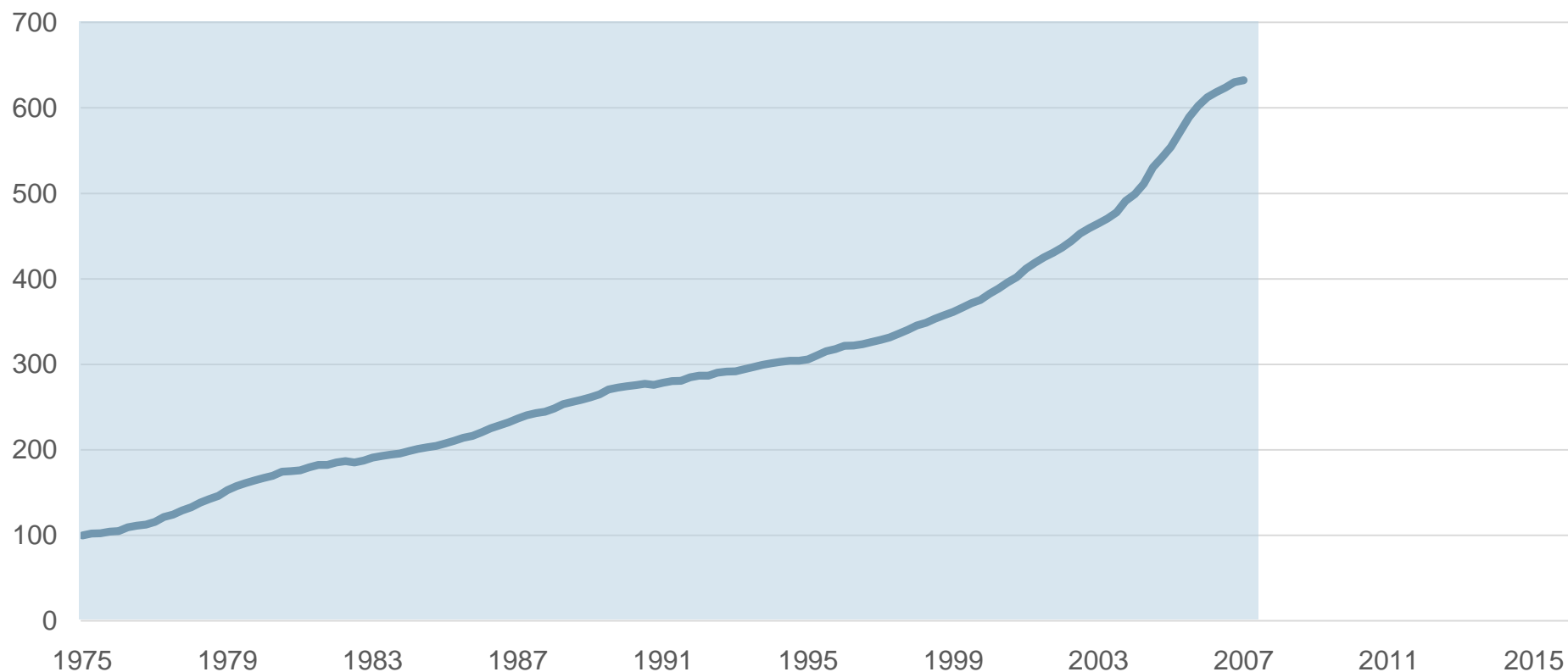
Risks: Backward Looking

Volatility Of Macro Risks Can Change Suddenly



Regime Change Can Leave Many Risk Models Flat Footed

Risks: Backward Looking US Housing Market

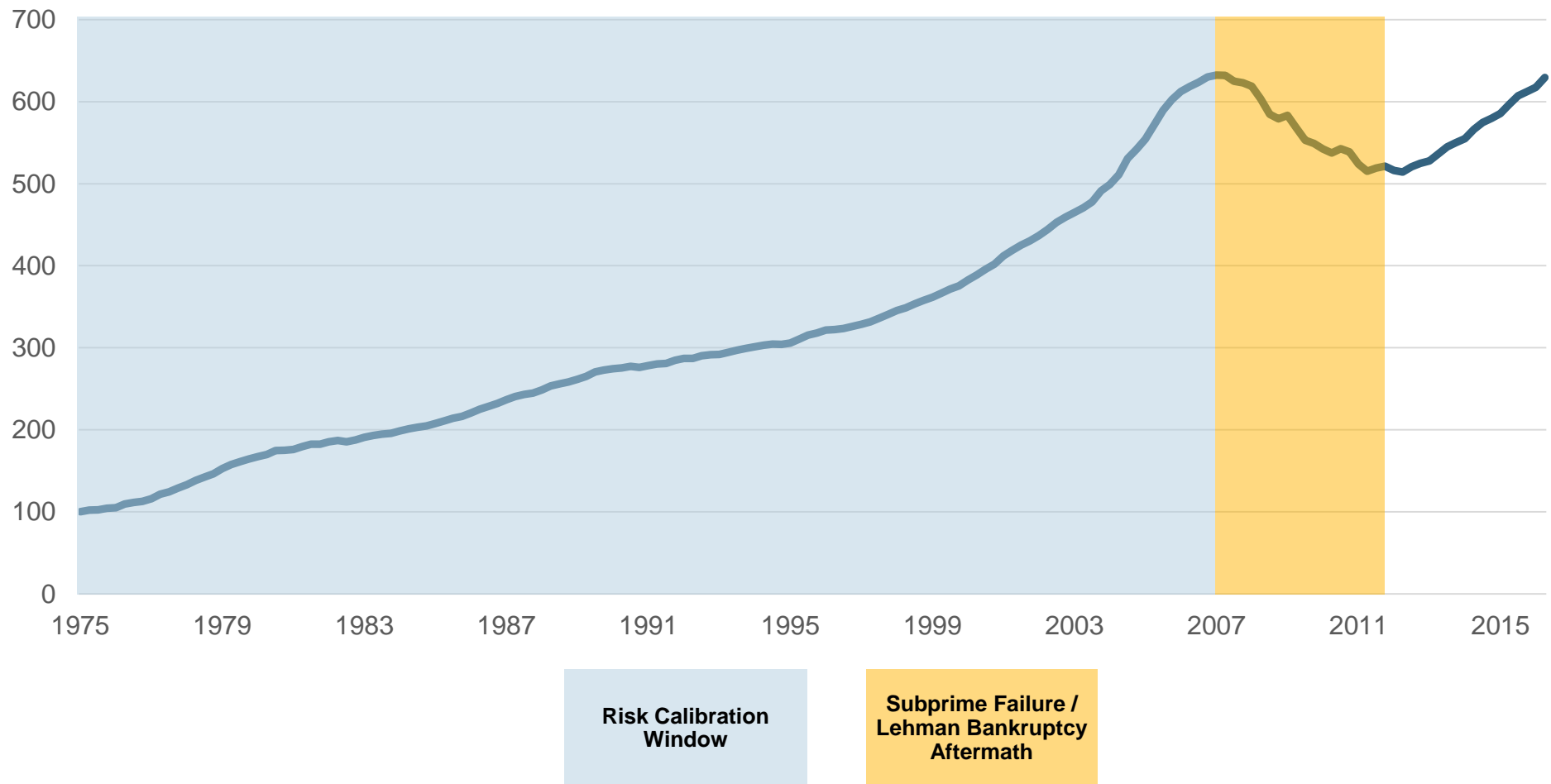


**Risk Calibration
Window**

