BLACKROCK®

Smart Beta: The Essentials

Muhammad Masood, CFA
iShares Product Research

October 2015

EMEAiS-1289

Contents page

Introduction to Smart Beta

What is Smart Beta?

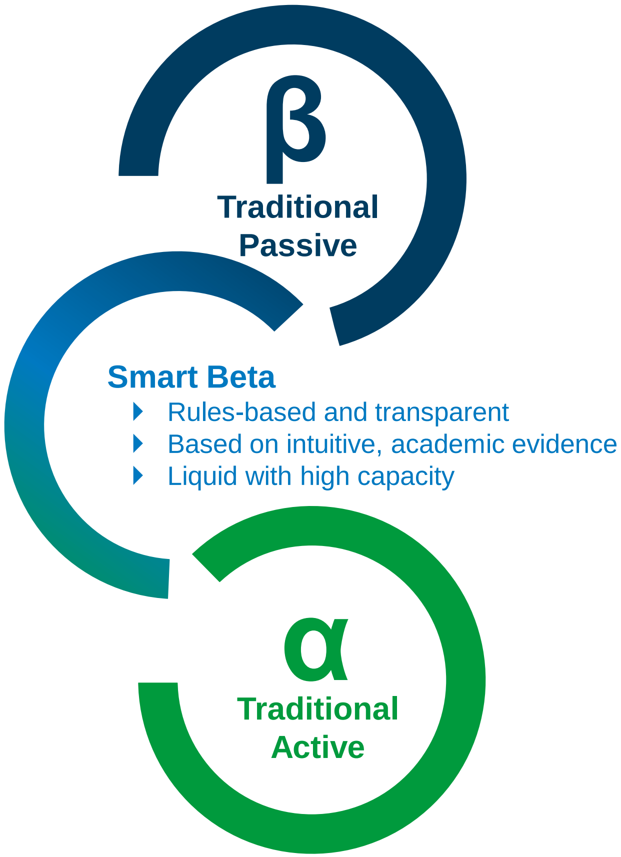
- A transparent and rules-based style of investing that seeks to capture rewarded investment factors
- Typically lower cost and higher capacity compared to traditional active management

How does Smart Beta work?

- Rewrites index rules to isolate or combine factors to create deliberate, diversified outcomes that traditional index investing cannot achieve

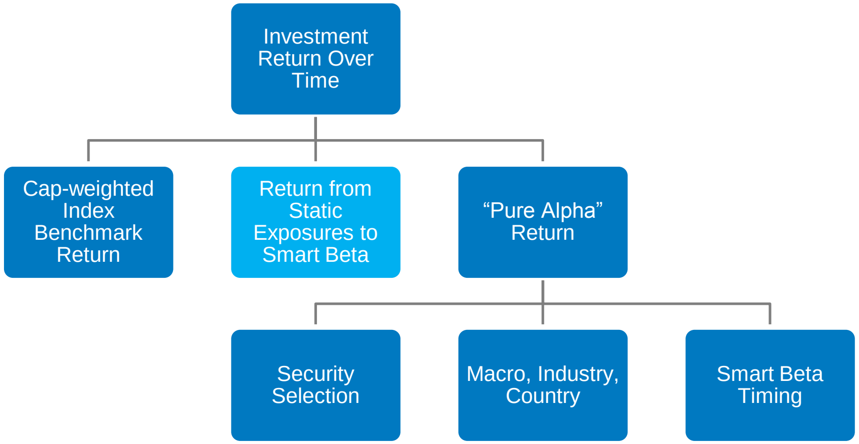
Why invest in Smart Beta?

- To deliver exposure to ideas that drive investment performance
- To achieve a desired outcome, such as:
  - Enhance returns
  - Reduce unwanted risks
  - Improve diversification along factor dimensions



