ScientificBeta
An EDHEC-Risk Institute Venture

Performance and Risk Report

SciBeta Developed High-Factor-Intensity Diversified Multi-Beta Multi-Strategy (Sector Neutral) 6-Factor 4-Strategy EW

Overview

Index Description as of 30-Jun-2019

The table summarises the index construction principles.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index
Currency	USD
Number of Constituents	978
Cap Coverage (Global Universe)	61.8 %
Regional Universe	Developed
Stock Selection	H-FInt. Multi-Beta Six-Factor EW
Weighting Scheme	Div. Multi-Strategy (4S)
Risk Control	Sector Neutral
TO Control	n/r
Base date	21-Jun-2002
Live Date	16-Mar-2018
Broad CW	SciBeta Dev CW
Bloomberg	SBDXAMAG (USD, RI)
Index Changes	June 2016 June-2019

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

The index coverage is calculated at the last rebalancing time.

Index Characteristics

Universe - **Developed**

The Developed universe consists of equities from Developed countries.

Selection - **Multi-Beta (EW) Six-Factor 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.

Filter - **High Factor Intensity Filter**

The Factor Intensity filter is applied to a stock selection scheme, targeting a given factor tilt, to improve its exposure to other rewarded factors in a multi-factor investment setting.

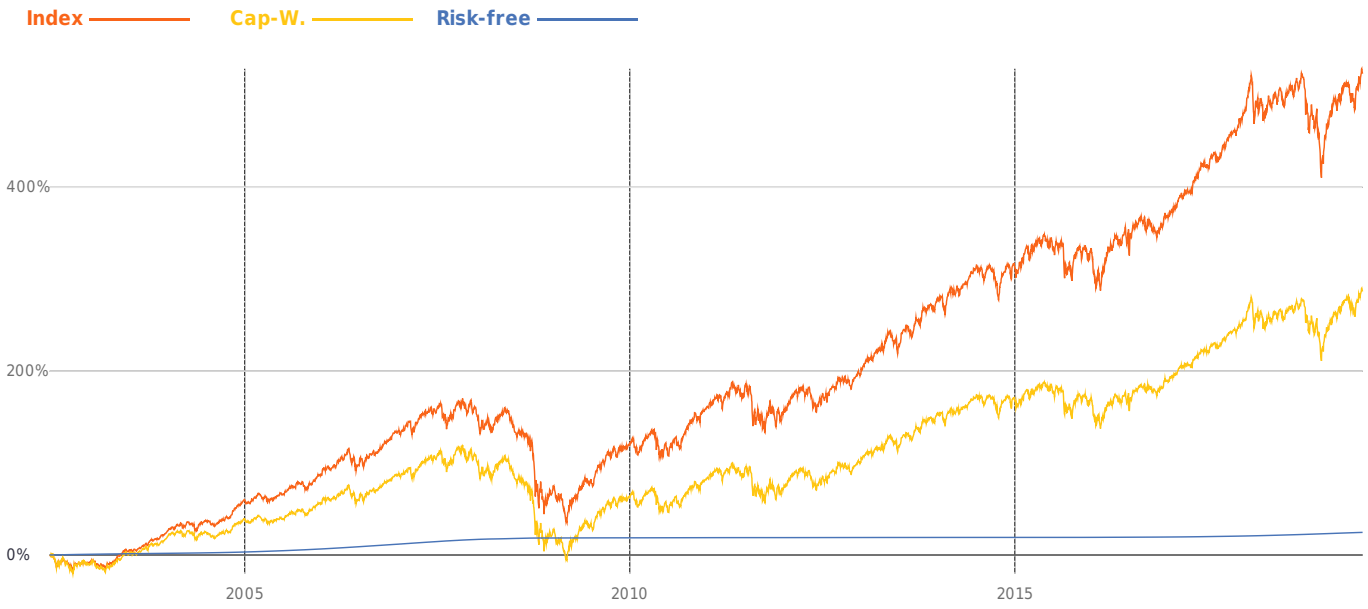
Weighting - **Diversified Multistrategy**

In the Diversified Multistrategy weighting scheme, four 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 - **Sector Neutral**

Sector Neutral is a risk control scheme that attempts to maintain sector neutrality while optimising the portfolio or pursuing a non-cap weighted strategy.

Total Return Index in USD



Latest Performances

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

Latest Performances (Total Return) as of 30-Jun-2019

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 the base date 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 univaried stock selection.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
1-Month Return	6.06 %	6.65 %
3-Month Return	3.39 %	4.29 %
Year-to-Date Return	15.92 %	17.45 %
1-Year Return	4.64 %	7.20 %
3-Year Return	11.41 %	12.43 %
5-Year Return	8.49 %	7.17 %

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.

Live	Index	Broad CW
Return	3.41 %	4.51 %
Volatility	10.91 %	11.70 %
Sharpe ratio	0.11	0.20

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.
Performances are annualised for periods longer than a year.
Live date is 16-Mar-2018.

Since base date	Index	Broad CW
Return	11.27 %	8.19 %
Volatility	13.48 %	15.39 %
Sharpe ratio	0.74	0.45

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.
Performances are annualised for periods longer than a year.
Base date is 21-Jun-2002.

Latest Performances (Net Return) as of 30-Jun-2019

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 the base date 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 univaried stock selection.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
1-Month Return	6.00 %	6.60 %
3-Month Return	3.19 %	4.08 %
Year-to-Date Return	15.53 %	17.04 %
1-Year Return	4.04 %	6.57 %
3-Year Return	10.79 %	11.80 %
5-Year Return	7.89 %	6.56 %

*Analytics are based on daily **net** returns (dividends net of tax reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.

Live	Index	Broad CW
Return	2.78 %	3.86 %
Volatility	10.91 %	11.70 %
Sharpe ratio	0.05	0.14

*Analytics are based on daily **net** returns (dividends net of tax reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.
Performances are annualised for periods longer than a year.
Live date is 16-Mar-2018.

Since base date	Index	Broad CW
Return	10.66 %	7.57 %
Volatility	13.48 %	15.39 %
Sharpe ratio	0.70	0.41

*Analytics are based on daily **net** returns (dividends net of tax reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.
Performances are annualised for periods longer than a year.
Base date is 21-Jun-2002.

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 univaried 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 Relative Performances

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

Latest Relative Performances (Total Return) as of 30-Jun-2019

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 univaried 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 the base date 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 HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	/ Broad CW
1-Month Relative Return	-0.58 %
3-Month Relative Return	-0.90 %
Year-to-Date Relative Return	-1.53 %
1-Year Relative Return	-2.56 %
3-Year Relative Return	-1.03 %
5-Year Relative Return	1.32 %

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.

Live	/ Broad CW
Relative Return	-1.10 %
Tracking-Error	2.15 %
Information ratio	n/r

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.
Performances are annualised for periods longer than a year.
Live date is 16-Mar-2018.

Since base date	/ Broad CW
Relative Return	3.07 %
Tracking-Error	3.11 %
Information ratio	0.99

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.
Performances are annualised for periods longer than a year.
Base date is 21-Jun-2002.

Latest Relative Performances (Net Return) as of 30-Jun-2019

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 univaried 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 the base date 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 HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	/ Broad CW
1-Month Relative Return	-0.60 %
3-Month Relative Return	-0.89 %
Year-to-Date Relative Return	-1.51 %
1-Year Relative Return	-2.53 %
3-Year Relative Return	-1.01 %
5-Year Relative Return	1.32 %

*Analytics are based on daily **net** returns (dividends net of tax reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.

Live	/ Broad CW
Relative Return	-1.09 %
Tracking-Error	2.15 %
Information ratio	n/r

*Analytics are based on daily **net** returns (dividends net of tax reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.
Performances are annualised for periods longer than a year.
Live date is 16-Mar-2018.

Since base date	/ Broad CW
Relative Return	3.09 %
Tracking-Error	3.12 %
Information ratio	0.99

*Analytics are based on daily **net** returns (dividends net of tax reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019 and updated monthly.
Performances are annualised for periods longer than a year.
Base date is 21-Jun-2002.

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 univaried 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.

Annual Performances

Annual Performances refers to calendar year returns.

Annual Performances (Total Return) as of 28-Jun-2019

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 univaried stock selection.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Year 2019 (YTD)	15.92 %	17.45 %
Year 2018	-8.45 %	-8.19 %
Year 2017	24.72 %	23.29 %
Year 2016	9.08 %	7.69 %
Year 2015	3.91 %	0.02 %
Year 2014	8.50 %	5.09 %
Year 2013	28.11 %	26.81 %
Year 2012	16.29 %	16.43 %
Year 2011	-1.99 %	-5.59 %
Year 2010	18.81 %	12.64 %

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated at 28-Jun-2019 and updated monthly with EOM values.

Annual Performances (Net Return) as of 28-Jun-2019

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 univaried stock selection.

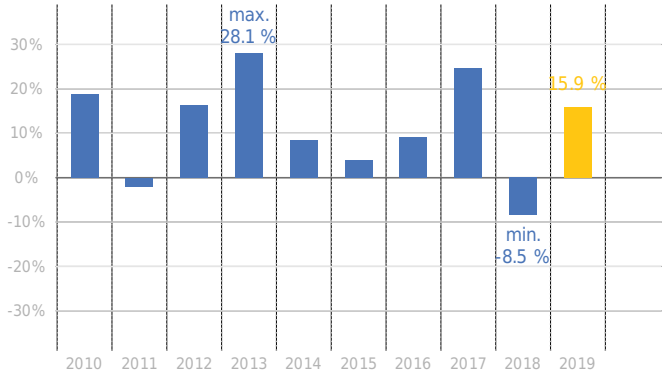
SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Year 2019 (YTD)	15.53 %	17.04 %
Year 2018	-8.96 %	-8.71 %
Year 2017	24.04 %	22.61 %
Year 2016	8.43 %	7.04 %
Year 2015	3.36 %	-0.52 %
Year 2014	7.91 %	4.53 %
Year 2013	27.34 %	26.03 %
Year 2012	15.50 %	15.62 %
Year 2011	-2.57 %	-6.20 %
Year 2010	18.21 %	12.01 %

*Analytics are based on daily **net** returns (dividends net of tax reinvested) in **USD**.*
Analytics are calculated at 28-Jun-2019 and updated monthly with EOM values.

