



Performance and Risk Report

**SciBeta Developed ex USA  
Multi-Beta Multi-Strategy  
Four-Factor EW**

# Overview

## Index Characteristics

### Universe - Developed ex-USA

The Developed ex-USA universe consists of equities from Developed countries excluding the United States of America.

### Selection - Multi-Beta (EW) Stock Selection

Multi-Beta stock selection is a form of multi-factor allocation that consists of selecting stocks from the underlying equity universe that correspond to one of the chosen risk factors.

### Weighting - Diversified Multistrategy

In the Diversified Multistrategy weighting scheme, five Scientific Beta strategies are combined in order to diversify away individual strategies' specific risks and to mix strategies with different sensitivities to market conditions.

### Risk Control - No Relative Risk Control

No Relative Risk Control indicates that the strategy does not control the relative risk resulting from a stock selection and weighting scheme decision with regard to the cap-weighted reference index.

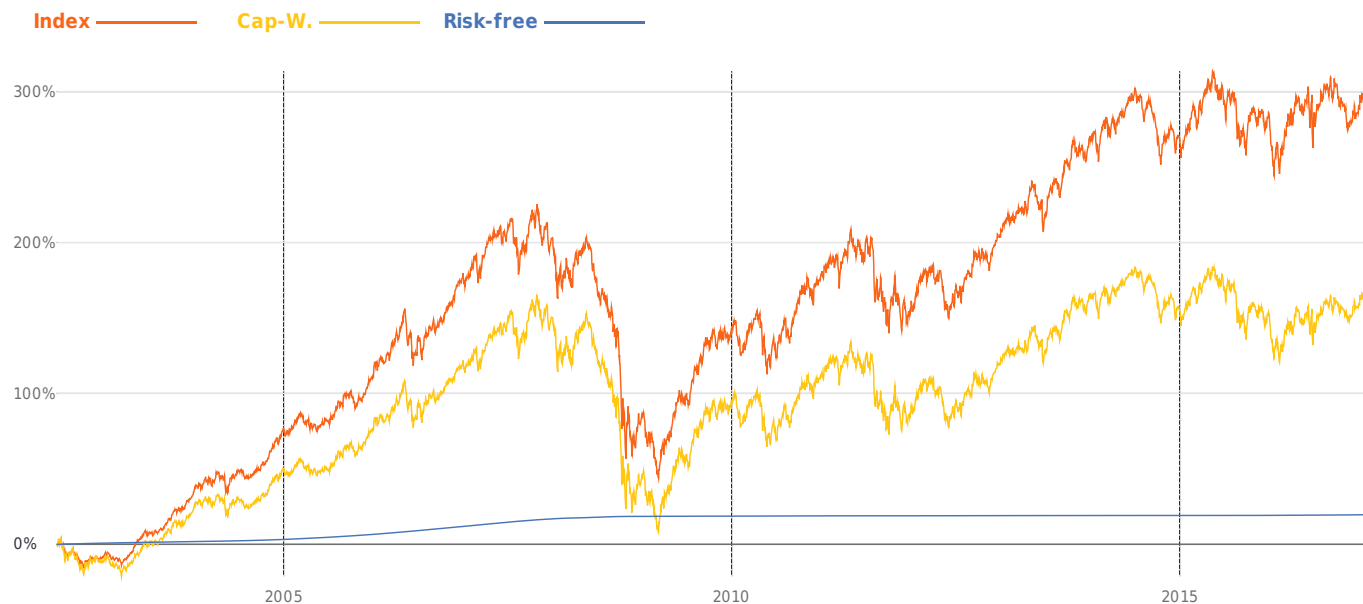
## Index Description as of 16-Dec-2016

The table summarises the index construction principles.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Index
Currency	USD
Number of Constituents	1 043
Cap Coverage (Global Universe)	34.8 %
Regional Universe	Dev ex-USA
Stock Selection	MBeta-4F-EW
Weighting Scheme	Div MStrat
Risk Control	None
TO Control	n/a
Inception Date	21-Jun-2002
Live Date	20-Dec-2013
Broad CW	SciBeta Dev ex-US CW

*Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.*

## Total Return Index inUSD



# Latest Performances

Latest Performances refers to basic risk and return information for the most recent part of the strategy's history.

## Latest Performances as of 13-Feb-2017

The first table shows the index's absolute returns over recent short time periods. The next table reports the index's return, volatility and associated Sharpe ratio since the live date of the index. The last table reports the index's return, volatility and associated Sharpe ratio since inception of the index. For periods longer than a year, the statistics are annualised, whereas the short-term statistics are calculated based on the period examined without annualisation. The corresponding statistics (calculated over the same dates) of the Broad cap-weighted reference index (Broad CW) are also reported, along with those of the Beta cap-weighted reference index (Beta CW) in case of univariate stock selection.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Broad CW
1-Day Return	0.33 %	0.43 %
1-Week Return	1.20 %	1.21 %
1-Month Return	1.90 %	1.36 %
1-Quarter Return	6.69 %	7.21 %
Year-to-Date Return	4.08 %	4.12 %

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated at 13-Feb-2017 and updated daily.

Live	Index	Broad CW
Return	3.80 %	1.25 %
Volatility	12.03 %	13.26 %
Sharpe ratio	0.30	0.08

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated at 13-Feb-2017 and updated daily. Performances are annualised for periods longer than a year. Live date is 20-Dec-2013.

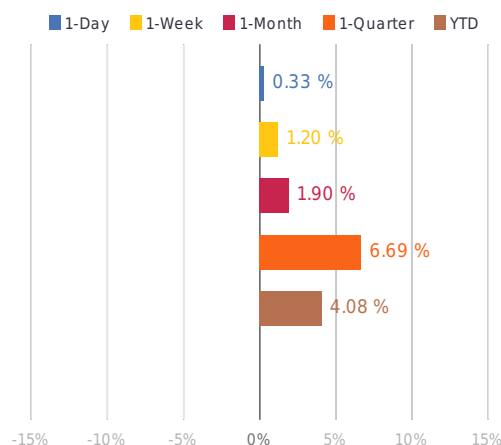
Since inception	Index	Broad CW
Return	10.00 %	6.98 %
Volatility	15.38 %	17.75 %
Sharpe ratio	0.57	0.32

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated at 13-Feb-2017 and updated daily. Performances are annualised for periods longer than a year. Inception date is 21-Jun-2002.

The statistics are based on daily total returns (with dividends reinvested). The short-term returns are calculated based on the period examined and are not annualised. On periods longer than a year, the statistics are annualised. The risk-free rates used to calculate the historical Sharpe Ratio are defined according to the regional universe of the index. In case of univariate stock selection, the Beta cap-weighted reference index (Beta CW) is the cap-weighted index whose index constituents are drawn from the same stock selection as that of the Scientific Beta index being analysed. The Broad cap-weighted reference index (Broad CW) is the cap-weighted index whose index constituents cover all stocks in the geographical region of the Scientific Beta index being analysed.

## Latest Returns as of 13-Feb-2017

The figure displays the index's absolute returns over recent short time periods.



# Latest Relative Performances

Latest Performances refers to basic risk and return information for the most recent part of the strategy's history.

## Latest Relative Performances as of 13-Feb-2017

The first table shows the index's relative returns with regard to its Broad cap-weighted reference index (Broad CW) over recent short time periods, and to its Beta cap-weighted reference index (Beta CW) in case of univariate stock selection. The next table reports the relative return, tracking error, and associated Information Ratio since the live date of the index. The last table reports the relative return, tracking error, and associated Information Ratio since inception of the index. For periods longer than a year, the statistics are annualised, whereas the short-term statistics are calculated based on the period examined without annualisation.

SciBeta Dev ex-US MBeta MStrat 4F-EW	/ Broad CW
1-Day Relative Return	-0.11 %
1-Week Relative Return	-0.01 %
1-Month Relative Return	0.54 %
1-Quarter Relative Return	-0.52 %
Year-to-Date Relative Return	-0.04 %

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated at 13-Feb-2017 and updated daily.

Live	/ Broad CW
Relative Return	2.54 %
Tracking-Error	2.91 %
Information ratio	0.87

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated at 13-Feb-2017 and updated daily. Performances are annualised for periods longer than a year. Live date is 20-Dec-2013.

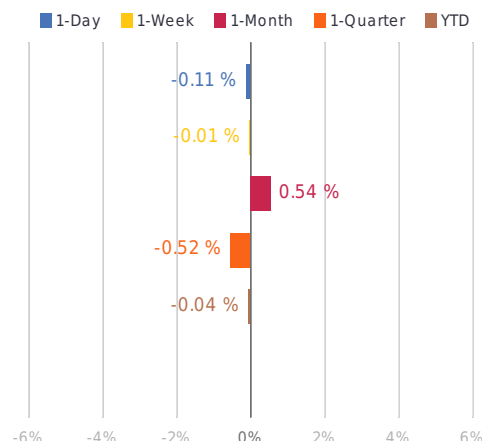
Since inception	/ Broad CW
Relative Return	3.01 %
Tracking-Error	4.11 %
Information ratio	0.73

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated at 13-Feb-2017 and updated daily. Performances are annualised for periods longer than a year. Inception date is 21-Jun-2002.

The statistics are based on daily total returns (with dividends reinvested). The short-term relative returns are calculated based on the period examined and are not annualised. On periods longer than a year, the statistics are annualised. In case of univariate stock selection, the Beta cap-weighted reference index (Beta CW) is the cap-weighted index whose constituents are drawn from the same stock selection as that of the Scientific Beta index being analysed. The Broad cap-weighted reference index (Broad CW) is the cap-weighted index whose index constituents cover all stocks in the geographical region of the Scientific Beta index being analysed.

## Latest Relative Returns as of 13-Feb-2017

The figure displays the index's relative returns with regard to its Broad cap-weighted reference index (Broad CW) over recent short time periods.