Smart Beta factors are already part of traditional active management

Investment Return Composition

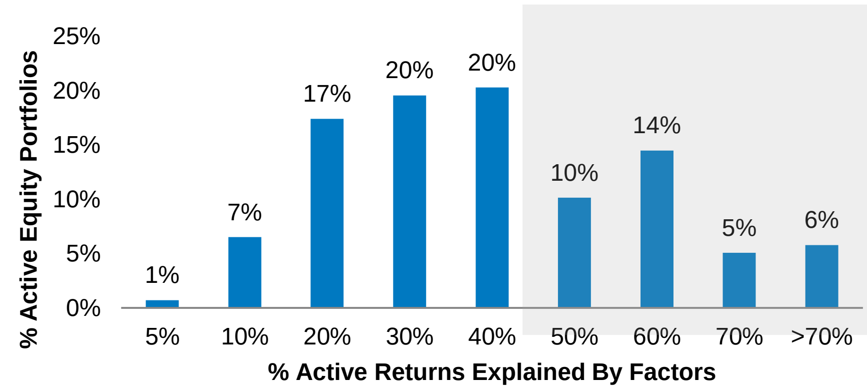


Smart Beta accounts for a significant portion of active risk budgets

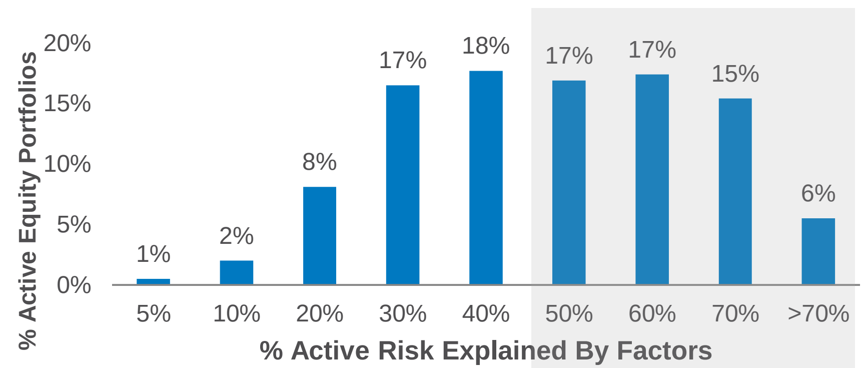
- On average, for 35% of active strategies, more than half of active risk was explained by factors
- In a multi-manager analysis (random selection of 10), 55% of aggregate portfolios had half of their active risk explained by factors, since smart beta returns are correlated across funds while pure alpha returns are not

% of Active Risk Budget in Smart Beta
*Study of 138 Global Equity Funds**

Single Fund Analysis



10 Fund Analysis



Source: BlackRock, eVestment 4/11 to 3/14. Global Equity data includes all 138 actively global equity strategies included in the eVestment database. See the BlackRock manuscript "Smart Decisions about Smart Beta", by Kahn and Lemmon, September 2014. Four Smart Beta Factors were Market, Size, Value, and Momentum.
*This represents all global equity funds that are tracked in eVestment from 4/11 to 3/14

Equity Smart Beta: Factors

What are factors and what makes a good Smart Beta factor?

Factors are characteristics relating to securities that are important in explaining their risks and returns

BlackRock's philosophy in identifying Smart Beta factors and building strategies is based upon four distinct guiding principles:

Value Creation

Does the factor generate positive expected returns over the long term?

Economic Intuition

Is the factor based upon strong economic intuition and academic evidence?	Is the theory backed by strong empirical evidence?

Diversification

Does the factor have a low correlation with core asset classes?	Does the factor have a low correlation with other Smart Beta factors?