The return of the current calendar year is the year-to-date return without annualisation. In case of univaried 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.

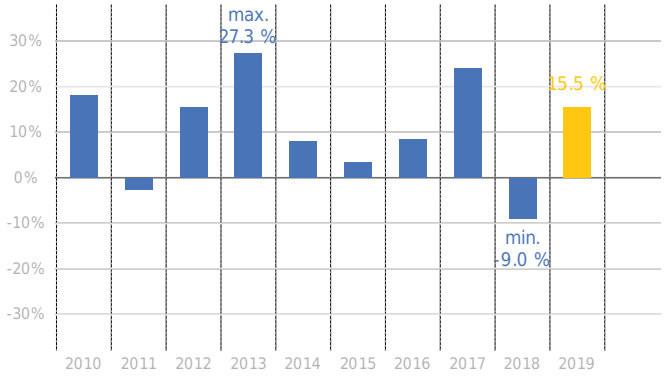
Annual Performances (Total Return) as of 28-Jun-2019

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



Annual Performances (Net Return) as of 28-Jun-2019

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



The return of the current calendar year is the year-to-date return without annualisation. In case of univaried 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 Performances

Annual Performances refers to calendar year returns.

Annual Relative Performances (Total Return) as of 28-Jun-2019

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 univaried stock selection.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	/ Broad CW
Year 2019 (YTD)	-1.53 %
Year 2018	-0.26 %
Year 2017	1.43 %
Year 2016	1.39 %
Year 2015	3.89 %
Year 2014	3.41 %
Year 2013	1.30 %
Year 2012	-0.15 %
Year 2011	3.60 %
Year 2010	6.17 %

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated at 28-Jun-2019 and updated monthly with EOM values.

Annual Relative Performances (Net Return) as of 28-Jun-2019

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 univaried stock selection.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	/ Broad CW
Year 2019 (YTD)	-1.51 %
Year 2018	-0.25 %
Year 2017	1.43 %
Year 2016	1.39 %
Year 2015	3.88 %
Year 2014	3.38 %
Year 2013	1.31 %
Year 2012	-0.12 %
Year 2011	3.62 %
Year 2010	6.20 %

*Analytics are based on daily **net** returns (dividends net of tax reinvested) in **USD**.*
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The return of the current calendar year is the year-to-date return without annualisation.

Annual Relative Performances (Total Return) as of 28-Jun-2019

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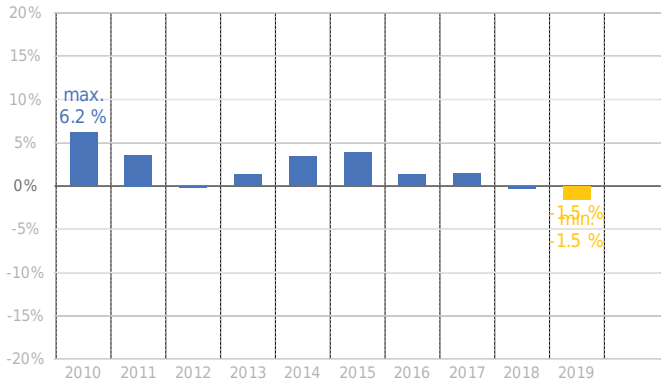

Annual Relative Performances (Net Return) as of 28-Jun-2019

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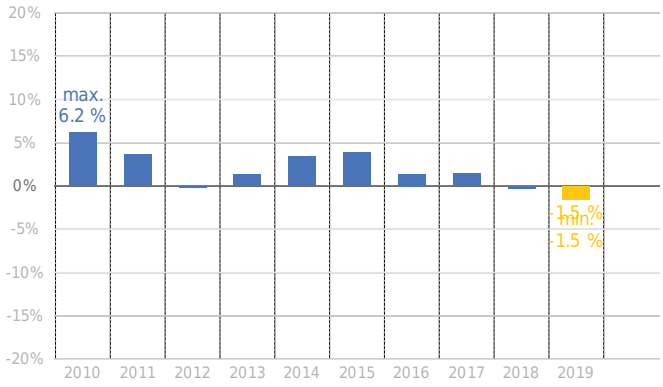


The return of the current calendar year is the year-to-date return without annualisation.

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 30-Jun-2019

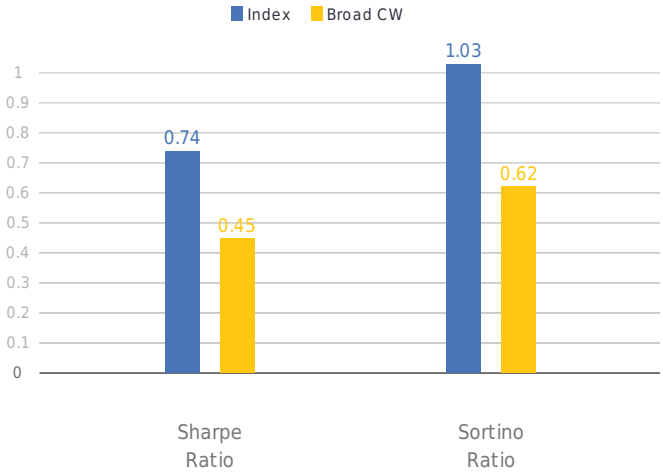
The table shows summary statistics of the index's absolute performance and risk over the selected analysis period. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported, along with those of the Beta cap-weighted reference index (Beta CW) in case of univaried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

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Return	11.27 %	8.19 %
Volatility	13.48 %	15.39 %
Sharpe ratio	0.74	0.45
Sortino ratio	1.03	0.62
Max Drawdown	49.9 %	57.1 %

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised for periods longer than a year.

Performance and Risk Characteristics as of 30-Jun-2019

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.



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 univaried 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 30-Jun-2019

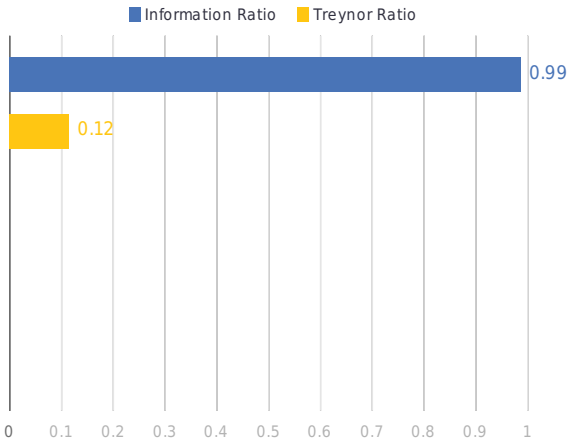
The table shows summary statistics of the index's relative performance and relative risk with regard to its Broad cap-weighted reference index (Broad CW) over the selected analysis period, along with those to its Beta cap-weighted reference index (Beta CW) in case of univaried stock selection.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	/ Broad CW
Relative Return Over CW	3.07 %
Tracking-Error	3.11 %
Information Ratio	0.99
Treynor Ratio	0.12
Max Relative Drawdown	7.3 %

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised for periods longer than a year.

Relative Performance and Risk as of 30-Jun-2019

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 30-Jun-2019

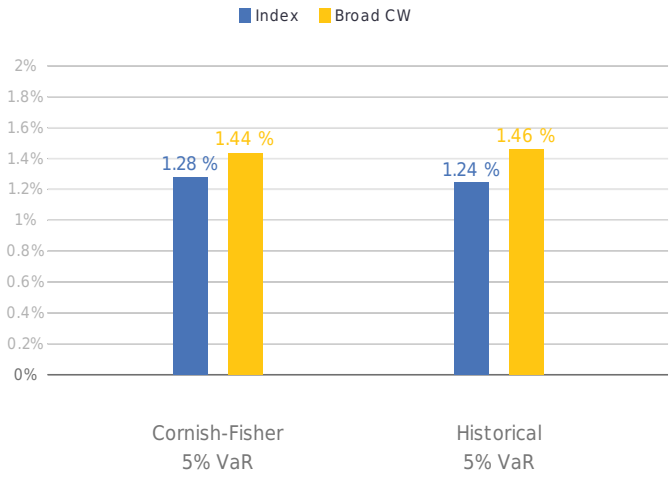
The table shows summary statistics of the index's absolute performance and risk over the selected analysis period. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Cornish-Fisher 5% VaR	1.28 %	1.44 %
Historical 5% VaR	1.24 %	1.46 %
Max Drawdown	49.9 %	57.1 %
Time Under Water	854	1 421

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.

Risk Analysis as of 30-Jun-2019

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.



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 30-Jun-2019

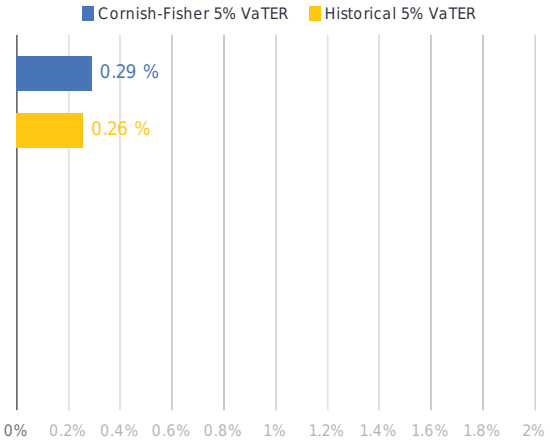
The table shows summary statistics of the index's relative performance and relative risk with regard to its Broad cap-weighted reference index (Broad CW) over the selected analysis period.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	/ Broad CW
Cornish-Fisher 5% VaTER	0.29 %
Historical 5% VaTER	0.26 %
Max Relative Drawdown	7.3 %
Rel. Time Under Water	551
Extreme Relative Return (5%)	-1.69 %
Extreme Tracking-Error (95%)	5.85 %
Average Tracking-Error	2.59 %

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.