# Annual Performances

Annual Performances refers to calendar year returns.

## Annual Returns as of 13-Feb-2017

The table shows the index's annual returns over the last 10 calendar years. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported, along with those of the Beta cap-weighted reference index (Beta CW) in case of unvaried stock selection.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Broad CW
Year 2017 (YTD)	4.08 %	4.12 %
Year 2016	1.55 %	2.81 %
Year 2015	3.97 %	-1.38 %
Year 2014	-0.34 %	-4.04 %
Year 2013	21.98 %	21.47 %
Year 2012	18.55 %	16.99 %
Year 2011	-8.30 %	-11.83 %
Year 2010	16.42 %	10.36 %
Year 2009	30.57 %	34.15 %
Year 2008	-39.37 %	-42.69 %

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated at 13-Feb-2017 and updated daily.

The returns are calculated based on daily total returns (with dividends reinvested). The return of the current calendar year is the year-to-date return without annualisation. In case of unvaried stock selection, the Beta cap-weighted reference index (Beta CW) is the cap-weighted index whose index constituents are the same as the Scientific Beta index being analysed. The Broad cap-weighted reference index (Broad CW) is the cap-weighted index whose index constituents cover all stocks in the geographical region of the Scientific Beta index being analysed.

## Annual Relative Returns as of 13-Feb-2017

The table shows the index's annual relative returns with regard to its Broad cap-weighted reference index (Broad CW) over the last 10 calendar years, and to its Beta cap-weighted reference index (Beta CW) in case of unvaried stock selection.

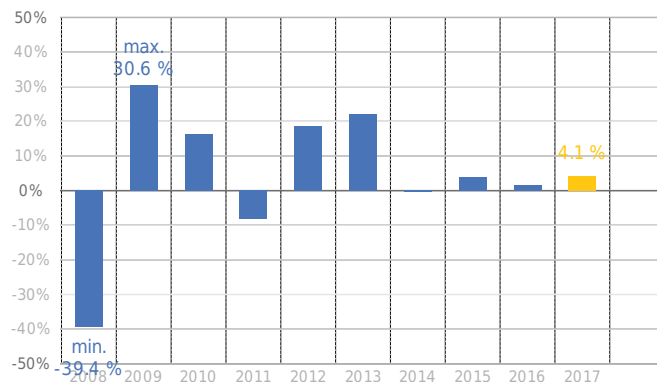
SciBeta Dev ex-US MBeta MStrat 4F-EW	/ Broad CW
Year 2017 (YTD)	-0.04 %
Year 2016	-1.26 %
Year 2015	5.35 %
Year 2014	3.71 %
Year 2013	0.51 %
Year 2012	1.56 %
Year 2011	3.53 %
Year 2010	6.06 %
Year 2009	-3.58 %
Year 2008	3.32 %

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated at 13-Feb-2017 and updated daily.

The relative returns are calculated based on daily total index returns (with dividends reinvested). The return of the current calendar year is the year-to-date return without annualisation.

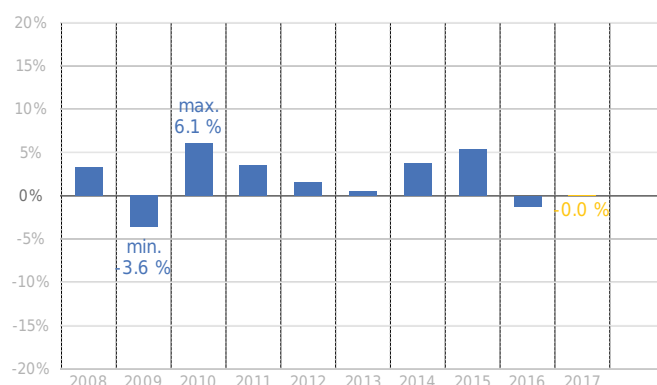
## Annual Returns as of 13-Feb-2017

The figure displays the index's annual returns over the last 10 calendar years.



## Annual Relative Returns as of 13-Feb-2017

The figure displays the index's annual relative returns with regard to its Broad cap-weighted reference index (Broad CW) over the last 10 calendar years.



# Performance Analysis

Performance and Risk Characteristics of equity portfolios allow for the analysis of the reward, the amount of risk and the reward per unit of risk obtained by investors. These characteristics can be calculated in absolute terms, or in relative terms (i.e. in terms of the difference in risks and returns against a cap-weighted reference index).

## Performance and Risk Characteristics as of 31-Jan-2017

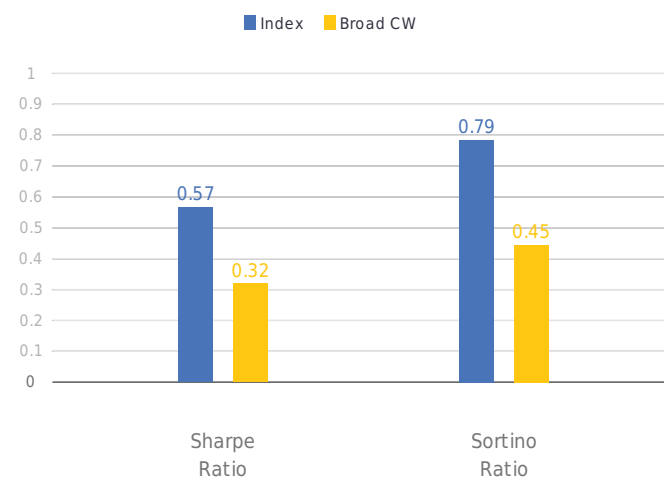
The table shows summary statistics of the index's absolute performance and risk over the selected analysis period. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported, along with those of the Beta cap-weighted reference index (Beta CW) in case of univariate stock selection.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Broad CW
Return	9.94 %	6.92 %
Volatility	15.40 %	17.77 %
Sharpe ratio	0.57	0.32
Sortino ratio	0.79	0.45
Max Drawdown	55.8 %	59.2 %

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values. Performances are annualised for periods longer than a year.

## Performance and Risk Characteristics as of 31-Jan-2017

The figure shows the index's Sharpe Ratio and Sortino Ratio over the selected analysis period. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported.



The statistics are based on daily total returns (with dividends reinvested). On periods longer than a year, statistics are annualised. The risk-free rates used are defined according to the regional universe of the index. In case of univariate stock selection, the Beta cap-weighted reference index (Beta CW) is the cap-weighted index whose constituents are drawn from the same stock selection as that of the Scientific Beta index being analysed. The Broad cap-weighted reference index (Broad CW) is the cap-weighted index whose constituents cover all stocks in the geographic region of the Scientific Beta index being analysed.

## Relative Performance and Risk as of 31-Jan-2017

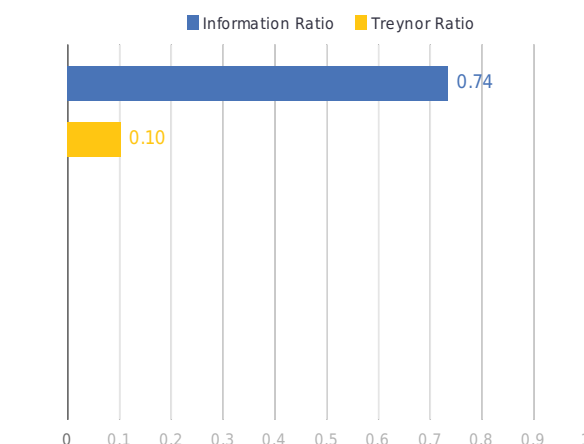
The table shows summary statistics of the index's relative performance and relative risk with regard to its Broad cap-weighted reference index (Broad CW) over the selected analysis period, along with those to its Beta cap-weighted reference index (Beta CW) in case of univariate stock selection.

SciBeta Dev ex-US MBeta MStrat 4F-EW	/ Broad CW
Relative Return Over CW	3.02 %
Tracking-Error	4.11 %
Information Ratio	0.74
Treynor Ratio	0.10
Max Relative Drawdown	8.0 %

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values. Performances are annualised for periods longer than a year.

## Relative Performance and Risk as of 31-Jan-2017

The figure shows the index's Information Ratio and Treynor Ratio with regard to its Broad cap-weighted reference index (Broad CW) respectively over the selected analysis period.



The statistics are based on daily total returns (with dividends reinvested). On periods longer than a year, statistics are annualised.

# Risk Analysis

Performance and Risk Characteristics of equity portfolios allow for the analysis of the reward, the amount of risk and the reward per unit of risk obtained by investors.

## Risk Analysis as of 31-Jan-2017

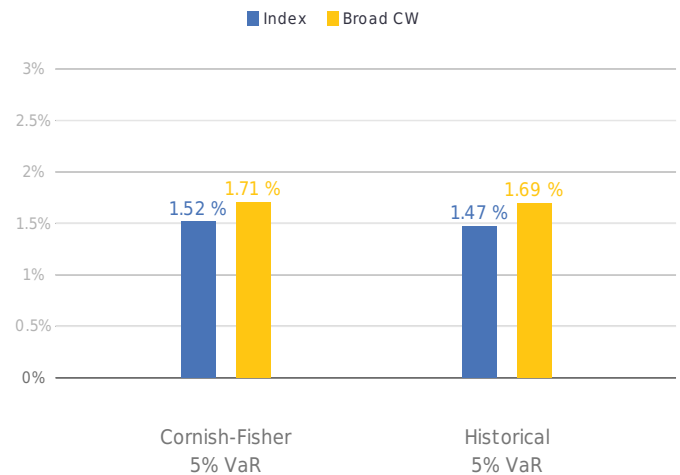
The table shows summary statistics of the index's absolute performance and risk over the selected analysis period. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Broad CW
Cornish-Fisher 5% VaR	1.52 %	1.71 %
Historical 5% VaR	1.47 %	1.69 %
Max Drawdown	55.8 %	59.2 %
Time Under Water	1 421	1 608

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values.