What If Your A Risk Model Increases Your Risk?

Period: 31 March 1975- 31 March 2007
Data shown above represents the FHFA USA House Price Index.
Source: Bloomberg

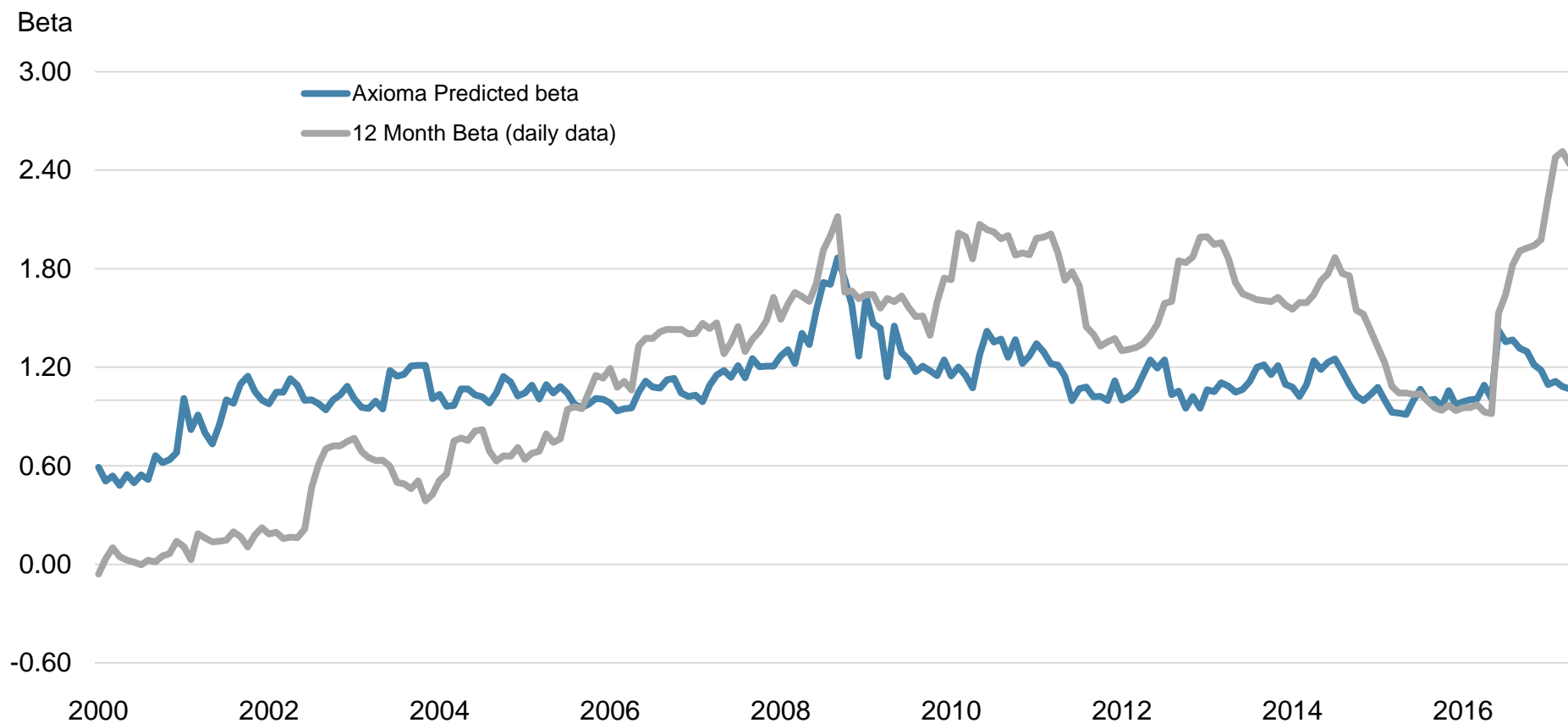
Risks: Risk Model Backward Looking US Housing Market



Simplistic Risk Models Tend To Breakdown At Most Inopportune Times!