Relative Risk Analysis as of 30-Jun-2019

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 30-Jun-2019

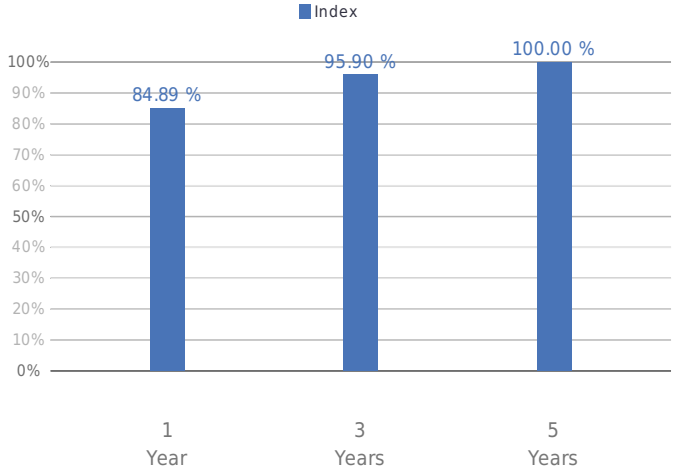
For long-only indices, the table shows summary statistics of the index's relative performance and relative risk with respect to its cap-weighted reference index, as well as the 1Y, 3Y and 5Y Probabilities of Outperformance over the last 10 years, and for the corresponding US Long-Term over the last 40 years. For long/short indices, the table shows the 1Y, 3Y and 5Y Probabilities of OutPerformance over the risk-free rate over the last 10 years.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	LT-US
Excess Return	1.92 %	n/r
Tracking-Error	2.15 %	n/r
Information Ratio	0.89	n/r
Prob. of Outperf. (1 year)	84.9 %	n/r
Prob. of Outperf. (3 years)	95.9 %	n/r
Prob. of Outperf. (5 years)	100.0 %	n/r
End of Period	30-Jun-2019	31-Dec-2017
Period	10 years	40 years

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated at 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised for periods longer than a year.

Robustness Analysis as of 30-Jun-2019

The figure, based on a rolling window analysis, shows the 1, 3, and 5 year Probability of Outperformance (over the risk-free rate for long/short indices) with respect to the cap-weighted reference index.



All statistics are annualised and based on the geometric average, which reliably reflects multiple holding period returns for investors.

Weight Profile and Top Holdings

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

Index Weight Concentration as of 30-Jun-2019

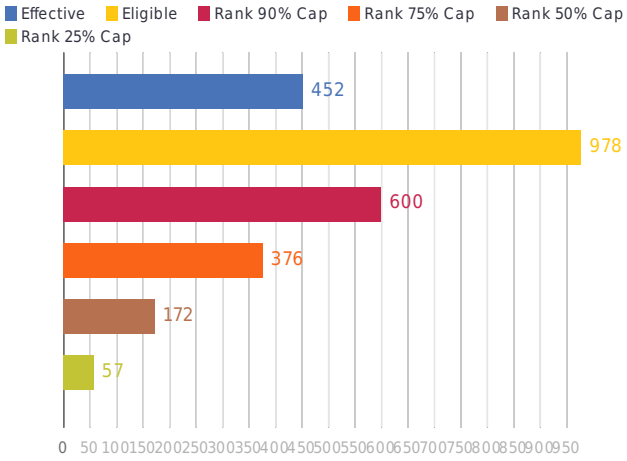
The table shows the index concentration level under various portfolio concentration measures based on the index's weight profile at the last rebalancing time. The quarterly calculated active share expresses the overall deviation of the index vis-à-vis its Broad cap-weighted reference, calculated as half 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 univaried stock selection.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Effective Number of Constituents	452	266
Number of Eligible Constituents	978	1 469
Nb. Stocks Cumul. to 90% Cap	600	795
Nb. Stocks Cumul. to 75% Cap	376	416
Nb. Stocks Cumul. to 50% Cap	172	137
Nb. Stocks Cumul. to 25% Cap	57	32
Deconcentration ratio	46.2 %	18.1 %
Active Share	58.50 %	0.00 %
Active Share (average)	62.16 %	0.00 %

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Index Weight Concentration as of 30-Jun-2019

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



In case of univaried 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.

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

Top Holdings as of 21-Jun-2019

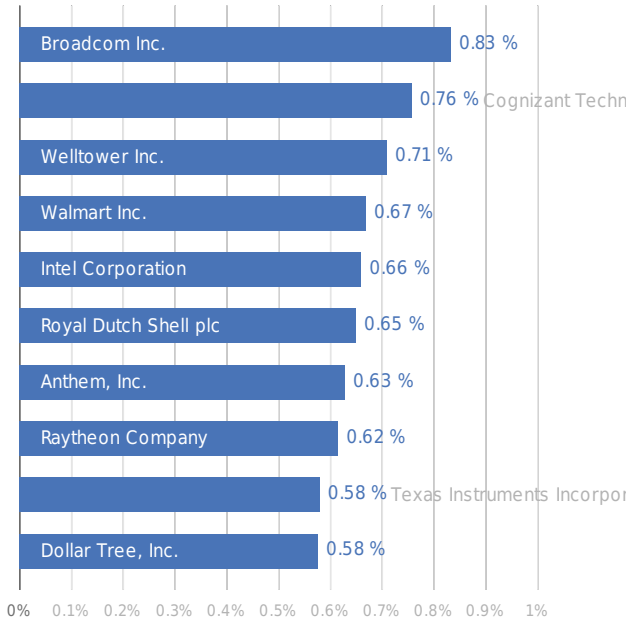
The table lists the weights of the ten largest constituents of the index, in descending order, based on the index's weight profile at the last quarterly rebalancing.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Country	Weight
Broadcom Inc.	US	0.83 %
Cognizant Technology Solutions Corpo...	US	0.76 %
Welltower Inc.	US	0.71 %
Walmart Inc.	US	0.67 %
Intel Corporation	US	0.66 %
Royal Dutch Shell plc	GB	0.65 %
Anthem, Inc.	US	0.63 %
Raytheon Company	US	0.62 %
Texas Instruments Incorporated	US	0.58 %
Dollar Tree, Inc.	US	0.58 %

Analytics are calculated at 21-Jun-2019.
Analytics are updated quarterly.

Top Holdings as of 21-Jun-2019

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.



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 21-Jun-2019

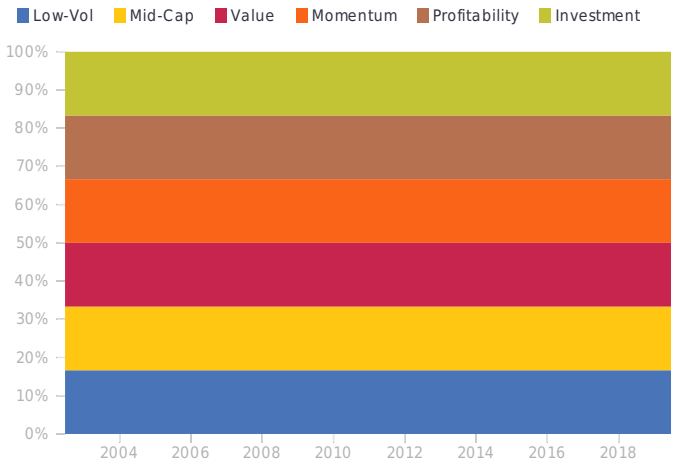
The Multi-Beta Allocation shows the average weight allocated to the underlying indices since the base date and at the latest quarterly review. The performance of the underlying index over the last quarter is also displayed.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Latest	Average
SciBeta Dev HFInt LVol Div MStrat (4S) (Sct-...	16.7 %	16.7 %
SciBeta Dev HFInt MCap Div MStrat (4S) (Sc...	16.7 %	16.7 %
SciBeta Dev HFInt Val Div MStrat (4S) (Sct-n...	16.7 %	16.7 %
SciBeta Dev HFInt HMom Div MStrat (4S) (Sc...	16.7 %	16.7 %
SciBeta Dev HFInt HProf Div MStrat (4S) (Sct...	16.7 %	16.7 %
SciBeta Dev HFInt LInv Div MStrat (4S) (Sct-n...	16.7 %	16.7 %

Allocations are reported at 21-Jun-2019.
Analytics are updated quarterly.

Multi-Beta Allocation as of 21-Jun-2019

The Multi-Beta Allocation graph exhibits the weight allocated to the underlying indices at the latest quarterly review.



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 30-Jun-2019

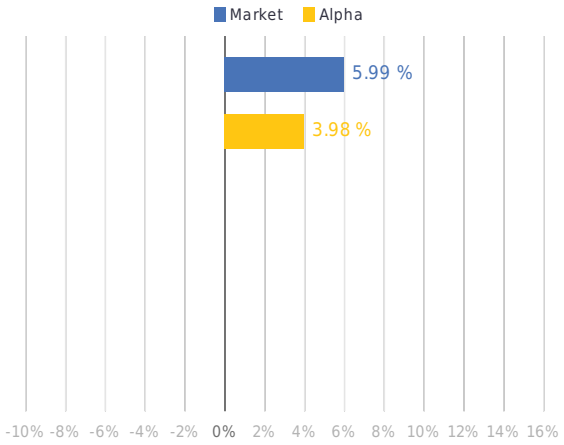
The table shows the coefficient estimates and R-squared of the regression of the index's excess returns (over the risk-free rate) using the CAPM single factor model over the selected analysis period. The factor contribution to the excess returns (over the risk-free rate) of the strategy are displayed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

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Coefficient	t-stat	Perf.
Alpha	3.55 %	6.0	3.98 %
Market	0.88	178.5	5.99 %
r^2	0.97		

*Analytics are based on weekly **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated quarterly with EOQ values.
Performances are annualised for periods longer than a year.

