

# Smart Beta: Unlocking New Investment Opportunities

Ana Paula Harris  
State Street Global Advisors

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# A Recap of Market Cap

# Market-Cap Weight Indices: Widely Used

Market-Cap weighted indices are a well established approach for capturing market exposures

## Positives

- Easy to understand
- Academic foundations
- Cost
- Widely used benchmark

## Negatives

- Bubble behaviour
- Questionable theoretical assumptions

Source: SSGA

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# Smart Beta in Equities

# What is Smart Beta? An Evolution in Indexing

- Its foundations are **not new**:
  - Academic research
  - Active managers
  - Style indices
- Exposure to **factors** has been shown to provide **better risk-adjusted returns** than broad cap-weighted indices **over the long term**
- Any **objective, consistent, transparent** process for capturing a **defined investment exposure** or factor

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Source: SSGA

## Key Factors in Equities:



**Value** (Low Valuation)



**Quality** (High Quality)



**Volatility** (Low Volatility/Risk)



**Size** (Small Caps)

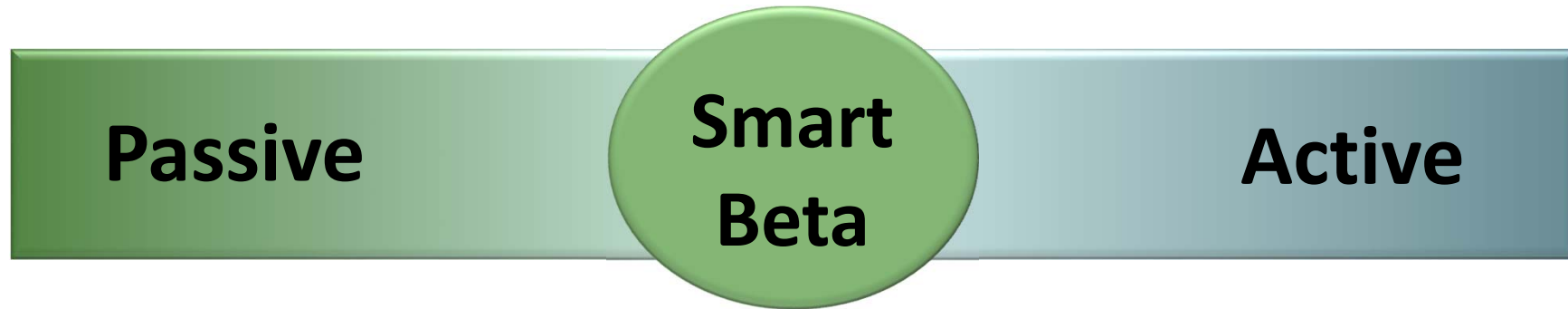


**Momentum** (High Momentum)

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# Smart Beta: The New Sweet Spot between Active and Passive

A sweet spot



Blurring the boundaries  
between active and passive  
investing

Source: SSGA

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# Smart Beta: The New Sweet Spot between Active and Passive

	Passive	Smart Beta	Active
+	<ul style="list-style-type: none"> <li>• Accepted approach</li> <li>• Transparency</li> <li>• Lowest cost</li> <li>• Limited implementation risk</li> </ul>	<ul style="list-style-type: none"> <li>• Transparency</li> <li>• Low cost</li> <li>• Enhance long-term returns</li> <li>• Seeks certainty in outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Accepted approach</li> <li>• Ability to enhance performance/manage risk</li> <li>• Ability to adjust to market environments</li> </ul>
-	<ul style="list-style-type: none"> <li>• Assume market risk</li> <li>• Lack of control</li> <li>• Performance driven by chosen index</li> </ul>	<ul style="list-style-type: none"> <li>• Relative new and unknown</li> <li>• Timing risk</li> <li>• Long-term sustainability of factors</li> </ul>	<ul style="list-style-type: none"> <li>• Performance volatility</li> <li>• Less transparency</li> <li>• Cost</li> <li>• Manager drift</li> </ul>

Source: SSGA

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# Smart Beta: How does it work?