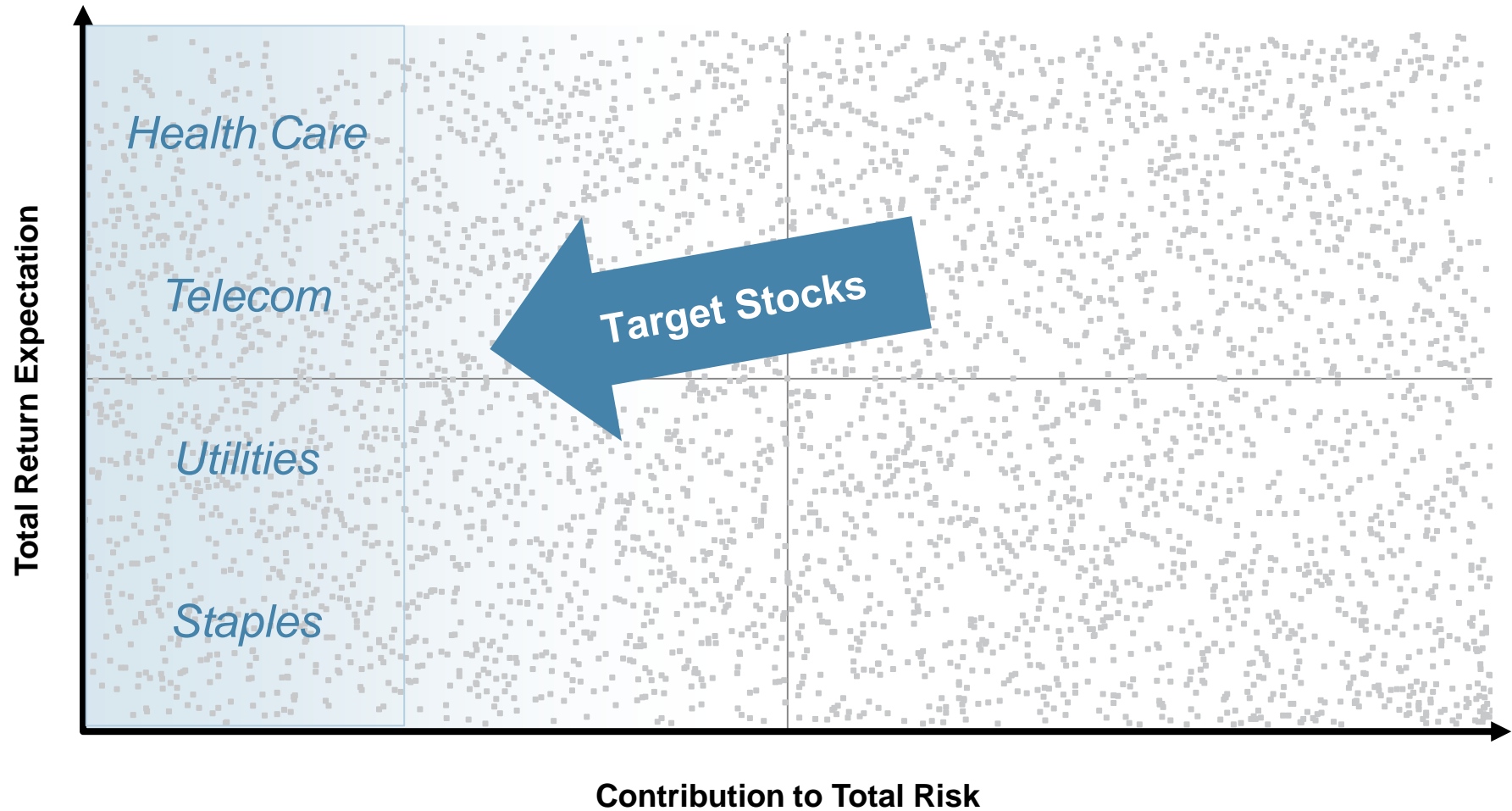
Risks: Sudden Changes

Dude, what's my beta? Taylor Wimpey PLC



**Correlation structures can become irrelevant overnight,
positions incorrectly sized**

Risks: Biases

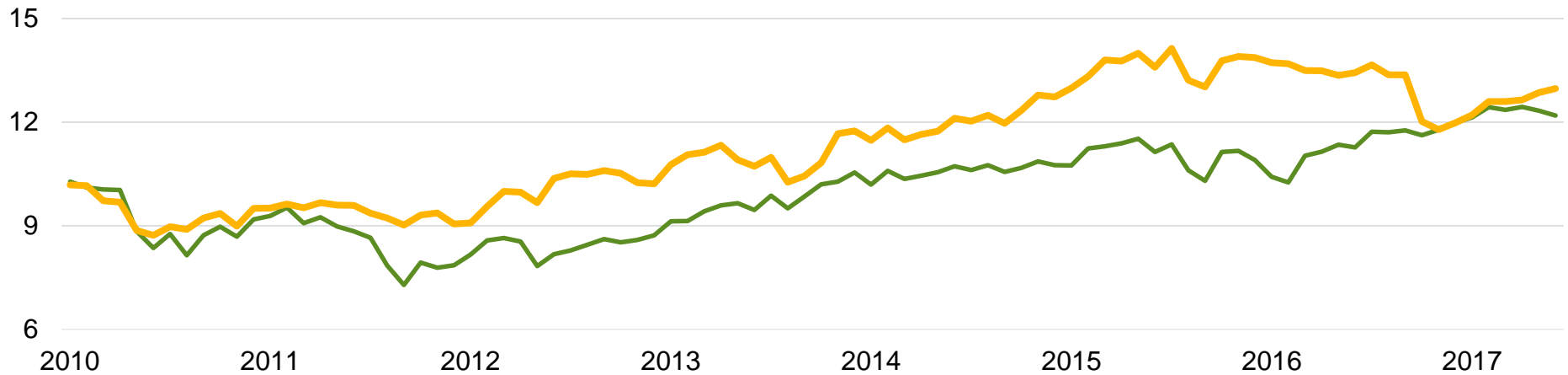


Low Volatility Equity Portfolios May Skew Toward the Usual Suspects

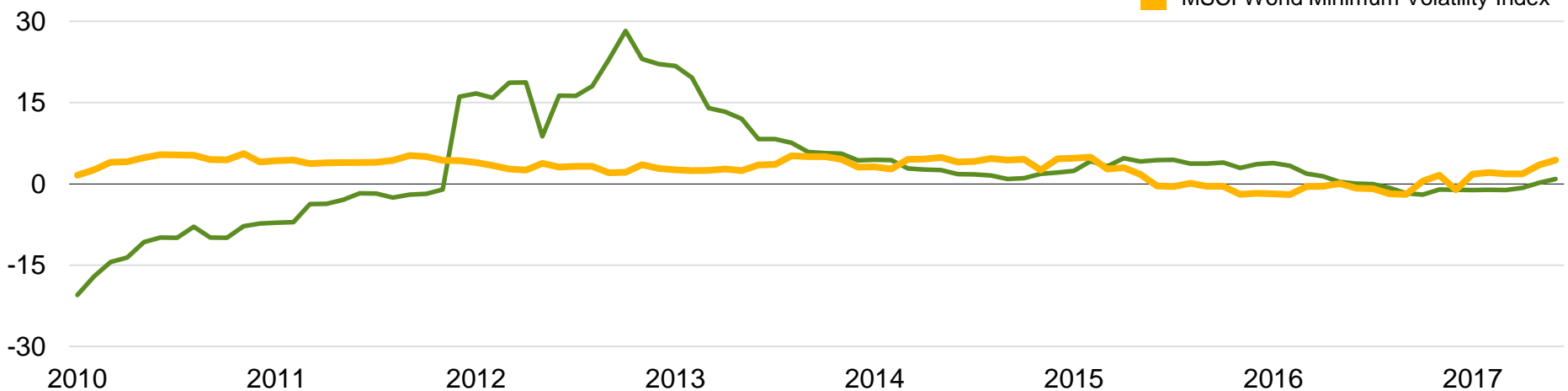
Risks: Biases

Fundamental Investment Exposure Impact

Price/Cash Flow



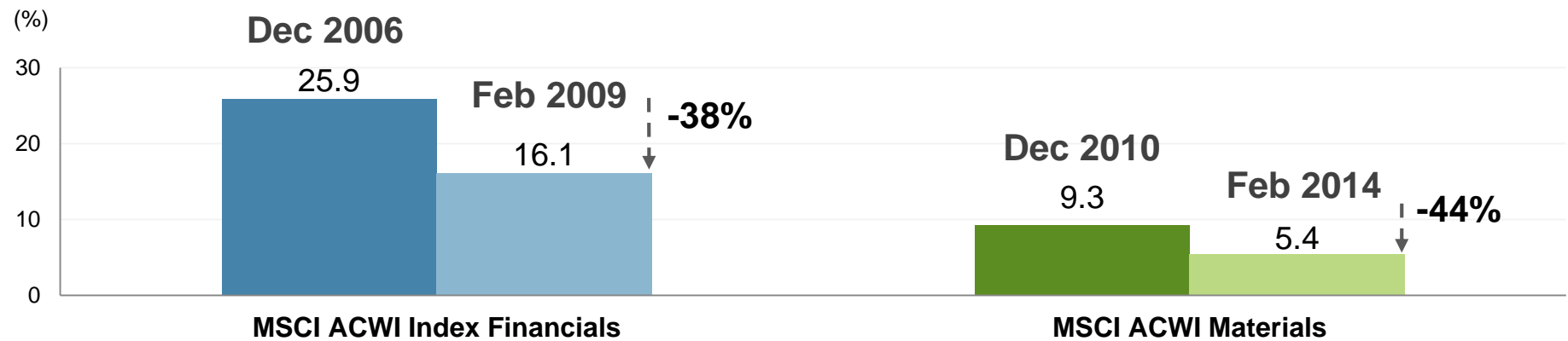