CAPM Performance Attribution as of 30-Jun-2019

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 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 30-Jun-2019

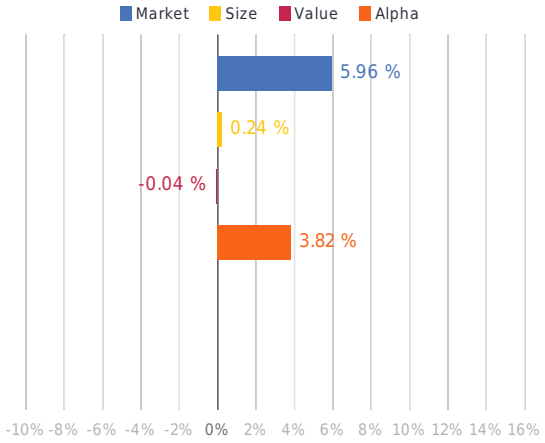
The table shows the coefficient estimates and R-squared of the regression of index's excess returns (over the risk-free rate) using the Fama French three-factor model over the selected analysis period. The factor contribution to the excess returns (over the risk-free rate) of the strategy are displayed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

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Coefficient	t-stat	Perf.
Alpha	3.38 %	5.8	3.82 %
Market factor	0.87	176.8	5.96 %
Size (SMB) factor	0.07	5.7	0.24 %
Value (HML) factor	-0.05	-3.1	-0.04 %
r^2	0.97		

*Analytics are based on weekly **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated quarterly with EOQ values.
Performances are annualised for periods longer than a year.

Fama-French Factor Performance Attribution as of 30-Jun-2019

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 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 small-cap stocks and short 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 SMB and HML factors are market beta neutralised ex-post on a quarterly basis. 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 30-Jun-2019

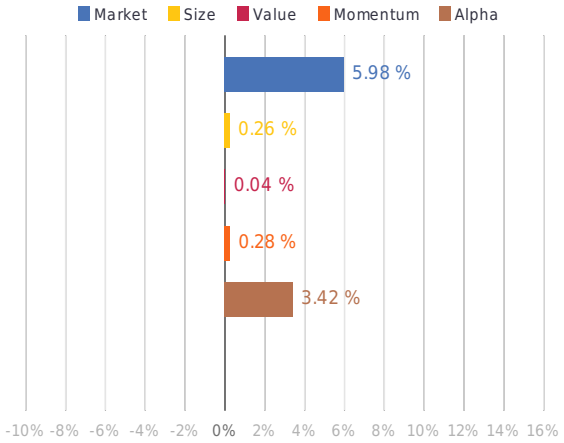
The table shows the coefficient estimates and r-square of the regression of the strategy's excess returns (over the risk-free rate) using the Carhart four-factor model over the selected analysis period. The factor contribution to the excess returns (over the risk-free rate) of the strategy are displayed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

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Coefficient	t-stat	Perf.
Alpha	2.92 %	5.3	3.42 %
Market factor	0.88	186.4	5.98 %
Size (SMB) factor	0.08	6.5	0.26 %
Value (HML) factor	0.05	2.5	0.04 %
Momentum (MOM) factor	0.11	9.8	0.28 %
r^2	0.98		

*Analytics are based on weekly **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated quarterly with EOQ values.
Performances are annualised for periods longer than a year.

Carhart Factor Performance Attribution as of 30-Jun-2019

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).



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 small-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 SMB, HML and MOM factors are market beta neutralised ex-post on a quarterly basis. The risk-free rates used are defined according to the regional universe of the index.

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 30-Jun-2019

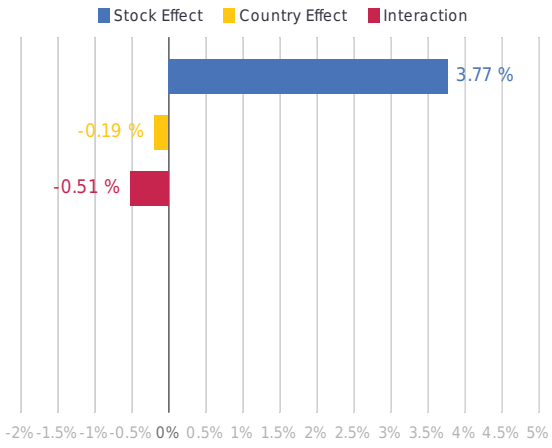
The table shows the results of the adaptation of Menchero Multi-period Attribution applied to country attribution, in which the index's outperformance with regard to its cap-weighted reference index is broken down into stock effect, country effect, and interaction effect. The analysis is based on the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

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Ref	Excess	Stock	Country	Inter
United Kingdom	0.40 %	0.14 %	0.26 %	0.08 %	-0.30 %	-0.12 %
Japan	1.49 %	1.36 %	0.13 %	2.72 %	0.41 %	-0.40 %
Canada	2.61 %	3.24 %	-0.63 %	0.63 %	0.13 %	-0.10 %
France	8.75 %	8.71 %	0.03 %	-0.30 %	0.11 %	-0.08 %
Australia	0.91 %	0.50 %	0.42 %	-0.18 %	-0.17 %	-0.13 %
Germany	0.96 %	0.50 %	0.45 %	0.33 %	0.50 %	0.21 %
Brazil	3.47 %	3.47 %	-0.00 %	-0.36 %	-0.05 %	0.03 %
Spain	1.01 %	0.50 %	0.51 %	0.43 %	0.13 %	0.17 %
India	1.50 %	1.37 %	0.13 %	-0.18 %	-0.30 %	0.12 %
Netherlands	0.55 %	0.28 %	0.26 %	0.02 %	-0.09 %	0.11 %
Italy	10.97 %	10.96 %	0.02 %	3.34 %	-0.33 %	-0.25 %
Russia	1.08 %	1.13 %	-0.05 %	-0.30 %	0.06 %	-0.04 %
Malaysia	1.11 %	1.01 %	0.10 %	-0.39 %	0.03 %	-0.23 %
Norway	0.31 %	0.08 %	0.23 %	0.04 %	-0.02 %	0.08 %
Indonesia	0.31 %	0.23 %	0.07 %	0.13 %	0.17 %	-0.07 %
Finland	3.74 %	4.45 %	-0.71 %	0.48 %	-0.13 %	-0.00 %
Turkey	51.09 %	51.17 %	-0.08 %	-1.26 %	-0.00 %	0.05 %
Poland	0.31 %	0.14 %	0.17 %	0.25 %	-0.24 %	0.27 %
Austria	1.99 %	2.94 %	-0.96 %	-0.26 %	-0.26 %	0.14 %
Egypt	1.48 %	1.70 %	-0.22 %	-0.68 %	0.58 %	-0.43 %
Ireland	0.20 %	0.19 %	0.01 %	0.17 %	-0.08 %	0.11 %
Czech Republic	2.64 %	3.78 %	-1.14 %	-0.63 %	-0.58 %	0.21 %
Greece	1.67 %	1.33 %	0.34 %	-0.32 %	-0.09 %	-0.02 %
Saudi Arabia	0.93 %	0.65 %	0.28 %	0.20 %	-0.05 %	0.07 %
Total				3.77 %	-0.19 %	-0.51 %

*Analytics are based on daily **total** returns (dividends reinvested).*
Analytics are calculated from base date to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised for periods longer than a year.

Country Performance Attribution as of 30-Jun-2019

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.



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.

Sector Performance Attribution

Sector Performance Attribution as of 30-Jun-2019

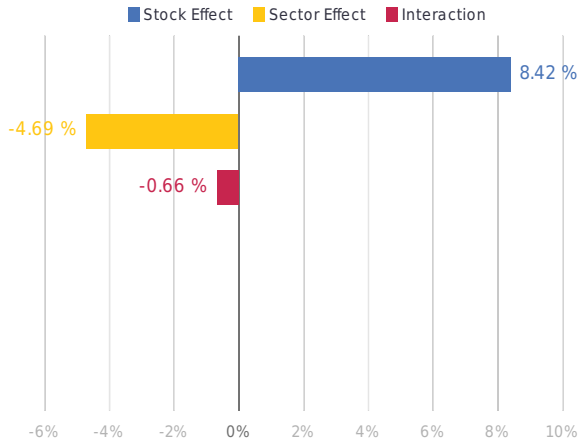
The table shows the results of Menchero Multi-period Attribution, in which the index's outperformance with regard to its cap-weighted reference index is broken down into stock effect, sector effect, and interaction effect. The analysis is based on the selected period.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Ref	Excess	Stock	Sector	Inter
Energy	8.27 %	8.56 %	-0.29 %	1.66 %	-0.52 %	0.05 %
Basic Materials	6.32 %	6.07 %	0.25 %	1.03 %	0.43 %	-0.17 %
Industrials	13.36 %	12.10 %	1.26 %	2.62 %	0.28 %	0.19 %
Cyclical Consumer	14.06 %	12.28 %	1.78 %	-2.81 %	0.03 %	-0.33 %
Non-Cyclical Consumer	10.79 %	9.10 %	1.69 %	0.93 %	-1.22 %	0.19 %
Financials	17.98 %	22.04 %	-4.06 %	0.62 %	0.20 %	-1.01 %
Healthcare	10.92 %	10.25 %	0.67 %	4.61 %	-0.26 %	0.34 %
Technology	8.93 %	11.21 %	-2.27 %	-0.61 %	-2.50 %	-0.08 %
Telecoms	4.64 %	4.58 %	0.06 %	0.12 %	-0.40 %	0.22 %
Utilities	4.74 %	3.82 %	0.92 %	0.23 %	-0.74 %	-0.06 %
Total				8.42 %	-4.69 %	-0.66 %

*Analytics are based on daily **total** returns (dividends reinvested).*
Analytics are calculated from base date to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised for periods longer than a year.

Sector Performance Attribution as of 30-Jun-2019

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.



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.

Multi-Beta Component Performances

The Component Performances analytic shows the allocation and the performance of the components of the multi-beta index at the latest completed calendar quarter in order to provide an in-depth analysis of the quarterly performance.