Starting Universe



Investment Methodology

- Set of Rules
- Repeatable
- Transparent
- Investible
- Scalable

Smart Beta Strategy



Sub-set of Names



Sub-set of Names  
Reweighted



Initial  
Universe  
Reweighted

Goal: increase the investment exposure to one or more factors






Source: SSGA

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# Smart Beta: Key Equity Factors

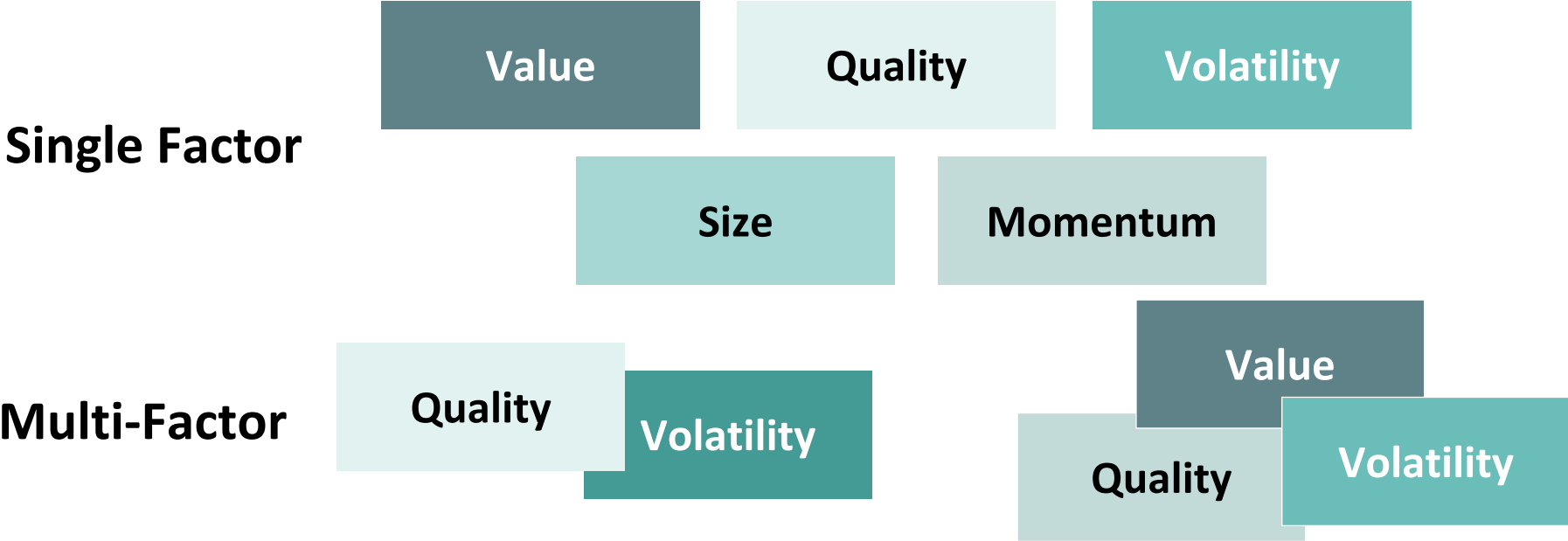
	Factor	SSGA Methodology	Return (%)	Volatility (%)
	Valuation	<b>Price/Fundamental</b> Fundamentals: Earnings, Cash Flow, Sales, Dividend, and Book Value	9.2	16.0
	Quality	<b>(1) Profitability, (2) Earnings Consistency, and (3) Low Leverage</b> ROA, EPS variability, LT Debt/Equity	8.9	14.1
	Volatility	<b>Volatility of Total Return</b> 60-month variance	8.2	13.2
	Size	<b>Market Capitalisation</b> Free float market capitalisation	8.7	15.5
	Momentum	<b>Total Return</b> Trailing 12-month	7.9	14.9
	MSCI World	<b>Market Capitalisation</b> Free float market capitalisation	7.4	15.2

# Smart Beta: How have Factors Behaved in the Past?

		<b>Downturn</b> Positive Economic Growth but Slowing	<b>Recession</b> Negative Economic Growth and Slowing	<b>Recovery</b> Negative Economic Growth but Improving	<b>Boom</b> Positive Economic Growth and Improving
<b>Economic Growth</b>					
<b>Market Cycle</b>					
<b>Value</b>		0	-	++	+
<b>Quality</b>		+	++	-	-
<b>Volatility</b>		+	++	--	-
<b>Size</b>		-	-	+	+
<b>Momentum</b>		0	-	0	+

Source: Russell, SSGA. Example for illustrative purposes only. Past performance is not a guarantee of future results.