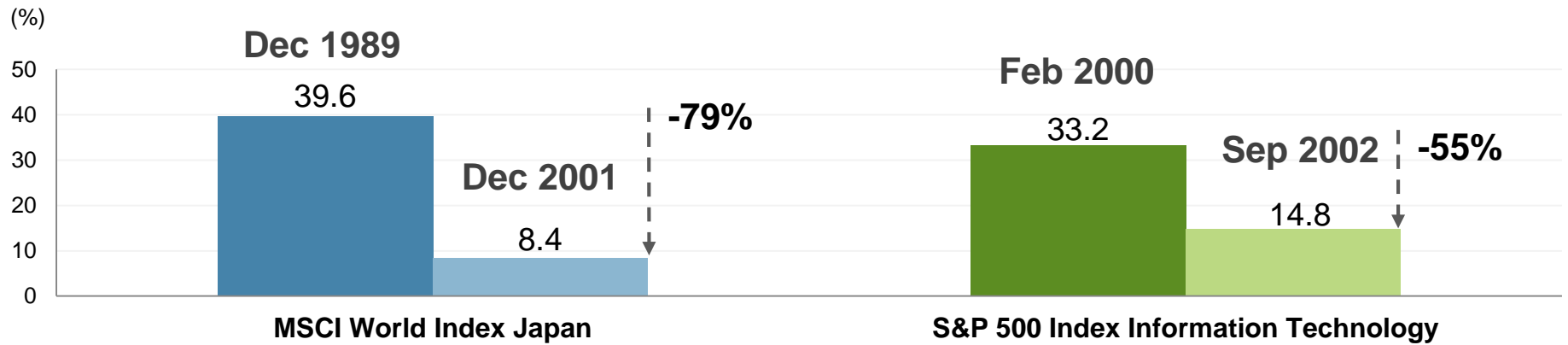
3 Year EPS Growth %



■ MSCI World Index
■ MSCI World Minimum Volatility Index

As of 30 June 2017.
 The index is unmanaged and has no fees. One cannot invest directly in an index.
 The performance quoted represents past performance. Past performance is not a reliable indicator of future results.
 Source: Lazard, MSCI

Risks — Reversal



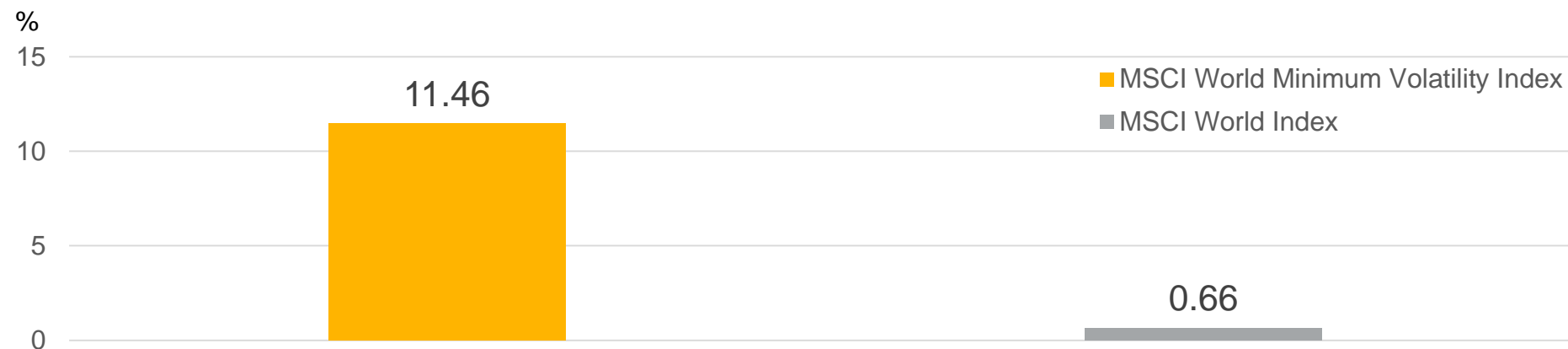
Index Based Investing Has Historically Delivered Highly Cyclical Return Patterns