## Risk Analysis as of 31-Jan-2017

The figure shows the index's Cornish-Fisher Value-at-Risk and Historical Value-at-Risk over the selected analysis period. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported.



The statistics are based on daily total returns (with dividends reinvested). All statistics are annualised and performance ratios that involve the average returns are based on the geometric average, which reliably reflects multiple holding period returns for investors. The risk-free rates used are defined according to the regional universe of the index. The Broad cap-weighted reference index (Broad CW) is the cap-weighted index whose index constituents cover all stocks in the geographic region of the Scientific Beta index being analysed.

## Relative Risk Analysis as of 31-Jan-2017

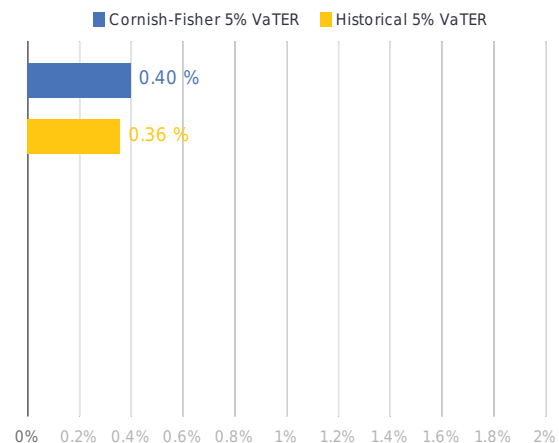
The table shows summary statistics of the index's relative performance and relative risk with regard to its Broad cap-weighted reference index (Broad CW) over the selected analysis period.

SciBeta Dev ex-US MBeta MStrat 4F-EW	/ Broad CW
Cornish-Fisher 5% VaTER	0.40 %
Historical 5% VaTER	0.36 %
Max Relative Drawdown	8.0 %
Rel. Time Under Water	570
Extreme Relative Return (5%)	-3.48 %
Extreme Tracking-Error (95%)	7.45 %
Average Tracking-Error	3.38 %

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values.

## Relative Risk Analysis as of 31-Jan-2017

The figure shows the index's Cornish-Fisher Value-at-Tracking Error and Historical Value-at-Tracking Error with regard to its Broad cap-weighted reference index (Broad CW) over the selected analysis period.



The statistics are based on daily total returns (with dividends reinvested). All statistics are annualised and performance ratios that involve the average returns are based on the geometric average, which reliably reflects multiple holding period returns for investors. The risk-free rates used are defined according to the regional universe of the index. The Broad cap-weighted reference index (Broad CW) is the cap-weighted index whose constituents cover all stocks in the geographic region of the Scientific Beta index being analysed.

# Robustness Analysis

Alternative weighting schemes may expose an investor to a risk of underperforming respective cap-weighted reference indices over short investment horizons. Moreover, it seems reasonable to assume that certain market conditions may influence the capacity of a given weighting scheme to provide outperformance over the cap-weighted reference index. The Scientific Beta robustness analysis provides insights on the conditions of outperformance or underperformance of Scientific Beta indices with regard to their cap-weighted reference index.

## Robustness Analysis as of 31-Jan-2017

The table shows summary statistics of the index's relative performance and relative risk (with respect to its cap-weighted reference index) as well as the 1Y, 3Y and 5Y Probabilities of Outperformance, over the last 10 years, and for the corresponding US Long-Term, over the last 40 years.

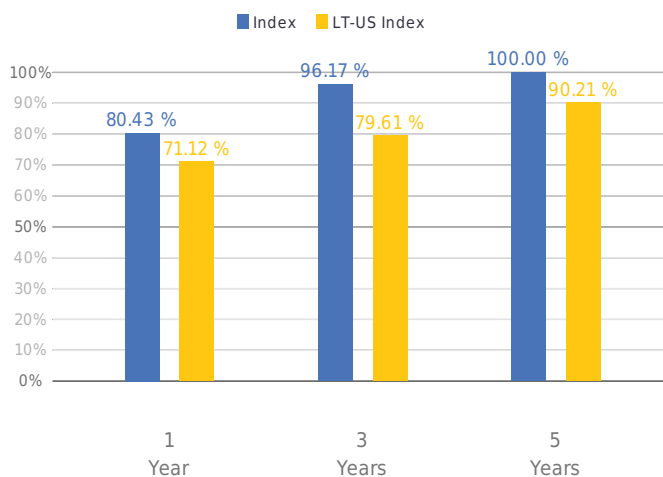
SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	LT-US
Excess Return	1.78 %	3.53 %
Tracking-Error	3.65 %	4.92 %
Information Ratio	0.49	0.72
Prob. of Outperf. (1 year)	80.4 %	71.1 %
Prob. of Outperf. (3 years)	96.2 %	79.6 %
Prob. of Outperf. (5 years)	100.0 %	90.2 %
End of Period	31-Jan-2017	31-Dec-2015
Period	10 years	40 years

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**.  
 Analytics are calculated at 31-Jan-2017.  
 Analytics are updated monthly with EOM values.  
 Performances are annualised for periods longer than a year.

The statistics are based on daily total returns (with dividends reinvested). All statistics are annualised and based on the geometric average, which reliably reflects multiple holding period returns for investors.

## Robustness Analysis as of 31-Jan-2017

The figure, based on a rolling window analysis, shows the 1, 3, and 5 year Probability of Outperformance with respect to the cap-weighted reference index.





# Top Holdings

Top Holdings refers to the information on the largest companies in the strategy portfolio ordered by their weights.

## Top Holdings as of 16-Dec-2016

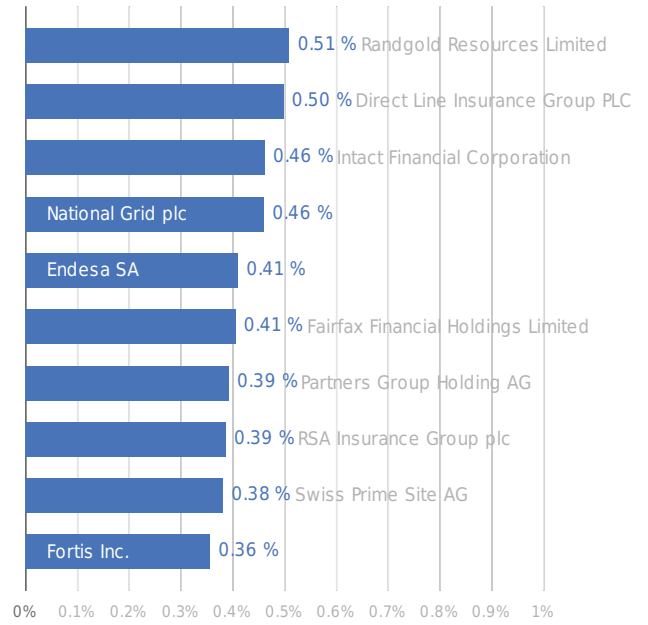
The table lists the weights of the ten largest constituents of the index, in descending order, based on the index's weight profile at the last quarterly rebalancing.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Country	Weight
Randgold Resources Limited	GB	0.51 %
Direct Line Insurance Group PLC	GB	0.50 %
Intact Financial Corporation	CA	0.46 %
National Grid plc	GB	0.46 %
Endesa SA	ES	0.41 %
Fairfax Financial Holdings Limited	CA	0.41 %
Partners Group Holding AG	CH	0.39 %
RSA Insurance Group plc	GB	0.39 %
Swiss Prime Site AG	CH	0.38 %
Fortis Inc.	CA	0.36 %

Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

## Top Holdings as of 16-Dec-2016

The figure displays the weights of the ten largest constituents of the index, in descending order, based on the index's weight profile at the last quarterly rebalancing.



# Weight Profile Analysis

Weight Profile Analysis refers to the allocation of the investment weights to the constituents in the strategy.

## Index Weight Concentration as of 16-Dec-2016

The table shows the index concentration level under various portfolio concentration measures based on the index's weight profile at the last rebalancing time, and the low correlation objective measure (GLR) based on historical returns and the index's historical weights since inception. The quarterly calculated active share expresses the overall deviation of the index vis-à-vis its Broad cap-weighted reference, calculated as half of the sum of the absolute deviations. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported, along with those of the Beta cap-weighted reference index (Beta CW) in case of unvaried stock selection.

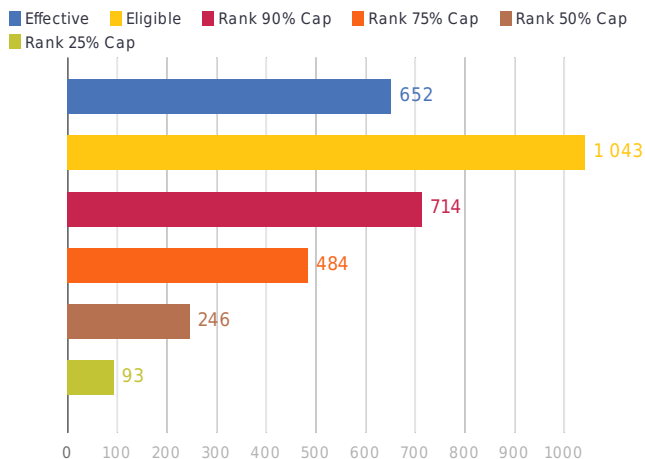
SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Broad CW
Effective Number of Constituents	652	318
Number of Eligible Constituents	1 043	1 100
Nb. Stocks Cumul. to 90% Cap	714	634
Nb. Stocks Cumul. to 75% Cap	484	339
Nb. Stocks Cumul. to 50% Cap	246	126
Nb. Stocks Cumul. to 25% Cap	93	36
Deconcentration ratio	62.5 %	28.9 %
Active Share	55.69 %	0.00 %
Active Share (average)	57.96 %	0.00 %
GLR	18.4 %	23.2 %

Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

In case of unvaried stock selection, the Beta cap-weighted reference index (Beta CW) is the cap-weighted index whose constituents are drawn from the same stock selection as that of the Scientific Beta index being analysed. The Broad cap-weighted reference index (Broad CW) is the cap-weighted index whose constituents cover all stocks in the geographic region of the Scientific Beta index being analysed.