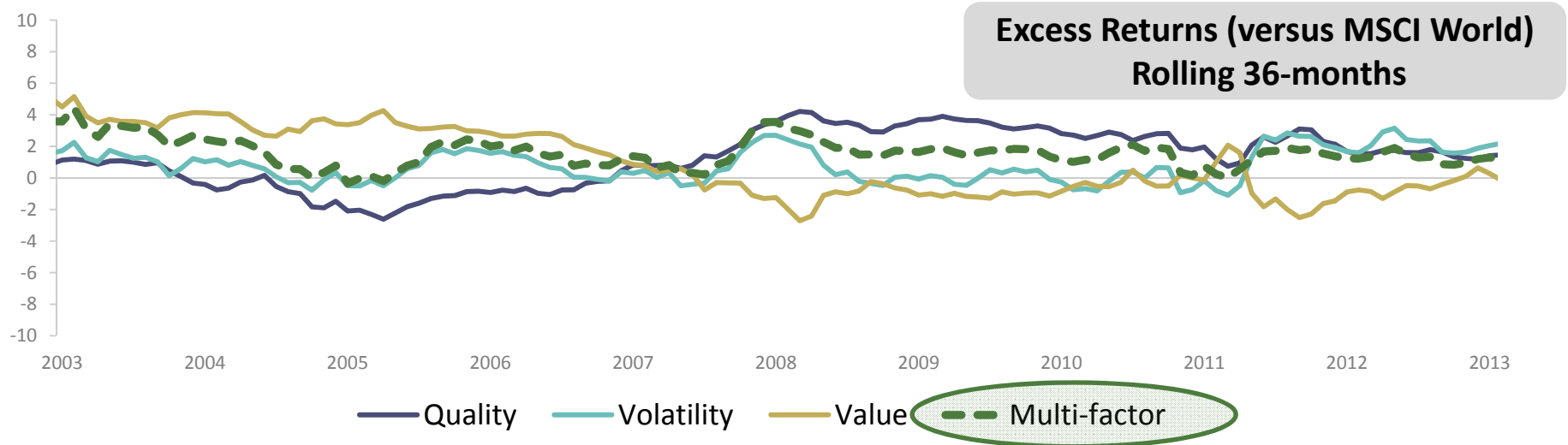
# Single or Multi-factor Approaches



Source: SSGA.  
The information contained above is for illustrative purposes only.  
Value stocks can perform differently from the market as a whole. They can remain undervalued by the market for long periods of time.

# Smart Beta: Single or Multi-factor Approaches?

Using multi-factor approaches as a way to potentially smooth returns



Source: State Street Global Advisors. Data is from 1 January 2003 through 31 December 2013. The data displayed is a hypothetical example of back-tested performance for illustrative purposes only and is not indicative of the past or future performance of any SSGA product. Back-tested performance does not represent the results of actual trading but is achieved by means of the retroactive application of a model designed with the benefit of hindsight. Actual performance results could differ substantially, and there is the potential for loss as well as profit. The performance may not take into account material economic and market factors that would impact the adviser's actual decision-making. The performance does not reflect management fees, transaction costs, and other fees expenses a client would have to pay, which would reduce returns. Please reference Appendix for the model methodology and other important disclosures. SSGA does not yet manage actual assets to this strategy. A complete list of the firm's composites and their descriptions is available upon request. Source: SSGA, FactSet, Axioma. Past performance is not a guarantee of future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income. The calculation method for value added returns may show rounding differences.

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# Implementation Considerations

## Ownership

- Investors must choose which factor(s) resonate with their own investment beliefs

## Limited Live Track Records

- Most strategies rely heavily on backtest

## Tracking Error versus Standard Cap Weighted Strategies

- Tracking error can be high for Smart Beta Strategies

## Transaction Costs: Initial Implementation and Ongoing Rebalances

- Smart Beta Strategies may be more concentrated and/or more exposed to smaller or less liquid names
- Smart Beta Strategies have a higher turnover