For illustrative purposes only. This does not represent any product or strategy managed by Lazard. The index is unmanaged and has no fees. One cannot invest directly in an index. The performance quoted represents past performance. Past performance is not a reliable indicator of future results. Source: MSCI, Standard & Poor's

A Tale of Two Halves

MSCI World Minimum Volatility vs World Index

1H 2016



2H 2016



Passive Low Volatility Equity Impacted By Sharp Reversal In Late 2016

As of 31 December 2016. Reporting currency: USD

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Source: Lazard, MSCI

Low Volatility — A Balanced Approach

Benchmark unaware

- Cap weighted indices can be biased and risky

Risk management diversification

- Markets' assessment of risk constantly evolve
- Increases stability of risk controls

Strong Stock Selection

- Driven by a common sense set of fundamental inputs
- Helps identify high quality companies with sustainable operating performance
- Independent assessment of stock risk

**We Believe A Balanced Approach Can Deliver More Predictable
And Consistent Low Volatility Investment Outcomes**

Multidimensional Risk Management

Avoiding Surprises



Managed Volatility Risk Management

Macro	Statistical	Market Insights
<ul style="list-style-type: none">▪ Beta, Region, Stock, Industry / Sector, Oil Price, Interest Rates, etc. <p>✓ Promotes thorough portfolio diversification</p>	<ul style="list-style-type: none">▪ Shorter-term, market driven approach to spot emerging risks <p>✓ Helps navigate market / risk inflection points</p>	<ul style="list-style-type: none">▪ Real time assessment of market risk characteristics <p>✓ Provides a dynamic element leveraging 20 years of active management experience</p>

Benchmark Unaware Strategies Require Adaptable Risk Management Parameters

Active, Multi-Factor Stock Selection

Core and Balanced



Return Assessment

Value

- Defensive and cyclical value mix
- ✓ Promotes sustained exposure to relative value throughout investment cycles

Growth

- Short and long term measures assessing a company's ability to outgrow peers
- ✓ Captures specific traits investors reward in growth oriented market environments

Market Sentiment

- Combination of price movement, news, analyst revisions, and liquidity
- ✓ Provides holistic, idiosyncratic assessment of market attitudes

Quality

- Comparison of cash vs accrued earnings, ROE vs cost of capital, etc.
- ✓ Favors companies with sustainable operating models and financial performance

Seeking Companies That Collectively Outperform Throughout Cycles

Low Volatility — A Balanced Approach

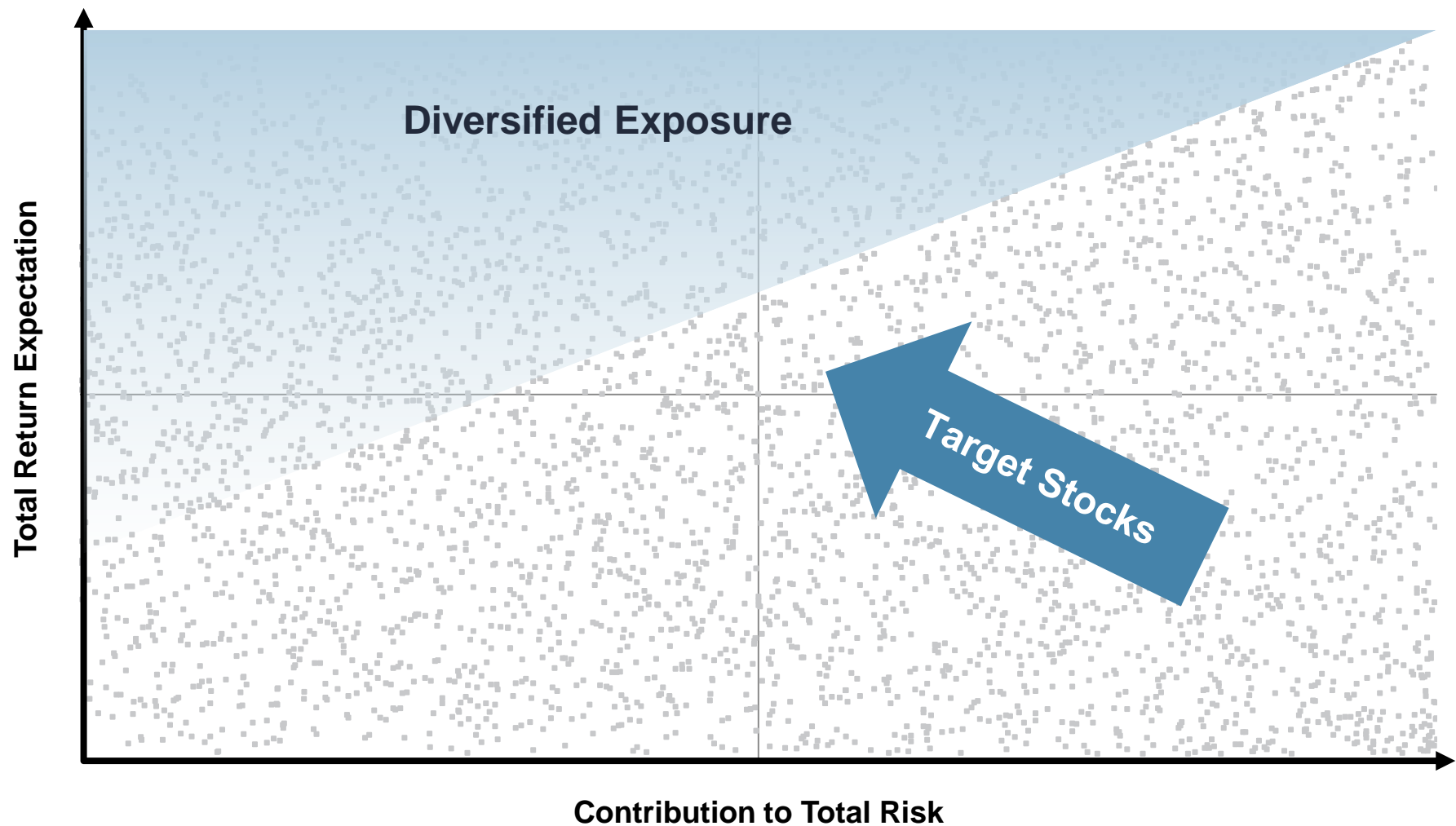
	Valuation	Sentiment	Growth	Quality
	Price to Peers	Optimism	Sustainable Growth	Financial Strength
Vestas Wind Systems	✓	✓	✓	✓
CSL	✓	—	✓	—
Lenzing AG	—	✓	✓	—
Xinyi Glass Holdings	✓	✓	✓	—
Stockland	—	—	✓	✓
Royal Bank of Canada	--	✓	—	✓
Roche Holdings	✓	—	✓	—