This analytic is updated at the end of calendar quarter and shows the quarterly performance, year-to-date performance, live performance and historical performance of the components.

Multi-Beta Component Performances as of 30-Jun-2019

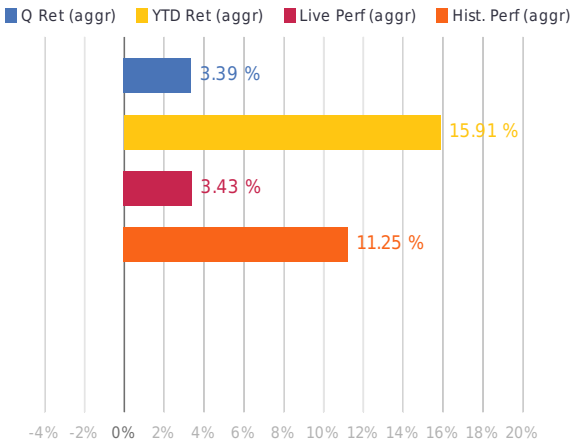
The table shows the weight allocated to the underlying indices at the penultimate rebalancing. For each component index, the return over the last quarter, the year-to-date return, the live performance and the historical performance are reported.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Allocation	Q Return	YTD Return	Live Perf	Hist. Perf
SciBeta Dev HFInt LVol Div MStrat ...	16.7 %	4.17 %	16.62 %	6.38 %	10.90 %
SciBeta Dev HFInt MCap Div MStra...	16.7 %	2.92 %	16.01 %	2.28 %	11.32 %
SciBeta Dev HFInt Val Div MStrat (4..	16.7 %	2.72 %	14.21 %	0.80 %	11.23 %
SciBeta Dev HFInt HMom Div MStra..	16.7 %	4.18 %	16.76 %	1.82 %	11.16 %
SciBeta Dev HFInt HProf Div MStrat...	16.7 %	3.39 %	16.45 %	5.74 %	11.92 %
SciBeta Dev HFInt LInv Div MStrat (...	16.7 %	2.94 %	15.41 %	3.53 %	10.96 %

Allocations are reported at 15-Mar-2019.
Quarterly returns are calculated between 29-Mar-2019 and 30-Jun-2019.
YTD returns are calculated between 31-Dec-2018 and 30-Jun-2019.
Live performances are calculated between Live date (16-Mar-2018) and 30-Jun-2019.
Historical performances are calculated between Base date (21-Jun-2002) and 30-Jun-2019.
Analytics are updated quarterly.

Multi-Beta Component Performances as of 30-Jun-2019

The figure displays the aggregated returns and performance of the component indices.



Multi-Beta Component Performances as of 30-Jun-2019

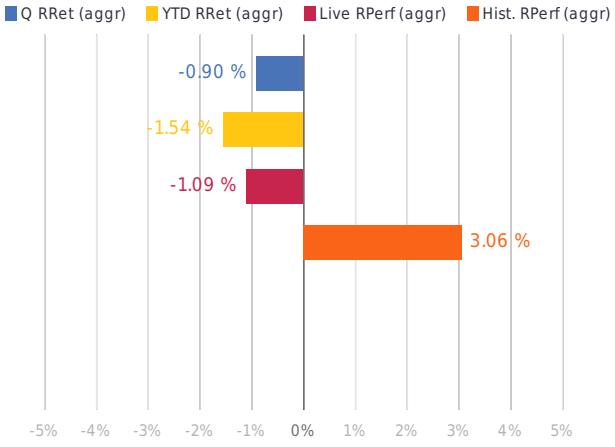
The table shows the weight allocated to the underlying indices at the penultimate rebalancing. For each component index, the relative return over the last quarter, the year-to-date relative return, the live relative performance and the historical relative performance are reported.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Allocation	Q RRet	YTD RRet	Live RPerf	Hist. RPerf
SciBeta Dev HFInt LVol Div MStrat ...	16.7 %	-0.11 %	-0.83 %	1.86 %	2.70 %
SciBeta Dev HFInt MCap Div MStra...	16.7 %	-1.37 %	-1.44 %	-2.24 %	3.13 %
SciBeta Dev HFInt Val Div MStrat (4..	16.7 %	-1.57 %	-3.23 %	-3.71 %	3.03 %
SciBeta Dev HFInt HMom Div MStra..	16.7 %	-0.11 %	-0.69 %	-2.69 %	2.97 %
SciBeta Dev HFInt HProf Div MStrat...	16.7 %	-0.89 %	-1.00 %	1.23 %	3.73 %
SciBeta Dev HFInt LInv Div MStrat (...	16.7 %	-1.35 %	-2.03 %	-0.98 %	2.77 %

Allocations are reported at 15-Mar-2019.
Quarterly relative returns are calculated between 29-Mar-2019 and 30-Jun-2019.
YTD relative returns are calculated between 31-Dec-2018 and 30-Jun-2019.
Live relative performances are calculated between Live date (16-Mar-2018) and 30-Jun-2019.
Historical relative performances are calculated between Base date (21-Jun-2002) and 30-Jun-2019.
Analytics are updated quarterly.

Multi-Beta Component Performances as of 30-Jun-2019

The figure displays the aggregated relative returns and performance of the component indices.



Index Diversification

The Diversification analytics measure the benefits of portfolio diversification after adjusting for the effect of factor exposures.

Diversification as of 30-Jun-2019

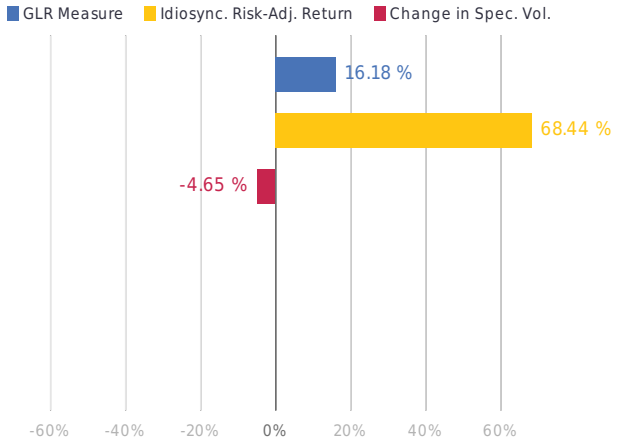
The table shows the average index concentration level and the low correlation objective measure (GLR) based on historical returns and weights over the period. The GLR measure is the ratio of the variance of a portfolio's returns to the weighted average of the variance of its constituents' returns. The Idiosyncratic Risk-Adjusted Return is calculated as the ratio of unexplained return to the standard deviation of the residuals in the risk factor exposure (seven factor) regression. The Change in Specific Volatility is calculated as the difference in volatility of the strategy and its Multi-factor Benchmark, a synthetic portfolio levered to match returns of the respective strategy that contains the same magnitude of systematic risk.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Effective Number of Constituents (avera...	464.8	359.7
GLR Measure	16.2 %	19.3 %
Idiosyncratic Risk-Adj. Return	0.68	n/r
Change in Specific Volatility	-4.65 %	n/r

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Diversification as of 30-Jun-2019

The figure displays the diversification measures of the index.



Index Fundamentals

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

Index Fundamentals as of 30-Jun-2019

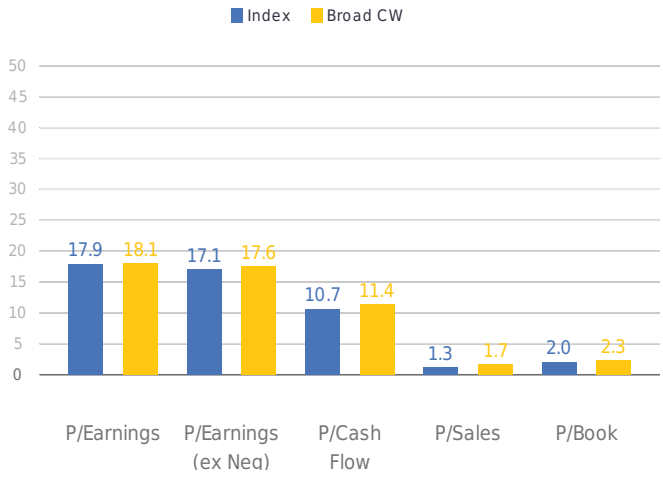
The table shows the index's fundamental attributes based on the index's weight profile at the last rebalancing time. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Price / Earnings	17.94	18.09
Price / Earnings (ex Neg)	17.07	17.59
Price / Cash Flow	10.66	11.43
Price / Sales	1.26	1.72
Price / Book Value	2.04	2.35
Gross Profitability	28.95 %	25.73 %
Total Asset Growth	3.49 %	11.40 %
Dividend Yield	2.51 %	2.50 %

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Index Fundamentals as of 30-Jun-2019

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 30-Jun-2019

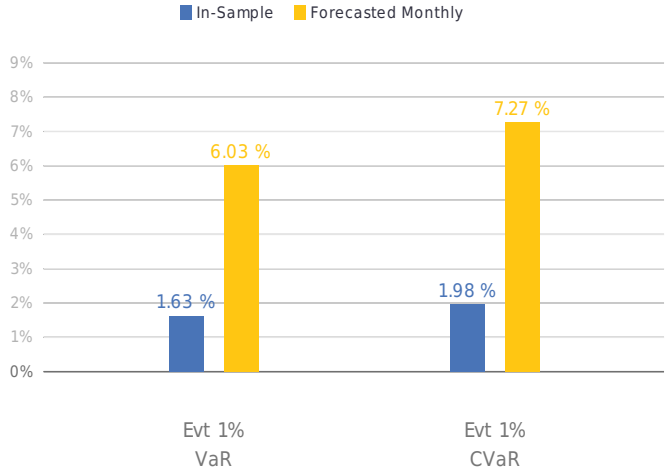
The table shows summary statistics of the index's extreme risk over the selected analysis period. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Return	11.27 %	8.19 %
EVT 1% VaR	1.63 %	1.88 %
EVT 1% CVaR	1.98 %	2.29 %
Ret to EVT 1% VaR ratio	0.38	0.23
Ret to EVT 1% CVaR ratio	0.31	0.19
For. Monthly EVT 1% VaR	6.03 %	6.56 %
For. Monthly EVT 1% CVaR	7.27 %	7.97 %

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised for periods longer than a year.