# **Incorporating Smart Beta Strategies in a Portfolio**

## **Impact on Performance and Portfolio Characteristics**

# Incorporating Smart Beta Strategies in a Portfolio

<b>Portfolios</b>	<b>Allocation A (%)</b>	<b>Allocation B (%)</b>	<b>Allocation C (%)</b>	<b>Allocation D (%)</b>
MSCI World	<b>100</b>	50	50	34
FTSE RAFI 3000	—	50	—	33
MSCI Minimum Volatility	—	—	50	33
<b>Risk/Return</b>	<b>Allocation A (%)</b>	<b>Allocation B (%)</b>	<b>Allocation C (%)</b>	<b>Allocation D (%)</b>
Annualised Return	<b>4.89</b>	5.01	5.61	5.53
Volatility	<b>17.95</b>	19.34	14.93	16.76
<b>Calendar Year</b>	<b>Allocation A (%)</b>	<b>Allocation B (%)</b>	<b>Allocation C (%)</b>	<b>Allocation D (%)</b>
2014	<b>4.94</b>	3.44	8.11	6.05
2011	<b>-5.54</b>	-7.56	0.94	-2.57
2009	<b>29.99</b>	38.02	23.10	30.75

Source: SSGA, FTSE, MSCI. Period covered: April 2008 – June 2015. Backtested data. The data displayed is a hypothetical example of back-tested performance for illustrative purposes only and is not indicative of the past or future performance of any SSGA product. Back-tested performance does not represent the results of actual trading but is achieved by means of the retroactive application of a model designed with the benefit of hindsight. Actual performance results could differ substantially, and there is the potential for loss as well as profit. The performance may not take into account material economic and market factors that would impact the adviser's actual decision-making. The performance does not reflect management fees, transaction costs, and other fees expenses a client would have to pay, which would reduce returns. Please reference appendix found on page 20 for the model methodology and other important disclosures. Past performance is not a guarantee of future results. Index returns are unmanaged and do not reflect the deduction of any fees or expenses. Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income.

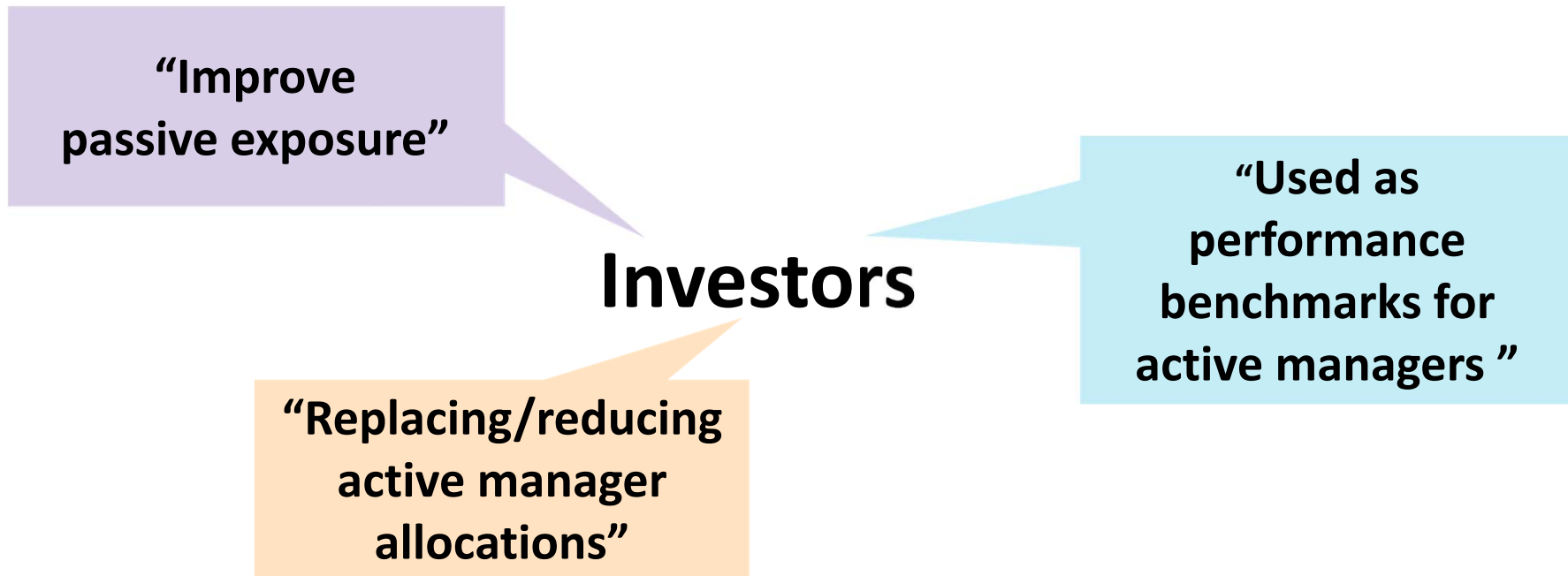
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# Smart Beta: How are Investors using it?