✓ Attractive — Neutral

As of 30 June 2017

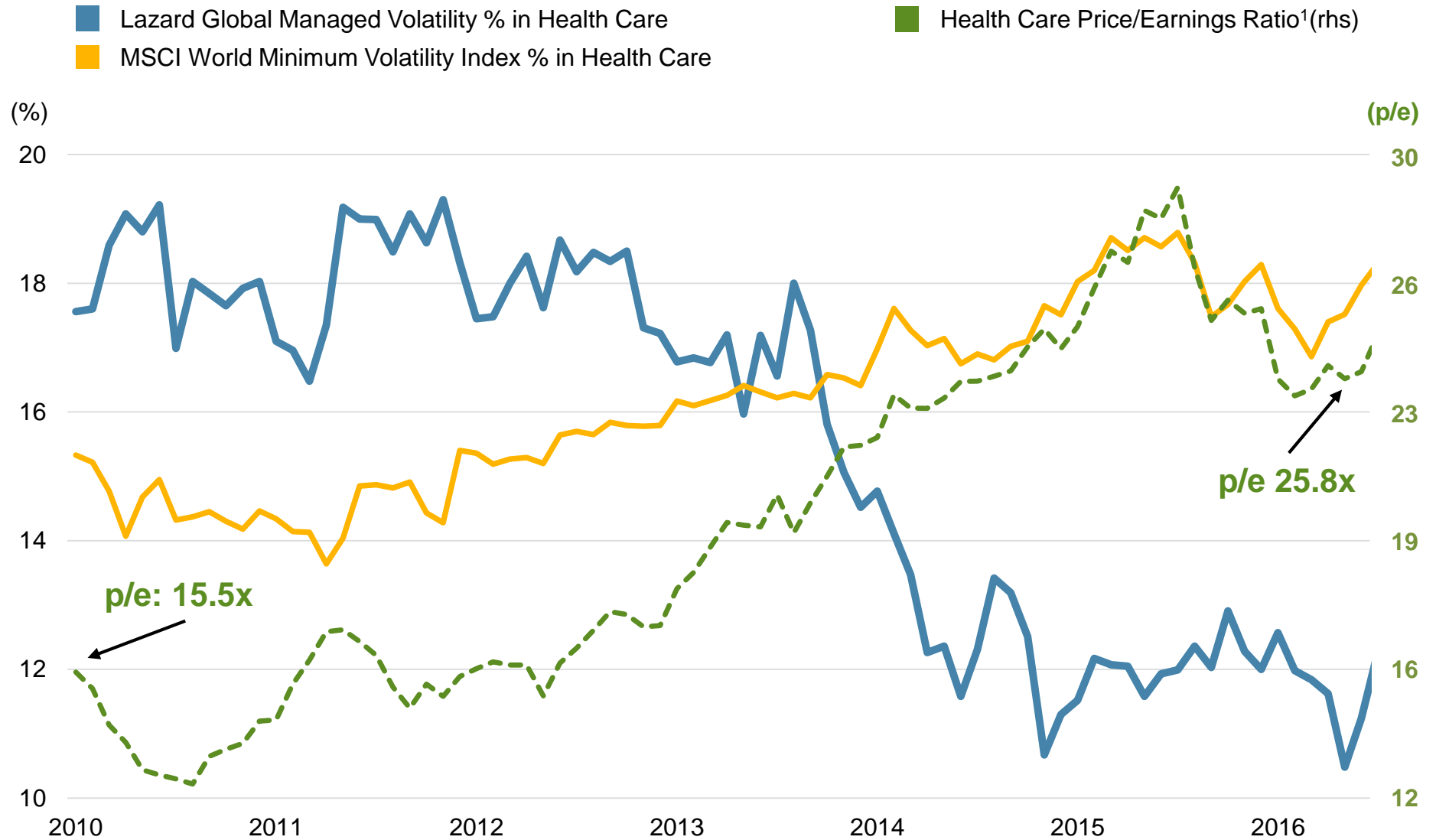
The securities mentioned are not necessarily held by Lazard for all portfolios managed by the Portfolio Management Team, and their mention should not be considered a recommendation or solicitation to purchase or sell these securities. It should not be assumed that any investment in these securities was, or will prove to be, profitable, or that the investment decisions we make in the future will be profitable or equal to the investment performance of securities referenced herein. There is no assurance that any securities referenced above are currently held in the portfolio or that securities sold have not been repurchased. The securities mentioned do not represent the entire portfolio. This information is intended to illustrate the Portfolio Management Team's process for ranking securities. Opinions are subject to change. Subject to manager discretion, the factors rated "attractive" are generally in the top 35% of the investment universe; factors rated "neutral" generally fall within 35-65% of the investment universe; and factors rated "unattractive" generally fall within the bottom 35% of the investment universe.