Extreme Risk Analysis as of 30-Jun-2019

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.



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 30-Jun-2019

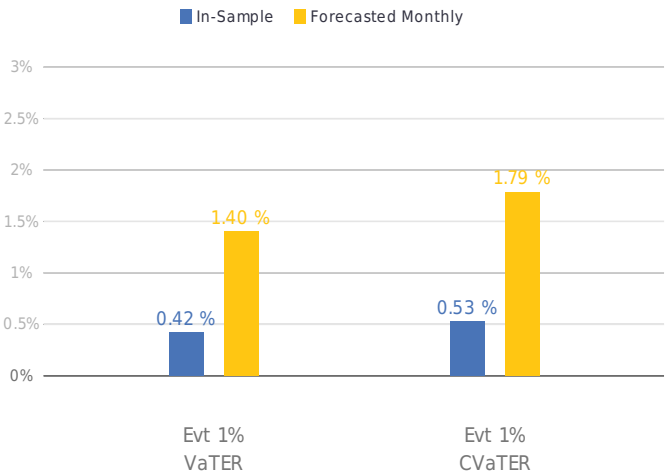
The table shows summary statistics of the index's extreme relative risk with regard to its Broad cap-weighted reference index (Broad CW) over the selected analysis period.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	/ Broad CW
Excess Return	3.07 %
EVT 1% VaTER	0.42 %
EVT 1% CVaTER	0.53 %
Ret to EVT 1% VaTER ratio	0.45
Ret to EVT 1% CVaTER ratio	0.36
For. Monthly EVT 1% VaTER	1.40 %
For. Monthly EVT 1% CVaTER	1.79 %

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised for periods longer than a year.

Extreme Relative Risk Analysis as of 30-Jun-2019

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.



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

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 30-Jun-2019

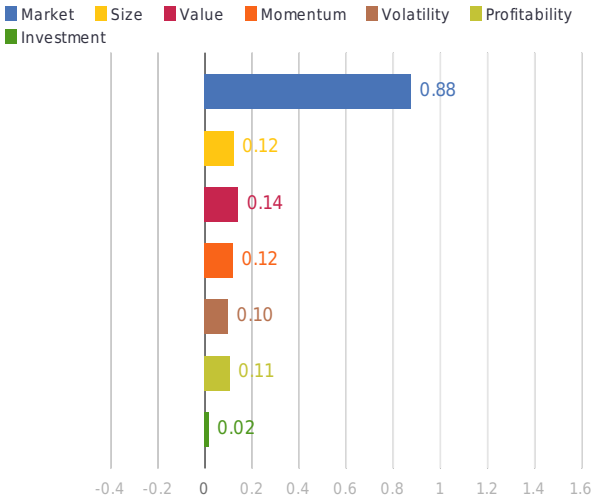
The table shows the coefficient estimates and r-square of the regression of the strategy's excess returns (over the risk-free rate) using the seven-factor model over the selected analysis period. The t-statistics associated with the coefficient estimates are also reported, together with the factor contribution to the excess returns (over the risk-free rate) of the strategy. Furthermore, the table displays Factor Intensity, which is the sum of all the beta coefficients of the factor regression, except the market beta, Factor Deconcentration, which is the inverse of the sum of squared relative betas, and the Factor Exposure Quality, which is the product of multiplying the Factor Intensity measure by the Effective Number of Factors.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Coefficient	t-stat	Perf.
Unexplained	1.39 %	2.7	1.95 %
Market factor	0.88	203.5	5.98 %
Size (SMB) factor	0.12	10.7	0.41 %
Value (HML) factor	0.14	6.0	0.12 %
Momentum (MOM) factor	0.12	11.0	0.30 %
Volatility factor	0.10	10.1	0.86 %
Profitability factor	0.11	4.7	0.35 %
Investment factor	0.02	0.8	0.01 %
Factor Intensity	0.61		
Factor Deconcentration	5.21		
Factor Exposure Quality	3.19		
Eff. Number of Factor Bets	2.75		
r^2	0.98		

*Analytics are based on weekly **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated quarterly with EOQ values.
Performances are annualised for periods longer than a year.

Risk Factor Exposure as of 30-Jun-2019

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.



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 small-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 SMB, HML, MOM, VOL, PRO and INV factors are market beta neutralised ex-post on a quarterly basis. The risk-free rates used are defined according to the regional universe of the index.

Relative Factor Score

Relative Factor Score identifies the exposure of an index to the academically consensual factors such as Size, Value, Momentum, Volatility, Profitability and Investment.

Relative Factor Score as of 30-Jun-2019

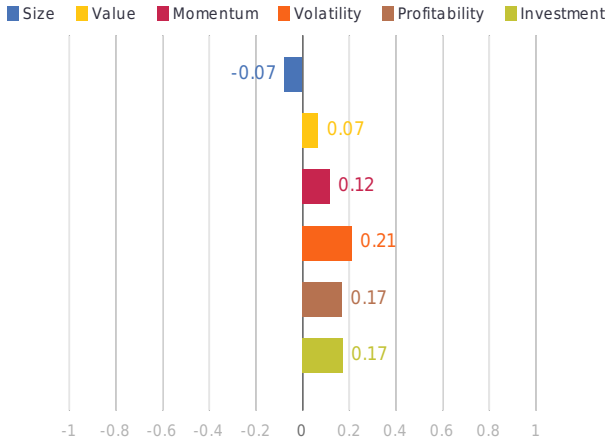
The table shows the relative factor score and relative score intensity of the strategy index, beta cap-weighted index and the broad cap-weighted index.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Size (SMB) factor	-0.07	-0.58
Value (HML) factor	0.07	-0.05
Momentum (MOM) factor	0.12	0.01
Volatility factor	0.21	0.15
Profitability factor	0.17	0.02
Investment factor	0.17	-0.00
Relative Score Intensity	0.67	-0.46

Analytics are based on quarterly weights.
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated quarterly with EOQ values.

Relative Factor Score as of 30-Jun-2019

The figure displays the relative factor scores of the index.



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 30-Jun-2019

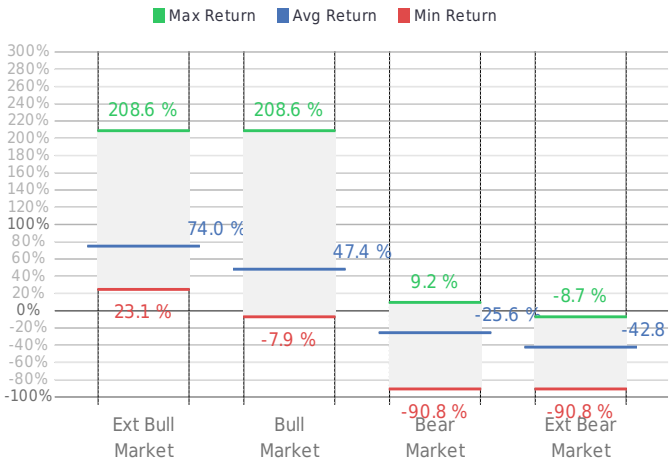
The analysis is based on the complete history of index returns. The table shows general statistics of the index's absolute performance and risk in periods of bull and bear market regimes and in periods of extreme bull and extreme bear market regimes.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Ext Bull Market	Bull Market	Bear Market	Ext Bear Market
Return	69.79 %	42.83 %	-30.28 %	-46.56 %
Volatility	11.27 %	10.34 %	17.60 %	21.64 %
Sharpe ratio	6.06	4.01	n/r	n/r

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised.

Bull / Bear Market Performances as of 30-Jun-2019

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



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 30-Jun-2019

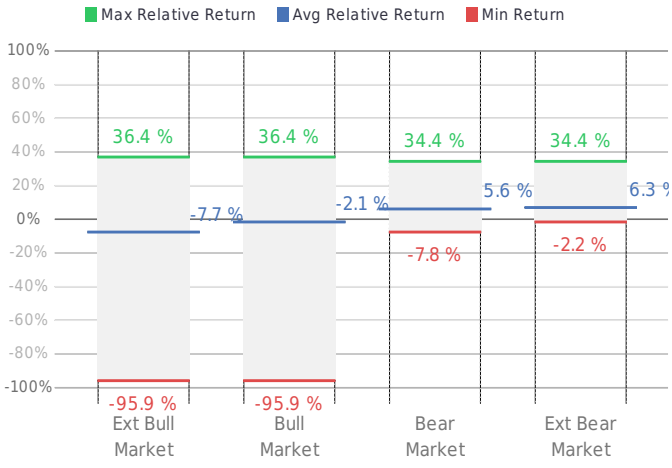
The analysis is based on the complete history of index returns. The table shows general statistics of the index's relative performance and relative risk (with respect to its cap-weighted reference index) in the periods of bull and bear market regimes respectively.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Ext Bull Market	Bull Market	Bear Market	Ext Bear Market
Relative Return	-6.14 %	-0.51 %	5.93 %	6.29 %
Tracking-Error	3.09 %	2.72 %	3.70 %	4.45 %
Information Ratio	n/r	n/r	1.60	1.41

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised.