Source: SSGA  
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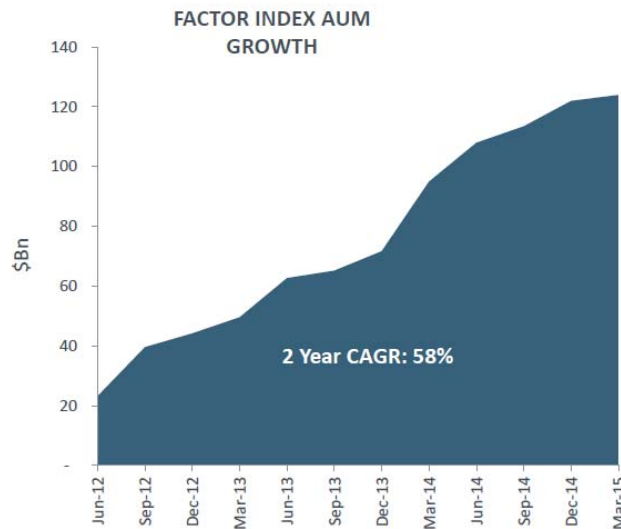
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# Smart Beta: How are Investors using it?

Smart Beta is still a small part of the market but growing steadily

- Over **USD 9.5 trillion** in assets are benchmarked to MSCI indexes
- Around **USD 124 billion** in assets are estimated to be benchmarked to **MSCI Factor Indexes**



Source: MSCI, as of 31 March 2015

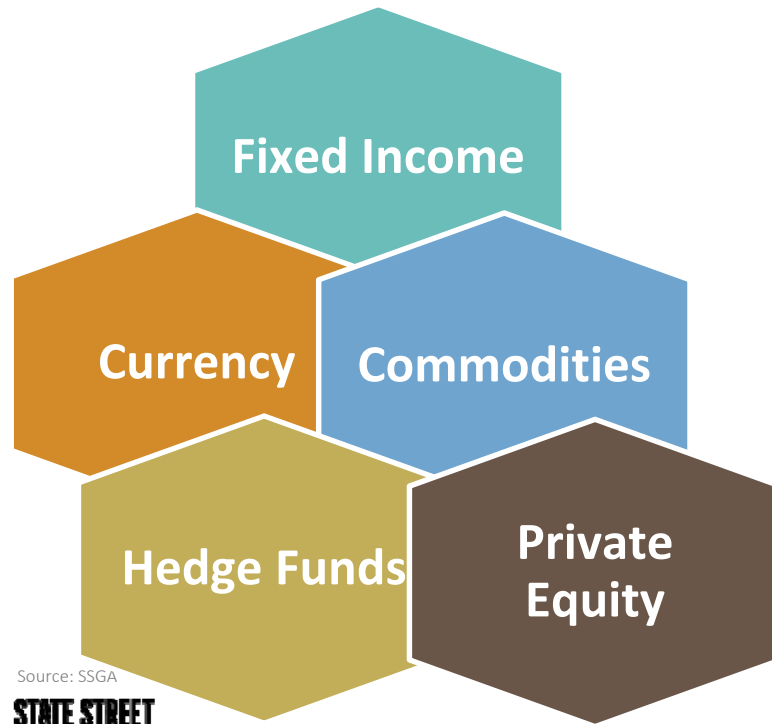


AUM Tracking MSCI Factor Indexes as of March 2015			
(USD billion)	Active	Passive	Total
<b>MSCI Factor Indexes</b>	<b>51.9</b>	<b>72.9</b>	<b>124.8</b>
High Dividend Yield	36.3	6.1	42.4
Minimum Volatility	10.4	41.2	51.6
Equal Weighted	0.0	8.3	8.3
GDP Weighted	2.8	3.5	6.3
Value Weighted	0.0	7.8	7.8
Risk Weighted	2.3	2.4	4.7
Momentum	0.0	1.1	1.1
Quality	0.1	1.9	2.0
Quality Mix	0.0	0.6	0.6