## Index Weight Concentration as of 16-Dec-2016

The figure displays the index concentration level under various portfolio concentration measures based on the index's weight profile at the last rebalancing time.



# Multi-Beta Allocation

Multi-Beta Allocation refers to the information on the weights allocated to the underlying indices that compose the Multi-Beta Index.

## Multi-Beta Allocation as of 16-Dec-2016

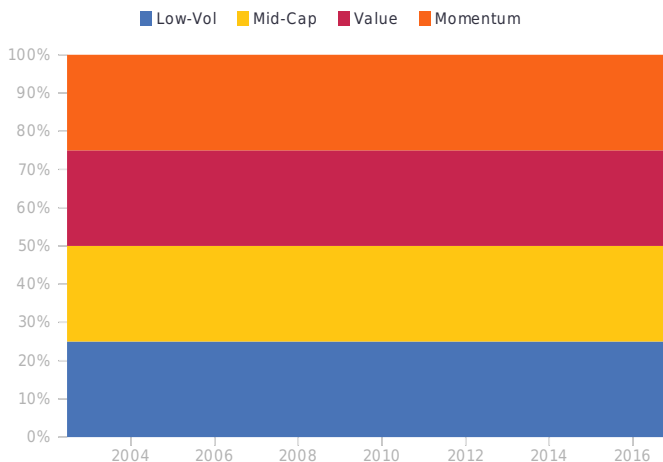
The Multi-Beta Allocation shows the average weight allocated to the underlying indices since inception and at the latest quarterly review.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Latest	Average
SciBeta Dev ex-US LVol MStrat	25.0 %	25.0 %
SciBeta Dev ex-US MCap MStrat	25.0 %	25.0 %
SciBeta Dev ex-US Val MStrat	25.0 %	25.0 %
SciBeta Dev ex-US HMom MStrat	25.0 %	25.0 %

Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

## Multi-Beta Allocation as of 16-Dec-2016

The Multi-Beta Allocation graph exhibits the historical quarterly weights allocated to the underlying indices since index inception.



# CAPM Analysis

The Capital Asset Pricing Model (CAPM) theoretically establishes the relationship between the expected excess return of an equity portfolio and its systematic risk as measured by its exposure to market risk. In CAPM analysis, the equity portfolio excess returns are regressed against market excess returns in order to estimate the exposure to market risk, and that exposure is then used to decompose the returns into reward for being exposed to the equity market and portfolio-specific returns.

## CAPM Analysis as of 31-Jan-2017

The table shows the coefficient estimates and R-squared of the regression of the index's excess returns (over the risk-free rate) using the CAPM single factor model over the selected analysis period. Based on the factor exposure, the excess returns attributed to each factor are reported in the last column. The t-statistics associated with the coefficient estimates are also reported.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Coefficient	t-stat	Perf.
Alpha	3.46 %	4.1	3.77 %
Market	0.86	138.3	4.83 %
r <sup>2</sup>	0.96		

Analytics are based on weekly **total** return index series (dividends reinvested) in **USD**.

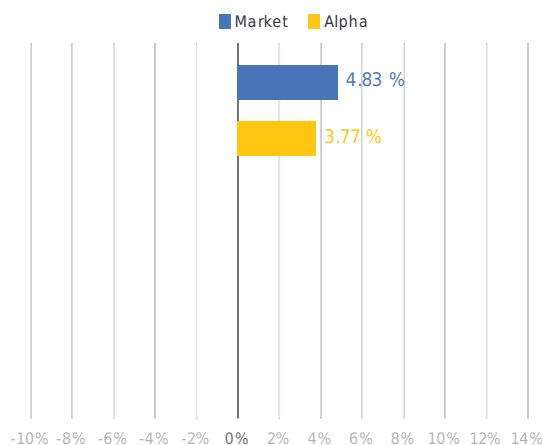
Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017.

Analytics are updated monthly with EOM values.

Performances are annualised for periods longer than a year.

## CAPM Performance Attribution as of 31-Jan-2017

The figure displays the attribution of the index's excess return (over the risk-free rate) to market factor and unexplained excess returns (Alpha).



The data are weekly total returns (with dividends reinvested). The Market factor is the weekly return of the cap-weighted index of all stocks that constitute the index portfolio. The risk-free rates used are defined according to the regional universe of the index.

# Fama-French Factor Analysis

The Fama-French factor model extends the CAPM model by adding the small size factor and the value factor. In Fama-French factor analysis, we explain the equity portfolio performance via linear regression using all three risk factors to better understand the potential factor or investment style biases as well as to form a clear idea of its risk-adjusted performance.

## Fama-French Factor Analysis as of 31-Jan-2017

The table shows the coefficient estimates and R-squared of the regression of index's excess returns (over the risk-free rate) using the Fama French three-factor model over the selected analysis period. Based on the factor exposure, the excess returns attributed to each factor are reported in the last column. The t-statistics associated with the coefficient estimates are also reported.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Coefficient	t-stat	Perf.
Alpha	2.69 %	4.2	3.15 %
Market factor	0.93	164.3	5.20 %
Size (SMB) factor	0.25	20.7	0.73 %
Value (HML) factor	-0.11	-10.9	-0.48 %
r <sup>2</sup>	0.98		

Analytics are based on weekly **total** return index series (dividends reinvested) in **USD**.

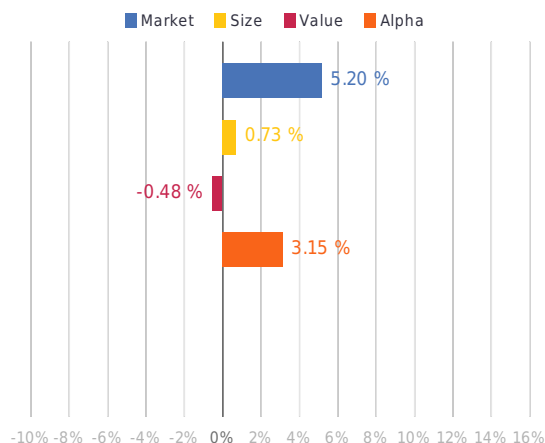
Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017.

Analytics are updated monthly with EOM values.

Performances are annualised for periods longer than a year.

## Fama-French Factor Performance Attribution as of 31-Jan-2017

The figure displays attribution of the index's excess return (over the risk-free rate) to market factor, HML factor, SMB factor, and unexplained excess returns (Alpha).



The data are weekly total returns (with dividends reinvested). The Market factor is the weekly return series of the cap-weighted index of all stocks that constitute the index portfolio. SMB factor is the weekly return series of a portfolio that is long for the bottom 30% stocks ranked by market capitalisation (mid market-cap stocks) and short for the top 30% stocks ranked by market capitalisation (large market-cap stocks). HML factor is the weekly return series of a portfolio that is long for the top 30% stocks (value stocks) and short for the bottom 30% stocks (growth stocks) sorted on book-to-market value in descending order. The risk-free rates used are defined according to the regional universe of the strategy.

# Carhart Factor Analysis

Carhart (1997) proposes an extended four-factor model incorporating the momentum factor. In Carhart four factor analysis, we explain the equity portfolio performance via linear regression using four risk factors to better understand the potential factor or investment style biases as well as to form a clear idea of its risk-adjusted performance.

## Carhart Factor Analysis as of 31-Jan-2017

The table shows the coefficient estimates and r-square of the regression of the strategy's excess returns (over the risk-free rate) using the Carhart four-factor model over the selected analysis period. Based on the factor exposure, the excess returns attributed to each factor are reported in the last column. The t-statistics associated with the coefficient estimates are also reported.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Coefficient	t-stat	Perf.
Alpha	2.15 %	3.6	2.72 %
Market factor	0.92	172.7	5.16 %
Size (SMB) factor	0.23	20.8	0.69 %
Value (HML) factor	-0.02	-1.3	-0.07 %
Momentum (MOM) factor	0.10	10.7	0.11 %
r <sup>2</sup>	0.98		

Analytics are based on weekly **total** return index series (dividends reinvested) in **USD**.

Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017.

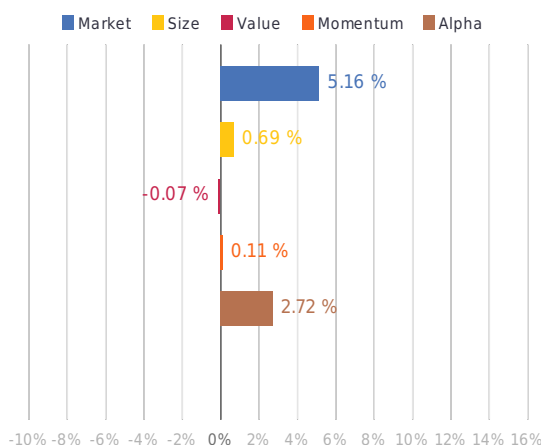
Analytics are updated monthly with EOM values.

Performances are annualised for periods longer than a year.

The data are weekly total returns (with dividends reinvested). The Market factor is the weekly return series of the cap-weighted index of all stocks that constitute the index portfolio. SMB factor is the weekly return series of a portfolio that is long for the bottom 30% stocks ranked by market capitalisation (mid market-cap stocks) and short for the top 30% stocks ranked by market capitalisation (large market-cap stocks). HML factor is the weekly return series of a portfolio that is long for the top 30% stocks (value stocks) and short for the bottom 30% stocks (growth stocks) sorted on book-to-market value in descending order. The MOM factor is calculated as the weekly return series of a cap-weighted portfolio that is long the winner stocks and short the loser stocks. The winner stocks (inversely the loser stocks) are defined as the top 30% (inversely the bottom 30%) of stocks, sorted on the past 52 weeks' compounded returns excluding the most recent month, in descending order. The risk-free rates used are defined according to the regional universe of the index.