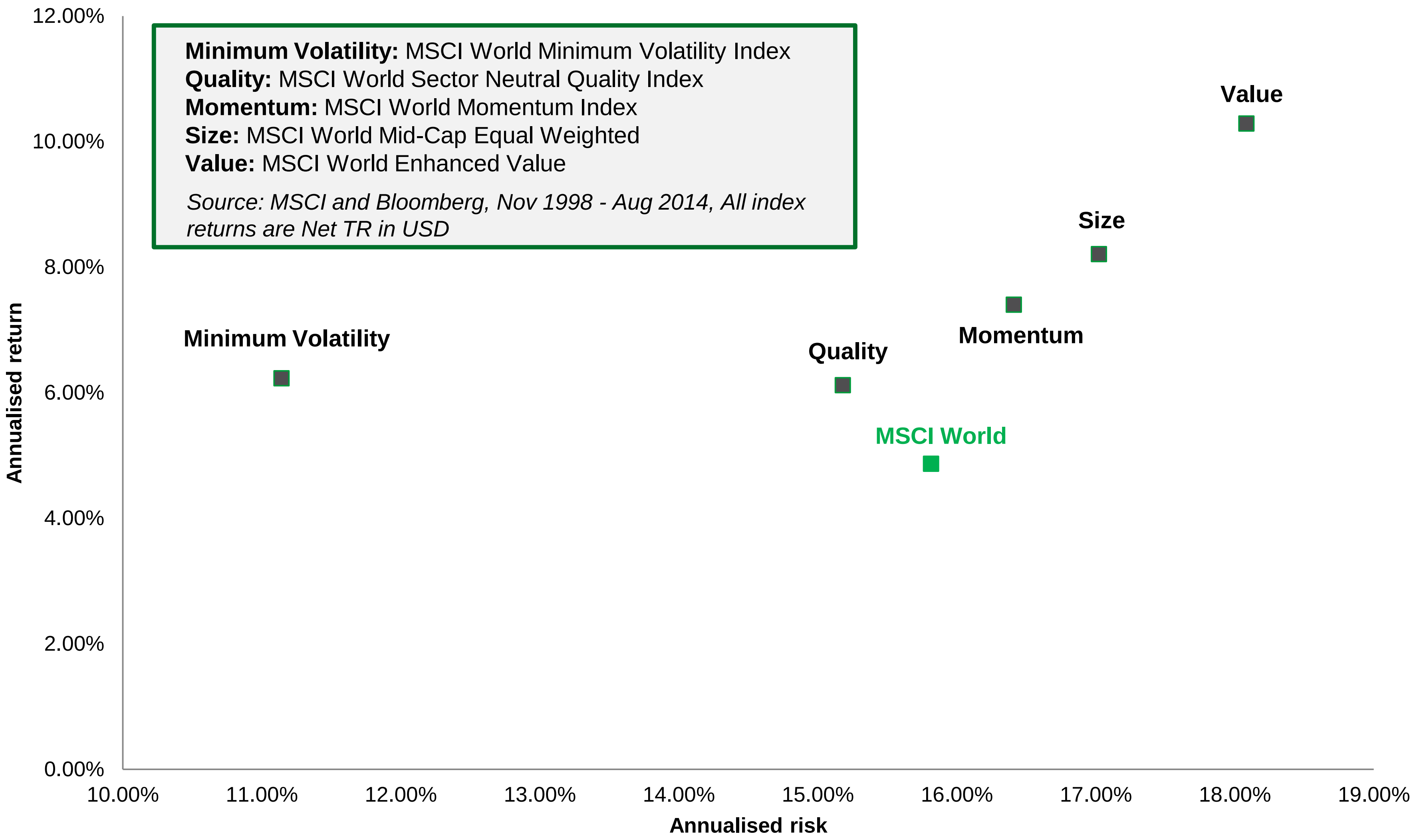
Efficient Implementation

Can the factor be efficiently captured in a transparent and rules based manner?	Can the factor be implemented with reasonable trading costs and a high degree of capacity?

Well known equity factors

	Description	Common descriptors
Value	Provide exposure to undervalued stocks based on their fundamentals	Book to price, earnings to price, sales, earnings, dividend yield etc.
Quality	Provide exposure to companies with strong balance sheets and stable earnings	ROE, earnings stability, dividend growth stability, strength of balance sheet, financial leverage, etc.
Momentum	Provide exposure to stocks that have had strong historic relative performance	Relative returns in the last 6 to 12 months, often excluding the last one month, historical alpha, etc.
Size	Provide exposure to smaller capitalisation stocks	Market capitalisation, total assets etc.
Volatility	Captures returns to stocks with lower than average volatility, beta and/or idiosyncratic risk	Standard deviation, downside standard deviation, standard deviation of idiosyncratic return, beta etc.

Risk and return profile of factor indices



Explaining factor returns and their persistence

Systematic risk

- Factors earn excess returns because there is additional risk associated with them
- Systematic refers to the fact that these risks cannot be diversified
- Consistent with “efficient markets theory”

Behavioural biases / Investor constraints

- Investors exhibit behavioural biases (emotional or cognitive)
- If enough investors exhibit these biases and it is difficult to arbitrage, then the anomalies exist
- Certain constraints (such as long-only portfolios) can lead to anomalies

Some considerations in capturing equity factors

General considerations: how strong is the exposure to the desired factor? Does the strategy skew towards some other drivers of risk/return (country, sector, other factors)? What is the liquidity, turnover and capacity of the strategy?

Factors	Risks to consider	Addressing these risks
Value	▸ Exposure to high leverage ▸ Persistent sector biases ▸ Value trap	▸ Take into account debt issued ▸ Sector constraints ▸ Use diversified signals including forward looking measures
Size	▸ Liquidity and capacity	▸ Consider mid-cap exposure instead of small-cap
Quality	▸ Persistent sector biases	▸ Sector constraints
Momentum	▸ Market reversal ▸ Turnover	▸ Adjust momentum scores for volatility ▸ Rebalancing frequency
Low volatility	▸ Concentration risk	▸ Constraints to diversify across sectors/countries

BLACKROCK®