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## Smart Beta: Going Beyond Equities

- Empirical evidence and investor interest for smart beta is going beyond equities



Source: SSGA

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High fees will have to be justified  
Smart beta indices may become  
performance benchmarks  
Innovation will continue

# Appendix A: Important Risk Information and Disclaimers

# Important Risk Information and Disclaimers

Pre-Inception Index Performance shown on slide 9 & 15 is Back-Tested. Performance prior to the date of index inception, MSCI World Index: 31 March 1986, MSCI Value-Weighted Index: 07 December 2010, MSCI Minimum Volatility Index: 14 April 2008, MSCI Equally Weighted Index: 22 January 2008, MSCI Quality Index: 18 December 2012 and MSCI Momentum Index: 11 December 2013 is hypothetical. Market indices are unmanaged and are not subject to fees and expenses which could lower returns. Index performance is not intended to represent the performance of any particular exchange-traded fund or product managed by SSGA Funds Management, Inc. Actual performance may differ substantially from the back-tested performance presented, as the performance was calculated with the benefit of hindsight, cannot account for all financial risk that may affect the actual performance, and is not a guarantee of future results. SSGA compensated [3rd Party Index] for the calculations noted herein. The rule set of the index is available upon request or can be viewed at this link: (<https://www.msci.com/end-of-day-data-search>). The Back-Tested Pre-Inception Index Performance data is reported on a gross of fees basis. You cannot invest directly in an index. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

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Actively managed funds do not seek to replicate the performance of a specified index.

The fund is actively managed and may underperform its benchmarks. An investment in the Fund is not appropriate for all investors and is not intended to be a complete investment program. Investing in the Fund involves risks, including the risk that investors may receive little or no return on the investment or that investors may lose part or even all of the investment.

The views expressed in this material are the views of Global Equity Beta Solutions through the period ended as of 30 September 2015 and are subject to change based on market and other conditions. This document contains certain statements that may be deemed forward-looking statements. Please note that any such statements are not guarantees of any future performance and actual results or developments may differ materially from those projected.

Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise, bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

Investing in high yield fixed income securities, otherwise known as junk bonds, is considered speculative and involves greater risk of loss of principal and interest than investing in investment grade fixed income securities. These Lower-quality debt securities involve greater risk of default or price changes due to potential changes in the credit quality of the issuer.

Investing in commodities entail significant risk and is not appropriate for all investors. Commodities investing entail significant risk as commodity prices can be extremely volatile due to wide range of factors. A few such factors include overall market movements, real or perceived inflationary trends, commodity index volatility, international, economic and political changes, change in interest and currency exchange rates.

All the index performance results referred to are provided exclusively for comparison purposes only. It should not be assumed that they represent the performance of any particular investment.

Investing in foreign domiciled securities may involve risk of capital loss from unfavorable fluctuation in currency values, withholding taxes, from differences in generally accepted accounting principles or from economic or political instability in other nations.



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Risk associated with equity investing include stock values which may fluctuate in response to the activities of individual companies and general market and economic conditions.

Hedge funds are typically unregulated private investment pools made available to only sophisticated investors who are able to bear the risk of the loss of their entire investment. An investment in a hedge fund should be viewed as illiquid and interests in hedge funds are generally not readily marketable and are generally not transferable. Investors should be prepared to bear the financial risks of an investment in a hedge fund for an indefinite period of time. An investment in a hedge fund is not intended to be a complete investment program, but rather is intended for investment as part of a diversified investment portfolio

Investments in small-sized companies may involve greater risks than in those of larger, better known companies.

Companies with large market capitalizations go in and out of favor based on market and economic conditions. Larger companies tend to be less volatile than companies with smaller market capitalizations. In exchange for this potentially lower risk, the value of the security may not rise as much as companies with smaller market capitalizations.

The Fund employs a value style of investing that emphasizes undervalued companies with characteristics for improved valuations, which may never improve and may actually have lower returns than other styles of investing or the overall stock market.

Investing involves risk including the risk of loss of principal.

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