## Carhart Factor Performance Attribution as of 31-Jan-2017

The figure displays the attribution of the index's excess return (over the risk-free rate) to market factor, HML factor, SMB factor, MOM factor, and unexplained excess returns (Alpha).



# Country Performance Attribution

Country Performance Attribution is used to disentangle the sources of outperformance of a strategy portfolio over its cap-weighted reference index, from the perspective of country allocation.

## Country Performance Attribution as of 31-Jan-2017

The table shows the results of the adaptation of Menchero Multi-period Attribution applied to country attribution, in which the index's outperformance with regard to its cap-weighted reference index is broken down into stock effect, country effect, and interaction effect. The analysis is based on the selected period.

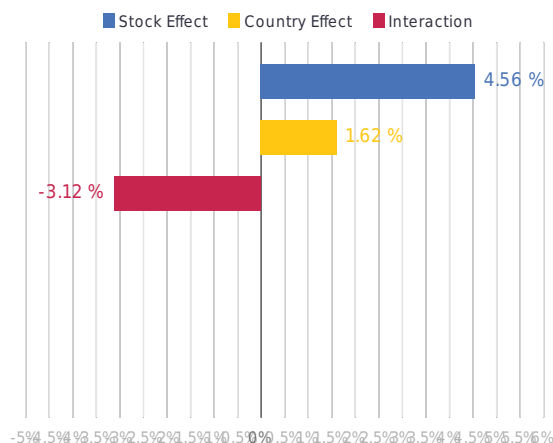
SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Ref	Excess	Stock	Country	Inter
United Kingdom	18.35 %	18.19 %	0.16 %	-1.59 %	0.05 %	0.19 %
Japan	21.29 %	22.41 %	-1.12 %	3.62 %	0.70 %	-0.69 %
Canada	7.92 %	6.91 %	1.01 %	0.29 %	0.15 %	0.30 %
France	7.22 %	9.00 %	-1.78 %	-0.53 %	-0.61 %	0.09 %
Australia	3.78 %	5.96 %	-2.17 %	-0.35 %	-1.32 %	0.01 %
Switzerland	4.72 %	6.55 %	-1.82 %	0.58 %	0.09 %	-0.41 %
Germany	5.18 %	7.67 %	-2.49 %	-1.47 %	-0.71 %	0.25 %
South Korea	2.89 %	3.09 %	-0.20 %	5.01 %	1.11 %	-1.68 %
Hong Kong	3.83 %	2.70 %	1.13 %	-0.20 %	0.46 %	-0.51 %
Sweden	2.71 %	2.32 %	0.40 %	0.05 %	0.68 %	-0.26 %
Spain	3.68 %	3.52 %	0.15 %	-0.94 %	0.81 %	-0.19 %
Netherlands	2.10 %	1.92 %	0.18 %	-0.74 %	0.15 %	-0.21 %
Italy	3.07 %	2.86 %	0.21 %	-0.63 %	-0.33 %	-0.11 %
Singapore	2.05 %	1.31 %	0.73 %	0.31 %	0.21 %	0.09 %
Denmark	1.89 %	0.98 %	0.91 %	0.24 %	0.92 %	0.06 %
Belgium	1.93 %	1.03 %	0.90 %	-0.12 %	-0.37 %	-0.03 %
Norway	0.93 %	0.58 %	0.35 %	-0.08 %	0.08 %	-0.10 %
Finland	1.48 %	1.02 %	0.46 %	0.75 %	0.19 %	0.24 %
Israel	0.42 %	0.38 %	0.03 %	0.36 %	0.04 %	-0.01 %
Austria	1.11 %	0.35 %	0.76 %	-0.23 %	0.52 %	-0.44 %
Portugal	1.11 %	0.30 %	0.80 %	0.11 %	-1.06 %	0.18 %
New Zealand	0.69 %	0.16 %	0.52 %	0.08 %	0.32 %	0.14 %
Ireland	0.79 %	0.46 %	0.33 %	0.00 %	0.23 %	-0.08 %
Greece	0.86 %	0.32 %	0.54 %	0.05 %	-0.67 %	0.06 %
Total				4.56 %	1.62 %	-3.12 %

Analytics are based on daily **total** return index series (dividends reinvested).  
 Analytics are calculated from inception to 31-Jan-2017.  
 Analytics are updated monthly with EOM values.  
 Performances are annualised for periods longer than a year.

Please see **Menchero Multi-period Attribution** in the glossary for a detailed explanation of the attribution model that is adapted by ERI Scientific Beta to country attribution. The country classification used is the Scientific Beta country allocation explained in our **Universe Construction Rules**. The statistics of historical performance are annualised.

## Country Performance Attribution as of 31-Jan-2017

The figure displays the breakdown of the index's outperformance with regard to its cap-weighted reference index into returns attributed to stock effect, country effect, and interaction effect from the Menchero Multi-period Attribution model. The analysis is based on the selected period.



# Sector Performance Attribution

## Sector Performance Attribution as of 31-Jan-2017

The table shows the results of Menchero Multi-period Attribution, in which the index's outperformance with regard to its cap-weighted reference index is broken down into stock effect, sector effect, and interaction effect. The analysis is based on the selected period.

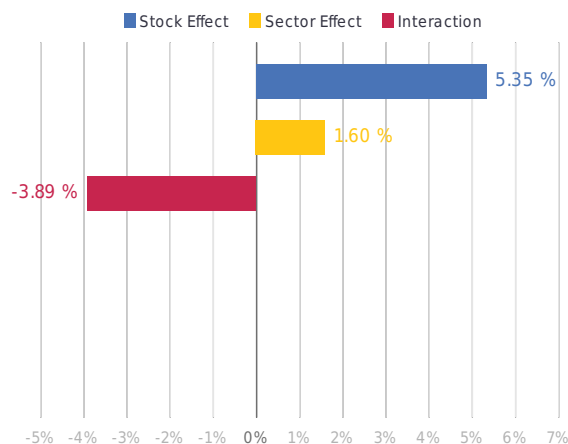
SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Ref	Excess	Stock	Sector	Inter
Energy	4.59 %	7.75 %	-3.16 %	1.40 %	-0.65 %	-0.60 %
Basic Materials	9.66 %	9.23 %	0.42 %	-2.12 %	1.29 %	-0.40 %
Industrials	15.51 %	12.27 %	3.24 %	0.86 %	0.33 %	0.45 %
Cyclical Consumer	14.54 %	12.68 %	1.86 %	1.19 %	0.34 %	-0.24 %
Non-Cyclical Consumer	12.00 %	8.60 %	3.40 %	0.12 %	-0.72 %	-0.71 %
Financials	22.83 %	25.84 %	-3.01 %	-2.42 %	1.59 %	-0.30 %
Healthcare	6.26 %	8.13 %	-1.87 %	2.38 %	0.89 %	-1.09 %
Technology	3.47 %	4.56 %	-1.09 %	1.14 %	0.04 %	0.07 %
Telecoms	4.49 %	6.34 %	-1.85 %	1.96 %	-0.99 %	-1.20 %
Utilities	6.64 %	4.60 %	2.04 %	0.85 %	-0.52 %	0.12 %
<b>Total</b>				<b>5.35 %</b>	<b>1.60 %</b>	<b>-3.89 %</b>

Analytics are based on daily **total** return index series (dividends reinvested).  
 Analytics are calculated from inception to 31-Jan-2017.  
 Analytics are updated monthly with EOM values.  
 Performances are annualised for periods longer than a year.

Please see Menchero Multi-period Attribution in the glossary for a detailed explanation of the attribution model. The sector classification used is the Thomson Reuters Business Classification. The statistics of historical performance are annualised.

## Sector Performance Attribution as of 31-Jan-2017

The figure displays the breakdown of the index's outperformance with regard to its cap-weighted reference index into returns attributed to stock effect, sector effect, and interaction effect from the Menchero Multi-period Attribution model. The analysis is based on the selected period.





# Index Fundamentals

Fundamental attributes refers to the fundamental aggregate characteristics of the index.

## Index Fundamentals as of 16-Dec-2016

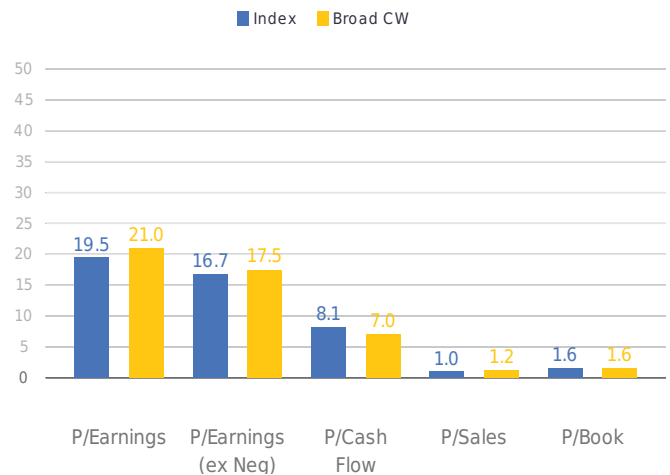
The table shows the index's fundamental attributes based on the index's weight profile at the last rebalancing time. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Broad CW
Price / Earnings	19.48	21.04
Price / Earnings (ex Neg)	16.71	17.45
Price / Cash Flow	8.14	7.01
Price / Sales	1.02	1.19
Price / Book Value	1.60	1.61
Dividend Yield	2.86 %	3.13 %

Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

## Index Fundamentals as of 16-Dec-2016

The figure displays the index's fundamental attributes based on the index's weight profile at the last rebalancing time. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported.