Bull / Bear Market Rel. Performances as of 30-Jun-2019

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 30-Jun-2019

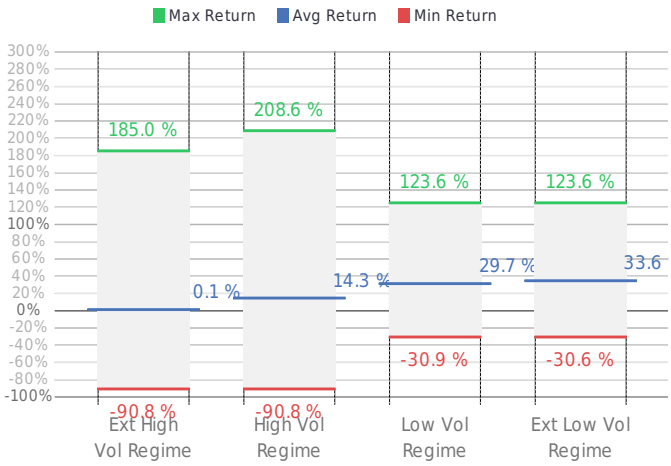
The analysis is based on the complete history of index returns. The table shows general statistics of the index's absolute performance and risk in periods of high and low volatility market regimes and in periods of extreme high and low volatility market regimes.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Ext High Vol Regime	High Vol Regime	Low Vol Regime	Ext Low Vol Regime
Annualized Return	-17.03 %	-1.47 %	25.70 %	30.17 %
Volatility	21.97 %	17.51 %	7.45 %	6.79 %
Sharpe ratio	n/r	n/r	3.25	4.19

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised.

High / Low Vol Regime Performances as of 30-Jun-2019

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



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 30-Jun-2019

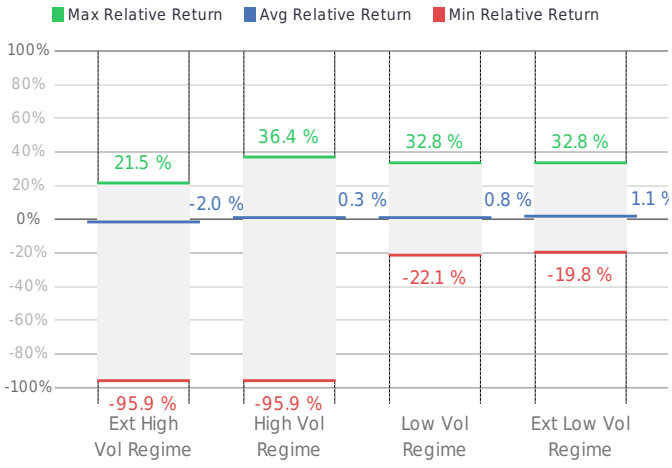
The analysis is based on the complete history of index returns. The table shows general statistics of the index's relative performance and relative risk (with respect to its cap-weighted reference index) in the periods of high and low volatility market regimes respectively.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Ext High Vol Regime	High Vol Regime	Low Vol Regime	Ext Low Vol Regime
Annualized Relative Return	4.43 %	4.71 %	1.02 %	1.28 %
Tracking-Error	4.90 %	3.97 %	1.88 %	1.81 %
Information Ratio	0.90	1.19	0.54	0.71

*Analytics are based on daily **total** returns (dividends reinvested) in **USD**.*
Analytics are calculated from base date (21-Jun-2002) to 30-Jun-2019.
Analytics are updated monthly with EOM values.
Performances are annualised.

High / Low Vol Regime Rel. Performances as of 30-Jun-2019

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.



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.

Turnover and Transaction Costs

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

Turnover & Capacity as of 30-Jun-2019

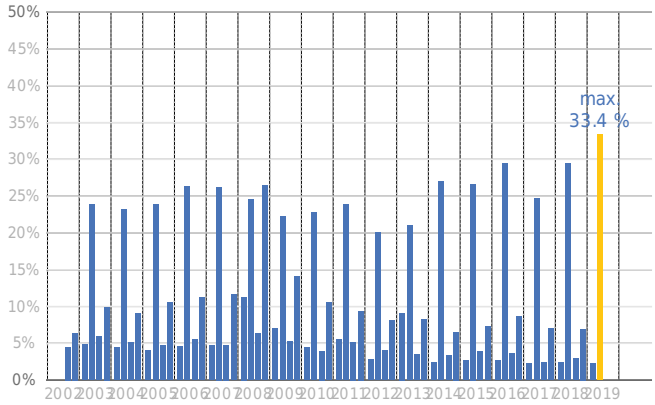
The table shows the turnover level of the index in % and the capacity of the index (long-only indices) as measured by the average market capitalisations, in M$. The corresponding statistics of the Broad cap-weighted reference index (Broad CW) are also reported, along with those of the Beta cap-weighted reference index (Beta CW) in case of univaried stock selection. * For long/short indices, the table also reports the average capacity and latest capacity in M$ of the long branch and the short branch of the unleveraged branch indices. * For Market Beta Adjusted (Overlay) indices, the reported investability measures do not take into account the cost of replication of the cap-weighted index using futures overlay.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Turnover (annualised)	44.3 %	3.9 %
Average Capacity (M$)	26 266	76 681
Latest Capacity (M$)	42 542	148 305

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Turnover History as of 30-Jun-2019

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



In case of univaried 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.

Transaction costs represent the cost associated with the activity of buying and selling securities due to the rebalancing of the index.

Transaction Costs as of 30-Jun-2019

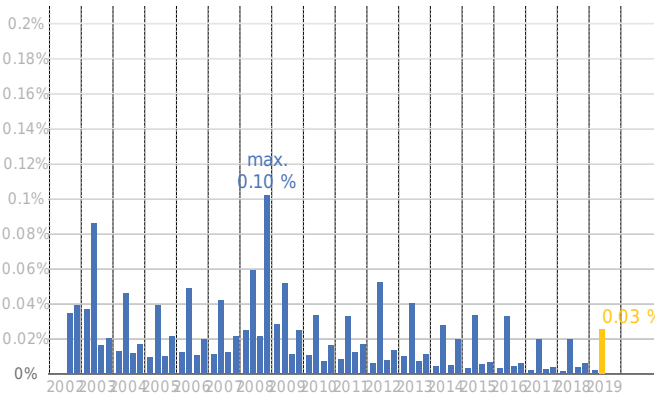
The table reports annualised Total Returns, annualised Transaction Costs and annualised Total Returns Net of Transaction Costs.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW
Total Return	11.27 %	8.19 %
Transaction Cost	0.09 %	0.01 %
Net of Cost Return	11.17 %	8.18 %

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Transaction Costs as of 30-Jun-2019

The chart displays the history of the relative transaction costs of the index on a quarterly basis.



In the 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.

Country Allocation

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

Country Allocation as of 30-Jun-2019

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

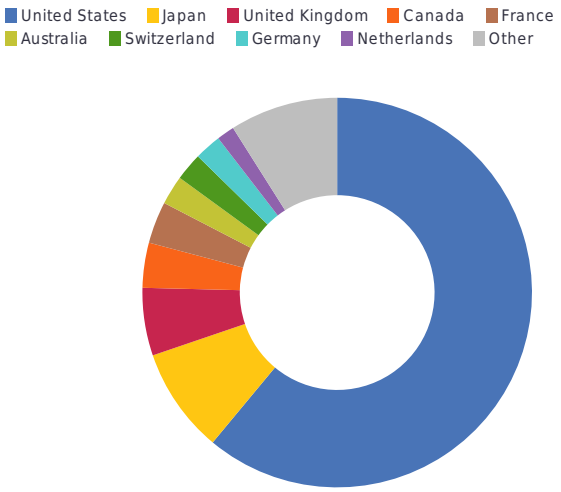
SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Weight
United States	61.0 %
Japan	8.7 %
United Kingdom	5.6 %
Canada	3.7 %
France	3.5 %
Australia	2.4 %
Switzerland	2.3 %
Germany	2.2 %
Netherlands	1.5 %
Other	9.0 %

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

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

Country Allocation as of 30-Jun-2019

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



Country Allocation as of 30-Jun-2019

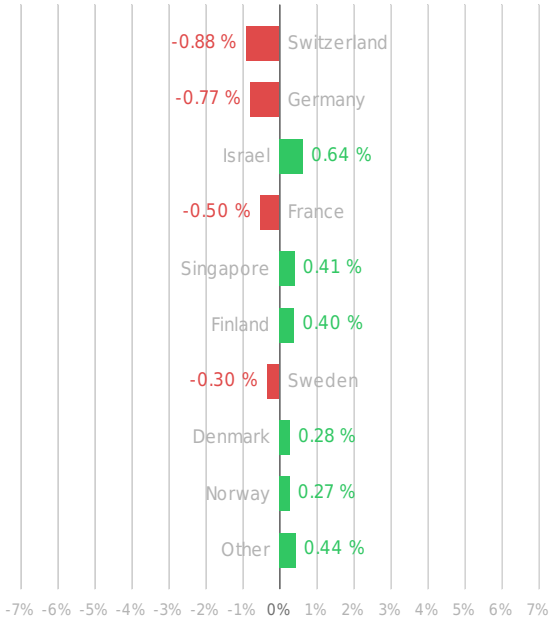
The table shows top relative country exposures (in relative weight percentage) of the index with regard to its Broad cap-weighted reference index (Broad CW), based on the index's weight profile at the last rebalancing time.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Excess Weight
Switzerland	-0.9 %
Germany	-0.8 %
Israel	0.6 %
France	-0.5 %
Singapore	0.4 %
Finland	0.4 %
Sweden	-0.3 %
Denmark	0.3 %
Norway	0.3 %
Other	0.4 %

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Country Allocation as of 30-Jun-2019

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.