Low Volatility — A Balanced Approach



The Intersection Of Return Seeking and Risk Management

Low Volatility — A Balanced Approach



As of 30 June 2017

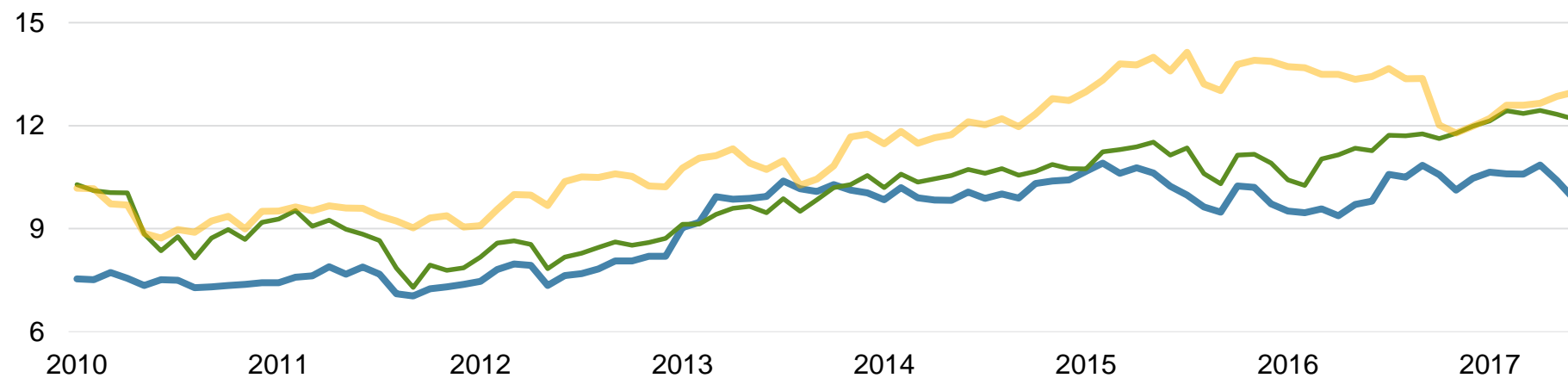
¹ Health Care Price Earnings Multiple calculated from MSCI World Index.

Allocations and investment characteristics are based upon a representative portfolio which represents the proposed investment for a fully discretionary account. Allocations are subject to change.

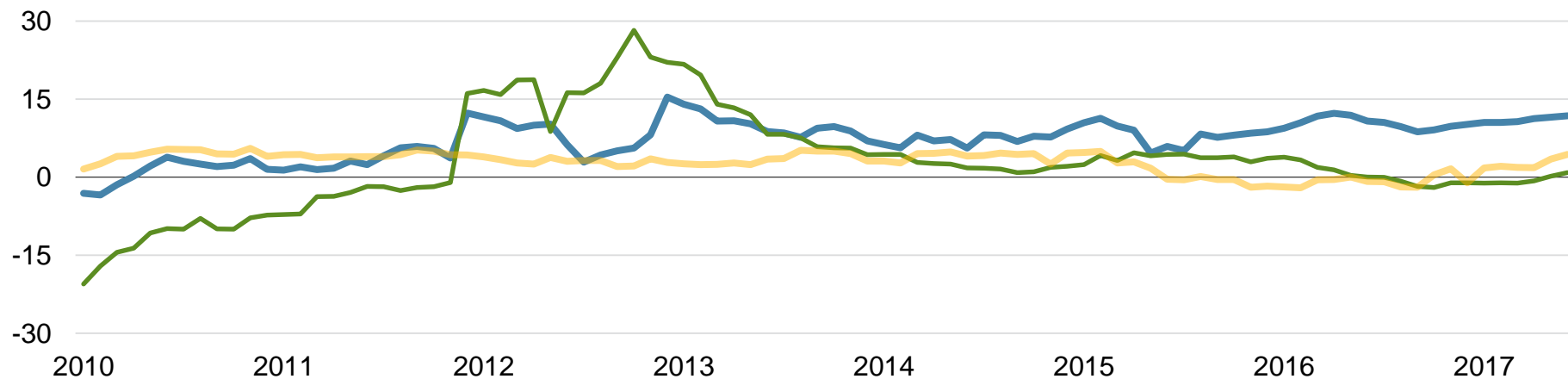
Source: Lazard, MSCI

Low Volatility — A Balanced Approach

Price/Cash Flow



3 Year EPS Growth %



■ Lazard Global Managed Volatility (Unhedged)

■ MSCI World Index

■ MSCI World Minimum Volatility Index

As of 30 June 2017.

Investment characteristics are based upon a portfolio that represents the proposed investment for a fully discretionary account.

The performance quoted represents past performance. Past performance is not a reliable indicator of future results.

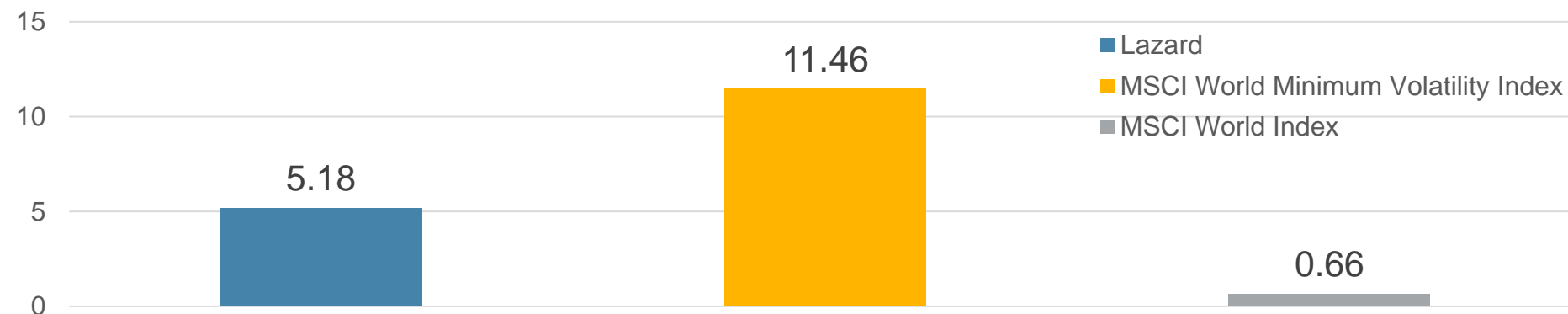
Source: Lazard, MSCI

A Tale of Two Halves

Lazard Global Managed Volatility (Unhedged)

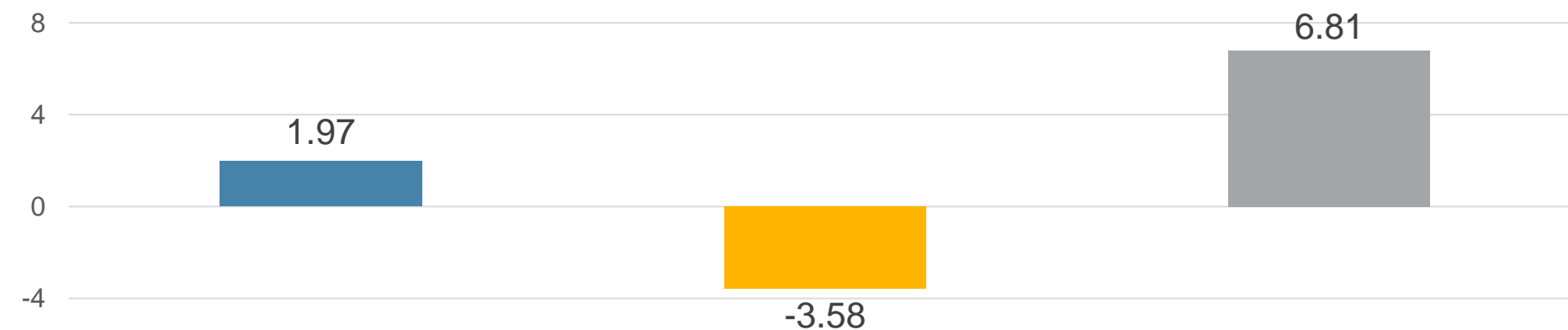
1H 2016

(%)