The Broad cap-weighted reference index (Broad CW) is the cap-weighted index whose constituents cover all stocks in the geographic region of the Scientific Beta index being analysed.

# Extreme Risk Analysis

The Extreme Risk Analytics calculate two measures of downside risk - Value-at-Risk and Conditional Value-at-Risk - aggregated over a certain time period together with the corresponding risk-adjusted returns and also provide monthly forecasts of the two risk measures based on a conditional time-series model that takes into account the clustering of volatility and assumes the conditional return distribution is fat-tailed.

## Extreme Risk Analysis as of 31-Jan-2017

The table shows summary statistics of the index's extreme risk over the selected analysis period. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Broad CW
Return	9.94 %	6.92 %
EVT 1% VaR	1.98 %	2.25 %
EVT 1% CVaR	2.41 %	2.73 %
Ret to EVT 1% VaR ratio	0.27	0.16
Ret to EVT 1% CVaR ratio	0.22	0.13
For. Monthly EVT 1% VaR	7.09 %	7.27 %
For. Monthly EVT 1% CVaR	8.65 %	8.87 %

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values. Performances are annualised for periods longer than a year.

Broad CW is the cap-weighted index whose constituents cover all stocks in the geographic region of the Scientific Beta index being analysed.

## Extreme Relative Risk Analysis as of 31-Jan-2017

The table shows summary statistics of the index's extreme relative risk with regard to its Broad cap-weighted reference index (Broad CW) over the selected analysis period.

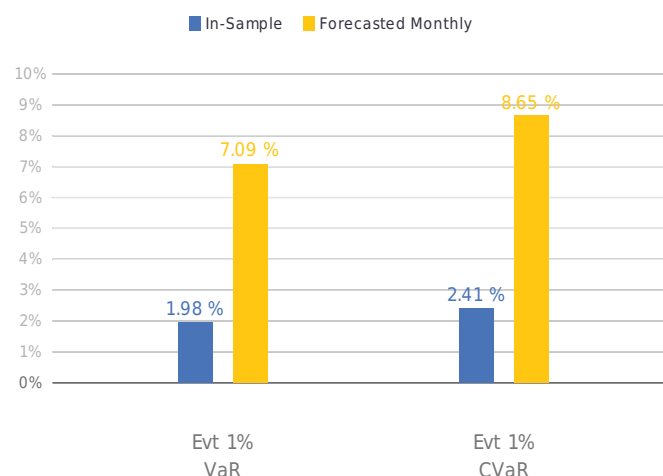
SciBeta Dev ex-US MBeta MStrat 4F-EW	/ Broad CW
Excess Return	3.02 %
EVT 1% VaTER	0.53 %
EVT 1% CVaTER	0.64 %
Ret to EVT 1% VaTER ratio	0.36
Ret to EVT 1% CVaTER ratio	0.29
For. Monthly EVT 1% VaTER	1.97 %
For. Monthly EVT 1% CVaTER	2.40 %

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values. Performances are annualised for periods longer than a year.

Broad CW is the cap-weighted index whose constituents cover all stocks in the geographic region of the Scientific Beta index being analysed.

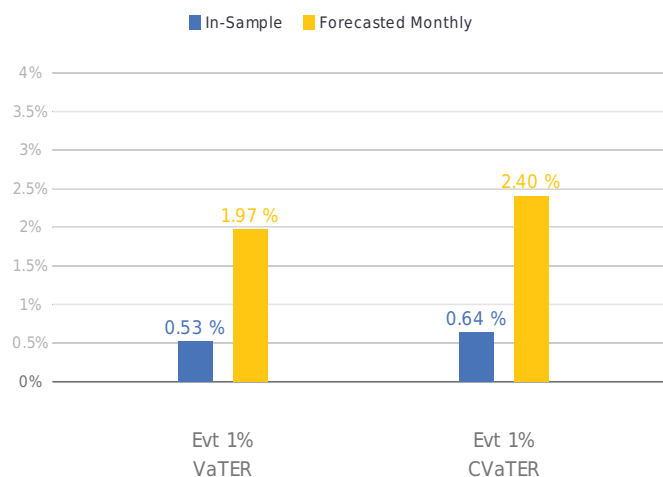
## Extreme Risk Analysis as of 31-Jan-2017

The figure shows the in-sample and forecasted monthly Value-at-Risk and Conditional Value-at-Risk for the index over the selected analysis period.



## Extreme Relative Risk Analysis as of 31-Jan-2017

The figure shows the in-sample and forecasted monthly Value-at-Tracking Error and Conditional Value-at-Tracking Error for the index over the selected analysis period.



# Risk Factor Exposure

The Risk Factor Exposure analysis assesses the exposure of a given strategy to a set of seven factors: Market factor, Size factor, Value factor, Momentum factor, Volatility factor, Profitability factor and Investment factor.

## Risk Factor Exposure as of 31-Jan-2017

The table shows the coefficient estimates and r-square of the regression of the strategy's excess returns (over the risk-free rate) using the seven-factor model over the selected analysis period. The t-statistics associated with the coefficient estimates are also reported.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Coefficient	t-stat
Unexplained	1.16 %	2.0
Market factor	0.97	136.4
Size (SMB) factor	0.22	20.6
Value (HML) factor	0.06	2.9
Momentum (MOM) factor	0.10	10.0
Volatility factor	0.11	11.7
Profitability factor	0.02	1.0
Investment factor	0.00	0.1
r <sup>2</sup>	0.98	

Analytics are based on weekly **total** return index series (dividends reinvested) in **USD**.

Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017.

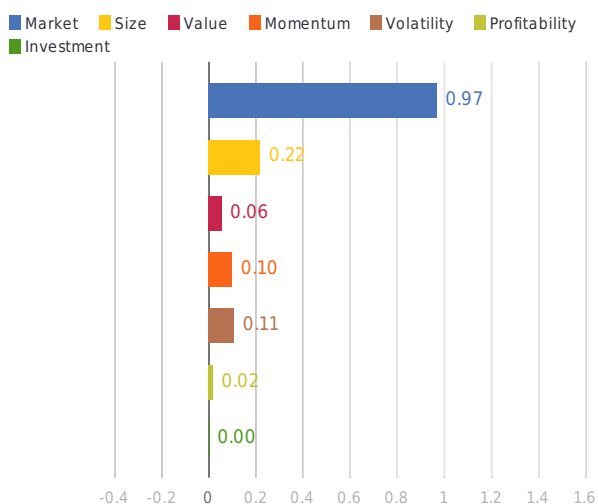
Analytics are updated monthly with EOM values.

Performances are annualised for periods longer than a year.

The regression is based on weekly total returns (with dividends reinvested). The Market factor is the excess return series of the cap-weighted index of all stocks that constitute the index portfolio over the risk-free rate. SMB factor is the return series of an equal-weighted portfolio that is long for the bottom 30% stocks ranked by market capitalisation (mid market-cap stocks) and short for the top 30% stocks ranked by market capitalisation (large market-cap stocks). HML factor is the return series of an equal-weighted portfolio that is long for the top 30% stocks (value stocks) and short for the bottom 30% stocks (growth stocks) sorted on book-to-market value in descending order. The MOM factor is the return series of an equal-weighted portfolio that is long the winner stocks and short the loser stocks. The winner stocks (inversely the loser stocks) are defined as the top 30% (inversely the bottom 30%) of stocks, sorted on the past 52 weeks' compounded returns excluding the most recent month, in descending order. The VOL factor is the return series of an equal-weighted portfolio that is long the bottom 30% stocks (low volatility stocks) and short the top 30% stocks (high volatility stocks) sorted on past volatility in descending order. The PRO factor is the return series of an equal-weighted portfolio that is long the top 30% stocks (high profitability stocks) and short the bottom 30% stocks (low profitability stocks) sorted on gross profitability in descending order. The INV factor is the return series of an equal-weighted portfolio that is long the bottom 30% stocks (low investment stocks) and short the top 30% stocks (high investment stocks) sorted on two year asset growth in descending order. The risk-free rates used are defined according to the regional universe of the index.

## Risk Factor Exposure as of 31-Jan-2017

The figure displays the exposure of the index's excess return (over the risk-free rate) to Market factor, SMB factor, HML factor, MOM factor, VOL factor, PRO factor and INV factor.



# Bull/Bear Market Performances

Bull / Bear Market Performances refer to return and risk in phases with positive/negative market returns.

## Bull / Bear Market Performances as of 31-Jan-2017

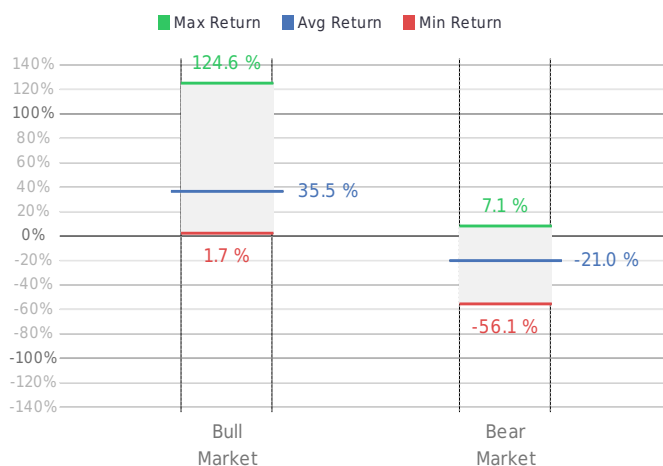
The analysis is based on the complete history of index returns. The table shows general statistics of the index's absolute performance and risk in the periods of bull and bear market regimes respectively.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Bull Market	Bear Market
Return	32.53 %	-23.49 %
Volatility	12.27 %	19.92 %
Sharpe ratio	2.54	-1.22

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values. Performances are annualised.

## Bull / Bear Market Performances as of 31-Jan-2017

The figure displays the index's average, minimum, and maximum annualised absolute returns in quarters characterised by bull and bear market regimes respectively. The analysis is based on the complete history of index returns.



The statistics are based on daily total returns (with dividends reinvested). The returns and volatility are annualised. The risk-free rate used is defined according to the regional universe of the index.

## Bull / Bear Market Rel. Performances as of 31-Jan-2017

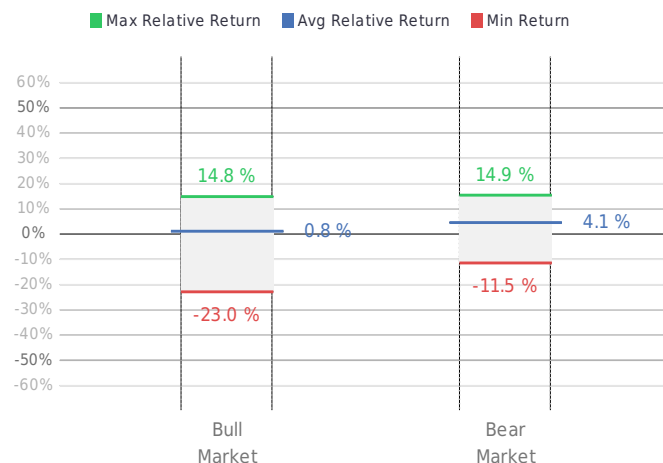
The analysis is based on the complete history of index returns. The table shows general statistics of the index's relative performance and relative risk (with respect to its cap-weighted reference index) in the periods of bull and bear market regimes respectively.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Bull Market	Bear Market
Relative Return	1.24 %	4.88 %
Tracking-Error	3.35 %	5.23 %
Information Ratio	0.37	0.93

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values. Performances are annualised.

## Bull / Bear Market Rel. Performances as of 31-Jan-2017

The figure displays the index's average, minimum and maximum annualised relative returns (with respect to its cap-weighted reference index) in quarters characterised by bull and bear market regimes, respectively. The analysis is based on the complete history of index returns.



The statistics are based on daily total returns (with dividends reinvested). The relative returns and tracking error are annualised. The risk-free rate used is defined according to the regional universe of the index.

# High/Low Vol Regime Performances

High / Low Volatility Regime Performances indicate performance statistics in high/low volatility regimes.

## High / Low Vol Regime Performances as of 31-Jan-2017

The analysis is based on the complete history of index returns. The table shows general statistics of the index's absolute performance and risk in the periods of high and low volatility market regimes respectively.

SciBeta Dev ex-US MBeta MStrat 4F-EW	High Vol Regime	Low Vol Regime
Annualized Return	-3.07 %	24.03 %
Volatility	19.48 %	9.77 %
Sharpe ratio	-0.20	2.29

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values. Performances are annualised.

The statistics are based on daily total returns (with dividends reinvested). The returns and volatility are annualised. The risk-free rate used is defined according to the regional universe of the index.

## High / Low Vol Regime Rel. Performances as of 31-Jan-2017

The analysis is based on the complete history of index returns. The table shows general statistics of the index's relative performance and relative risk (with respect to its cap-weighted reference index) in the periods of high and low volatility market regimes respectively.

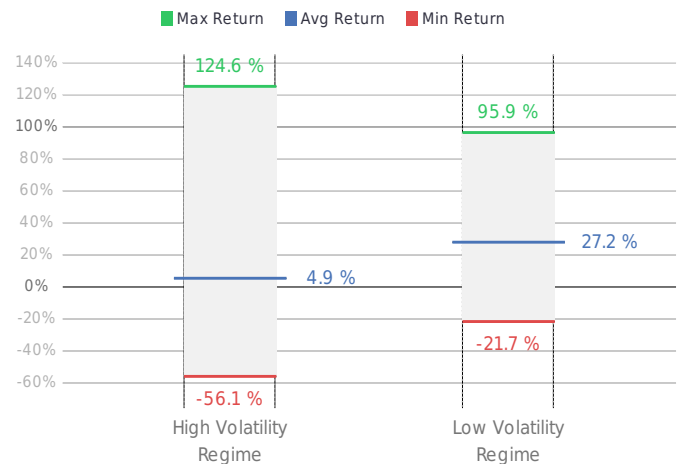
SciBeta Dev ex-US MBeta MStrat 4F-EW	High Vol Regime	Low Vol Regime
Annualized Relative Return	4.11 %	1.78 %
Tracking-Error	5.02 %	2.90 %
Information Ratio	0.82	0.61

Analytics are based on daily **total** return index series (dividends reinvested) in **USD**. Analytics are calculated from inception (21-Jun-2002) to 31-Jan-2017. Analytics are updated monthly with EOM values. Performances are annualised.

The statistics are based on daily total returns (with dividends reinvested). The relative returns and tracking error are annualised. The risk-free rate used is defined according to the regional universe of the index.

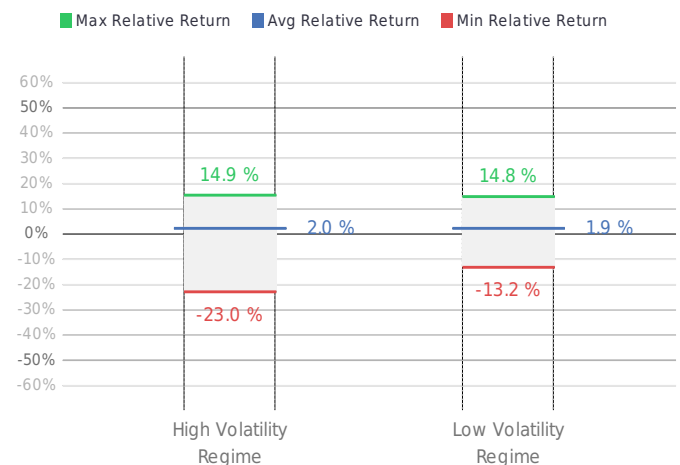
## High / Low Vol Regime Performances as of 31-Jan-2017

The figure displays the index's average, minimum, and maximum quarterly absolute returns in quarters characterised by high and low volatility market regimes respectively. The analysis is based on the complete history of index returns.



## High / Low Vol Regime Rel. Performances as of 31-Jan-2017

The figure displays the index's average, minimum and maximum quarterly relative returns (with respect to its cap-weighted reference index) in quarters characterised by high and low volatility market regimes, respectively. The analysis is based on the complete history of index returns.



# Turnover & Capacity

Turnover and capacity analysis addresses the main implementation issues of ERI Scientific Beta indices.

## Turnover & Capacity as of 16-Dec-2016

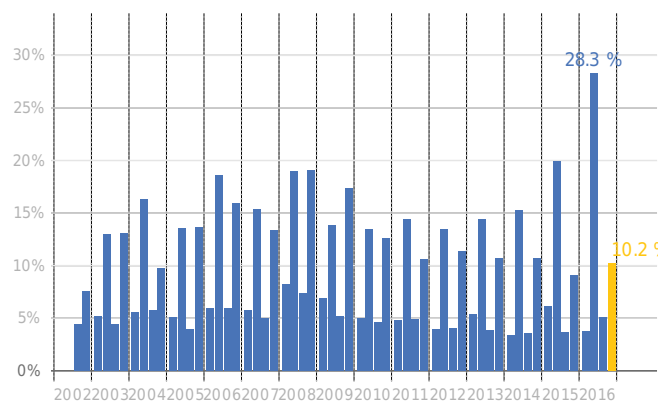
The table shows the turnover level of the index in % and the capacity of the index as measured by the average market capitalisations, in M\$. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported, along with those of the Beta cap-weighted reference index (Beta CW) in case of univariated stock selection.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Index	Broad CW
Turnover (annualised)	38.7 %	4.6 %
Average Capacity (M\$)	10 839	42 189
Latest Capacity (M\$)	11 702	42 334

Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

## Turnover History as of 16-Dec-2016

The chart below shows the turnover history of the index since inception on a quarterly basis.



In case of univariated stock selection, the Beta cap-weighted reference index (Beta CW) is the cap-weighted index whose constituents are drawn from the same stock selection as that of the Scientific Beta index being analysed. The Broad cap-weighted reference index (Broad CW) is the cap-weighted index whose constituents cover all stocks in the geographic region of the Scientific Beta index being analysed.

# Country Allocation

Country Allocation refers to the separation of investment weights of the strategy portfolio into different countries.

## Country Allocation as of 16-Dec-2016

The table shows top country exposures (in weight percentage) of the index, based on the index's weight profile at the last rebalancing time.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Weight
Japan	23.5 %
United Kingdom	15.3 %
Canada	8.5 %
France	8.5 %
Switzerland	6.1 %
Germany	5.9 %
Australia	4.3 %
Hong Kong	3.6 %
Sweden	3.1 %
Other	21.2 %

Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

The top countries are ordered by the index exposure at the last rebalancing time.

## Country Allocation as of 16-Dec-2016

The table shows top relative country exposures (in relative weight percentage) of the index with regard to its Broad cap-weighted reference index (Broad CW), based on the index's weight profile at the last rebalancing time.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Excess Weight
Australia	-2.9 %
Germany	-2.0 %
Switzerland	-1.7 %
Singapore	1.3 %
Finland	1.1 %
New Zealand	1.0 %
Belgium	1.0 %
Austria	0.8 %
Netherlands	-0.7 %
Other	2.2 %

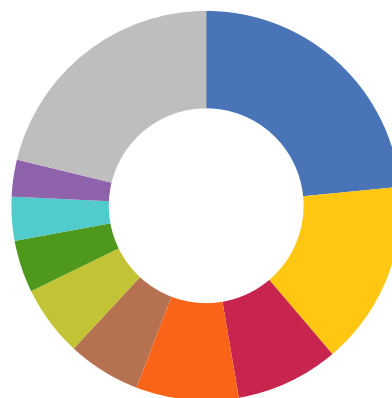
Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

The top countries are ordered by the index relative exposures at the last rebalancing time.