2H 2016

(%)



Balanced Risk Exposures Provided Smoother Returns in 2016

As of 31 December 2016. Reporting currency: USD

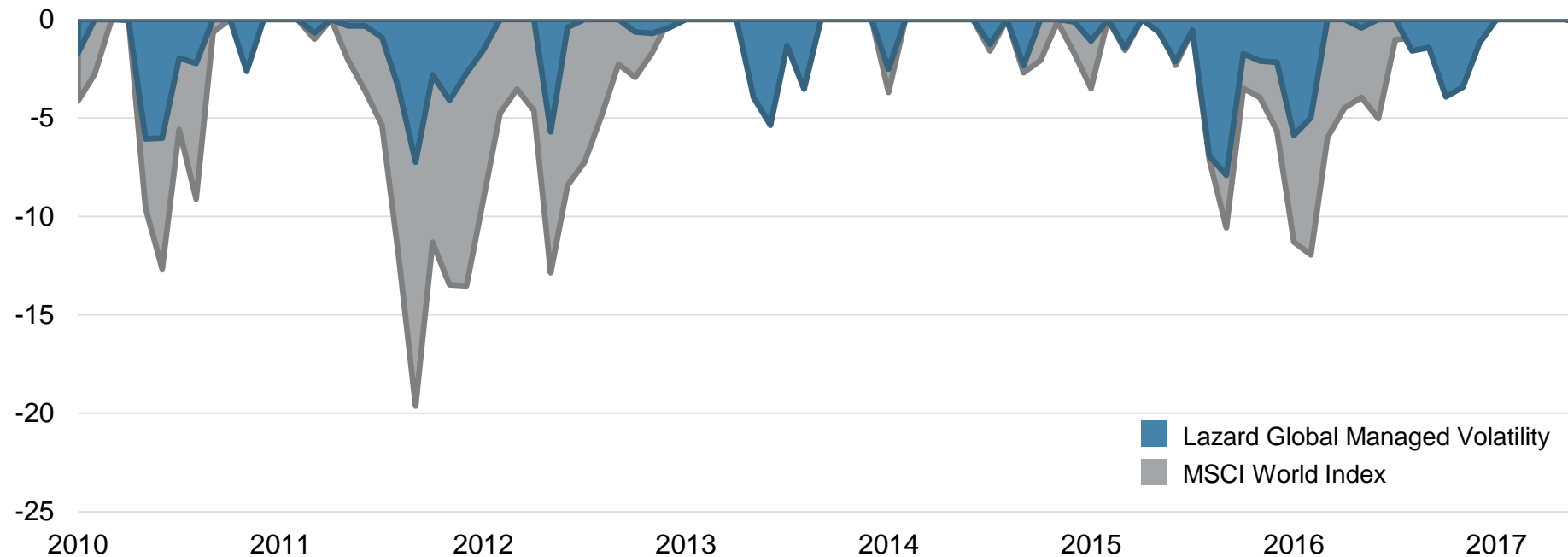
Performance is presented gross of fees. Please refer to "GIPS® Composite Information" for additional information, including net-of-fee results. The performance quoted represents past performance. Past performance is not a reliable indicator of future results.

Source: Lazard, MSCI

Lazard Global Managed Volatility

Absolute Drawdown

% drawdown



	Up Market Capture (%)	Down Market Capture (%)	Sharpe Ratio	Annualized Standard Deviation (%)	Correlation
Lazard Global Managed Volatility (Unhedged)	77.98	49.54	1.17	9.50	0.91
MSCI World Index	100.00	100.00	0.66	13.23	1.00

As of 30 June 2017. Reporting Currency: USD.

Represents the Global Managed Volatility Composite (Unhedged).

Performance is preliminary and presented gross of fees. Please refer to "GIPS® Composite Information" for the most recent final performance and additional information, including net-of-fee results. The performance quoted represents past performance. Past performance is not a reliable indicator of future results.

Source: Lazard, MSCI

Lazard Global Managed Volatility

As of 30 June 2017

(%)	3 Months	YTD	1 Year	Annualized			Standard Deviation	Std Dev Discount	
				3 Years	5 Years	Since Inception			
Global Managed Volatility							1 Jan 2010	5 year	5 year
Lazard Global Managed Volatility (Unhedged)	3.61	10.33	12.50	8.00	12.32	11.38	9.50	28	
MSCI World Index	4.03	10.66	18.20	5.24	11.38	9.06	13.23	—	
							1 Jan 2009	5 year	5 year
Lazard Global Managed Volatility (USD Hedge)	2.70	8.38	13.11	11.14	14.74	11.60	8.00	37	
MSCI World Index (USD Hedged)	2.83	8.54	19.37	8.01	13.19	11.95	12.65	—	
							1 Jul 2015		
Lazard Global Managed Volatility (ACW)	4.29	11.57	11.28	—	—	8.98	—	—	
MSCI ACWI	4.27	11.48	18.78	—	—	6.94	—	—	
Emerging Markets Managed Volatility							1 Oct 2011	Since Inception	Since Inception
Lazard Emerging Markets Managed Volatility	6.75	18.17	17.23	2.19	6.12	8.92	12.20	26	
MSCI Emerging Markets Index	6.27	18.43	23.75	1.07	3.96	4.91	16.42	—	

Reported in USD. Performance is presented gross of fees. Please refer to "GIPS® Composite Information" for the most recent final performance and additional information, including net-of-fee results. The performance quoted represents past performance. Past performance is not a reliable indicator of future results.

Source: Lazard, MSCI

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