## Country Allocation as of 16-Dec-2016

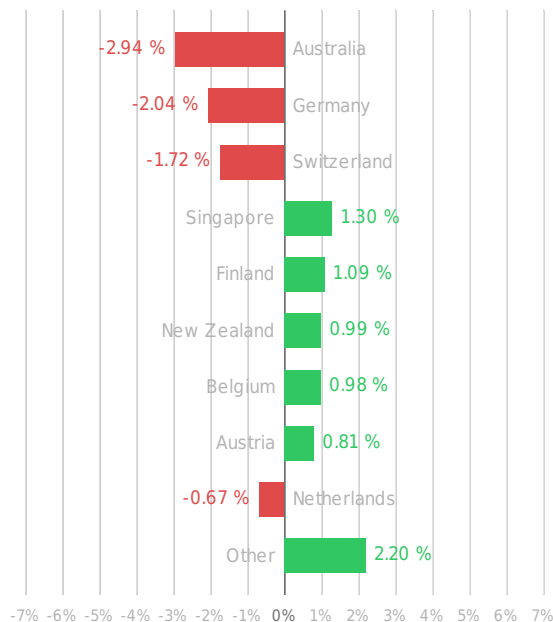
The figure displays top country exposures (in weight percentage) of the index, based on the index's weight profile at the last rebalancing time.

Japan United Kingdom Canada France Switzerland Germany  
Australia Hong Kong Sweden Other



## Country Allocation as of 16-Dec-2016

The figure displays top relative country exposures (in relative weight percentage) of the index with regard to its Broad cap-weighted reference index (Broad CW), based on the index's weight profile at the last rebalancing time.



# Sector Allocation

Sector Allocation refers to the separation of investment weights of the strategy portfolio into various sectors.

## Sector Allocation as of 16-Dec-2016

The table shows industry sector exposures (in weight percentage) of the index, based on the index's weight profile at the last rebalancing time.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Weight
Energy	4.8 %
Basic Materials	9.7 %
Industrials	18.3 %
Cyclical Consumer	13.5 %
Non-Cyclical Consumer	9.0 %
Financials	25.1 %
Healthcare	5.7 %
Technology	4.8 %
Telecoms	3.6 %
Utilities	5.5 %

Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

The sector classification used is the Thomson Reuters Business Classification.

## Sector Allocation as of 16-Dec-2016

The table shows the differences in aggregated sector weights of the index with regard to its Broad cap-weighted reference index (Broad CW), based on the index's weight profile at the last rebalancing time.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Excess Weight
Energy	-1.6 %
Basic Materials	2.0 %
Industrials	3.9 %
Cyclical Consumer	1.0 %
Non-Cyclical Consumer	-1.1 %
Financials	-1.5 %
Healthcare	-4.1 %
Technology	0.3 %
Telecoms	-1.3 %
Utilities	2.4 %

Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

The sector classification used is the Thomson Reuters Business Classification.

## Sector Allocation as of 16-Dec-2016

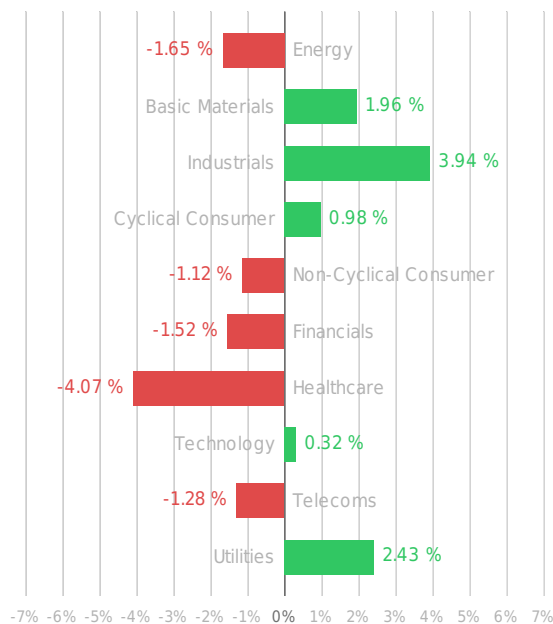
The figure displays industry sector exposures (in weight percentage) of the index, based on the index's weight profile at the last rebalancing time.

Energy Basic Materials Industrials Cyclical Consumer  
Non-Cyclical Consumer Financials Healthcare Technology  
Telecoms Utilities



## Sector Allocation as of 16-Dec-2016

The figure displays the differences in aggregated sector weights of the index with regard to its Broad cap-weighted reference index (Broad CW), based on the index's weight profile at the last rebalancing time.





# Currency Allocation

Currency Allocation refers to the separation of investment weights of the strategy portfolio into the quote currencies of its stocks.

## Currency Allocation as of 16-Dec-2016

The figure displays top currency exposures (in weight percentage) of the index, based on the index's weight profile at the last rebalancing time.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Weight
Euro	27.7 %
Japanese Yen	23.5 %
British Pound	15.3 %
Canadian Dollar	8.3 %
Swiss Franc	6.1 %
Australian Dollar	4.3 %
Hong Kong Dollar	3.8 %
Swedish Krona	3.1 %
Singapore Dollar	2.3 %
Other	5.5 %

Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

The table shows top currency exposures (in weight percentage) of the index, based on the index's weight profile at the last rebalancing time.

## Currency Allocation as of 16-Dec-2016

The figure displays top relative currency exposures (in relative weight percentage) of the index with regard to its Broad cap-weighted reference index (Broad CW), based on the index's weight profile at the last rebalancing time.

SciBeta Dev ex-US MBeta MStrat 4F-EW	Excess Weight
Australian Dollar	-2.9 %
Swiss Franc	-1.7 %
Singapore Dollar	1.0 %
New Zealand Dollar	1.0 %
Hong Kong Dollar	0.8 %
Danish Krone	0.6 %
Swedish Krona	0.6 %
Norwegian Kroner	0.5 %
Euro	0.2 %
Other	-0.1 %

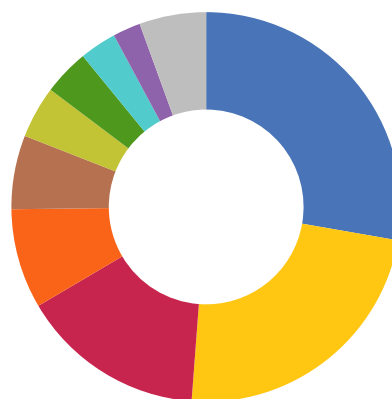
Analytics are calculated at 16-Dec-2016.  
Analytics are updated quarterly.

The table shows top relative currency exposures (in relative weight percentage) of the index with regard to its Broad cap-weighted reference index (Broad CW), based on the index's weight profile at the last rebalancing time.

## Currency Allocation as of 16-Dec-2016

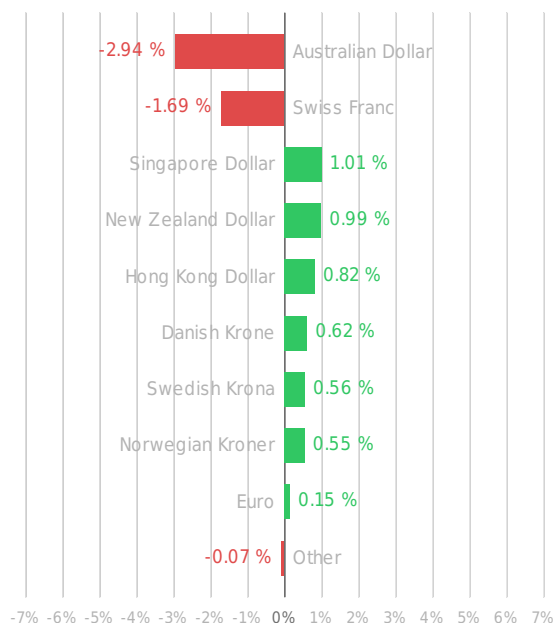
The top currencies are ordered by the index exposure at the last rebalancing time.

■ Euro 
 ■ Japanese Yen 
 ■ British Pound 
 ■ Canadian Dollar 
 ■ Swiss Franc 
 ■ Australian Dollar 
 ■ Hong Kong Dollar 
 ■ Swedish Krona 
 ■ Singapore Dollar 
 ■ Other



## Currency Allocation as of 16-Dec-2016

The top currencies are ordered by the index relative exposure at the last rebalancing time.



For more information, please contact:  
Séverine Cibelly on: +33 493 187 863 or by e-mail to: [severine.cibelly@scientificbeta.com](mailto:severine.cibelly@scientificbeta.com)

ERI Scientific Beta HQ & Asia  
1 George Street  
#07-02  
Singapore 049145  
Tel: +65 6438 0030

ERI Scientific Beta R&D  
393 promenade des Anglais  
BP 3116 - 06202 Nice Cedex 3  
France  
Tel: +33 493 187 863

ERI Scientific Beta—Europe  
10 Fleet Place, Ludgate  
London EC4M 7RB  
United Kingdom  
Tel: +44 207 871 6742

ERI Scientific Beta—North America  
One Boston Place, 201 Washington Street  
Suite 2608/2640, Boston, MA 02108  
United States of America  
Tel: +1 857 239 8891

ERI Scientific Beta—Japan  
East Tower 4th Floor, Otemachi First Square,  
1-5-1 Otemachi, Chiyoda-ku, Tokyo 100-0004  
Japan  
Tel: +81 352 191 418

[www.scientificbeta.com](http://www.scientificbeta.com)