The top countries are ordered by the index relative exposures 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 30-Jun-2019

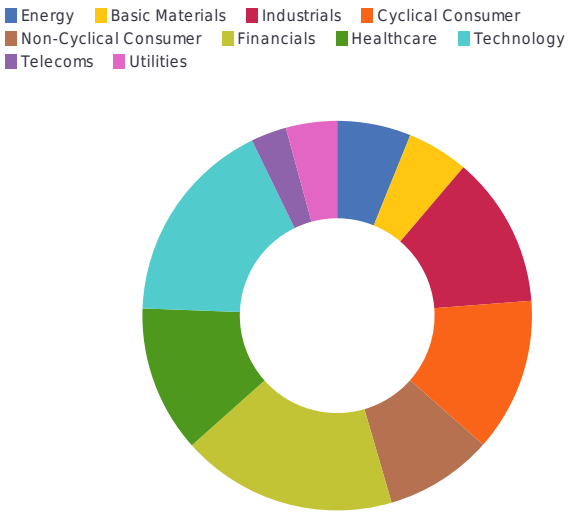
The table shows industry sector exposures (in weight percentage) of the index, based on the index's weight profile at the last rebalancing time.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Weight
Energy	6.1 %
Basic Materials	5.1 %
Industrials	12.6 %
Cyclical Consumer	12.7 %
Non-Cyclical Consumer	9.0 %
Financials	17.9 %
Healthcare	12.2 %
Technology	17.2 %
Telecoms	3.0 %
Utilities	4.2 %

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Sector Allocation as of 30-Jun-2019

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



The sector classification used is the Thomson Reuters Business Classification.

Sector Allocation as of 30-Jun-2019

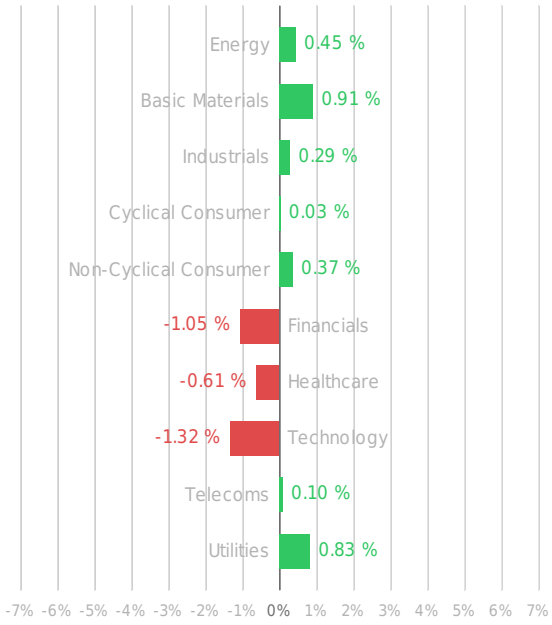
The table shows the differences in aggregated sector weights of the index with regard to its Broad cap-weighted reference index (Broad CW), based on the index's weight profile at the last rebalancing time.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Excess Weight
Energy	0.4 %
Basic Materials	0.9 %
Industrials	0.3 %
Cyclical Consumer	0.0 %
Non-Cyclical Consumer	0.4 %
Financials	-1.1 %
Healthcare	-0.6 %
Technology	-1.3 %
Telecoms	0.1 %
Utilities	0.8 %

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Sector Allocation as of 30-Jun-2019

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.



The sector classification used is the Thomson Reuters Business Classification.

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 30-Jun-2019

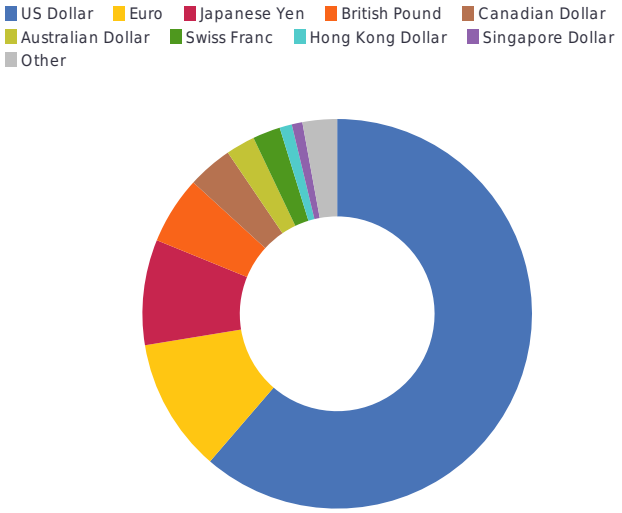
The figure displays top currency exposures (in weight percentage) of the index, based on the index's weight profile at the last rebalancing time.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Weight
US Dollar	61.3 %
Euro	11.1 %
Japanese Yen	8.7 %
British Pound	5.6 %
Canadian Dollar	3.7 %
Australian Dollar	2.4 %
Swiss Franc	2.3 %
Hong Kong Dollar	1.0 %
Singapore Dollar	0.9 %
Other	2.9 %

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Currency Allocation as of 30-Jun-2019

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



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 30-Jun-2019

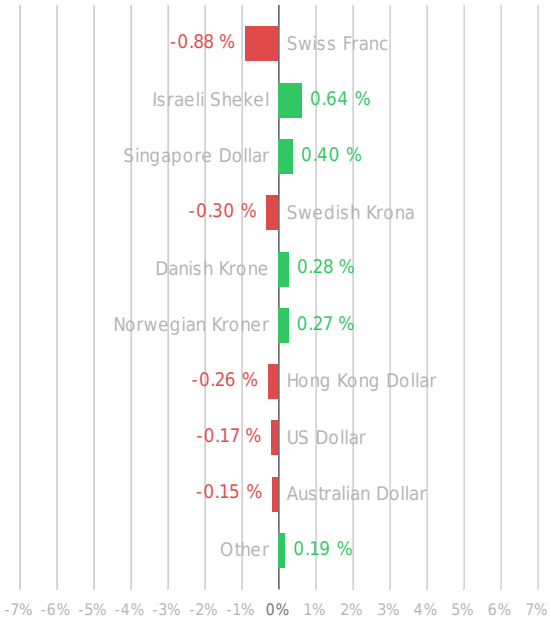
The figure displays top relative currency exposures (in relative weight percentage) of the index with regard to its Broad cap-weighted reference index (Broad CW), based on the index's weight profile at the last rebalancing time.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Excess Weight
Swiss Franc	-0.9 %
Israeli Shekel	0.6 %
Singapore Dollar	0.4 %
Swedish Krona	-0.3 %
Danish Krone	0.3 %
Norwegian Kroner	0.3 %
Hong Kong Dollar	-0.3 %
US Dollar	-0.2 %
Australian Dollar	-0.1 %
Other	0.2 %

Analytics are calculated at 30-Jun-2019.
Analytics are updated quarterly.

Currency Allocation as of 30-Jun-2019

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



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.

Controversial Products

The Controversial Weapons Metrics report the index exposure to companies with involvement in controversial weapons in general and certain classes of weapons in particular, namely cluster munitions and anti-personnel landmines on the one hand, and weapons of mass destruction on the other.

Controversial Weapons as of 30-Jun-2019

The table shows the cumulated weight of index constituents with involvement in the controversial product. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Companies involved in controversial weapons	2.02 %	2.61 %	-22.67 %
Companies involved in cluster munitions and anti-personnel mines	1.05 %	0.68 %	55.18 %
Companies involved in nuclear, biological and chemical weapons	1.92 %	2.44 %	-21.51 %

Analytics are calculated at the end of the latest quarter and with ESG data updated at the beginning of the penultimate month of the quarter.

Controversial weapons cover ten classes of inhumane weapons whose production or proliferation is regulated by international treaties or subject to stakeholder campaigns and discussions in international institutions regarding possible future regulation. The former include anti-personnel landmines and cluster munitions; nuclear, biological and chemical weapons of mass destruction; as well as other weapons considered inhumane due to their disproportionate or indiscriminate impact, including weapons with fragments not detected in the human body by X-rays, incendiary weapons such as those that use white phosphorus and blinding laser weapons. The latter cover depleted uranium weapons and white phosphorus weapons. Involvement in anti-personnel landmines and cluster munitions disqualifies companies from being recognised as participants in the UN Global Compact. Public sources are used to measure involvement in cluster munitions and anti-personnel landmines. Vigeo-Eiris data are used to measure involvement in the other eight classes of controversial weapons.

Coal as of 30-Jun-2019

The table shows the cumulated weight of index constituents with involvement in the controversial product. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Companies classified in the coal industry	0.05 %	0.09 %	-44.34 %
Companies with 30% or more of turnover from thermal coal mining	0.00 %	0.00 %	n/r
Companies owning coal reserves (other than those classified in the iron and steel industry)	1.70 %	2.15 %	-20.83 %
Utilities with 30% or more of coal in power generation fuel mix	1.82 %	1.22 %	49.83 %

Analytics are calculated at the end of the latest quarter and with ESG data updated at the beginning of the penultimate month of the quarter.

The Tobacco Metrics report the index exposure to companies with involvement in tobacco production and/or distribution.

Tobacco as of 30-Jun-2019

The table shows the cumulated weight of index constituents with involvement in the controversial product. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Companies producing tobacco products	0.10 %	0.94 %	-88.81 %
Companies with 5% or more of turnover derived from the production or distribution of tobacco	0.29 %	1.19 %	-75.61 %

Analytics are calculated at the end of the latest quarter and with ESG data updated at the beginning of the penultimate month of the quarter.

Tobacco industry classification is a per the Thomson Reuters Business Classification (TRBC 54102030) and covers tobacco farming; stemming and redrying; cigars and cigarette manufacturing; Chewing Tobacco Products. Involvement in the production of tobacco is in respect of tobacco products and does not include associated products such as packaging, filters and flavour additives. This scope corresponds to that of the Tobacco-Free Finance Pledge (2018) and companies with such involvement are disqualified from participation in the UN Global Compact (since October 2017). Public sources are used to measure involvement in the manufacture of tobacco products, which is determined irrespective of industry classification and regardless of the percentage of business turnover represented by tobacco product manufacturing. Involvement in production or distribution of tobacco at a level of 5% or more of turnover concerns ownership of tobacco plantations and the manufacture of tobacco products (including revenues from the sale of own products) and wholesaling and retailing of tobacco products manufactured by other companies. Vigeo-Eiris data are used to measure involvement in the production or distribution of tobacco in relation to turnover.

Industry classification is as per the Thomson Reuters Business Classification (TRBC) and covers coal mining or beneficiating, provision of support services for coal, mining support (e.g. testing, tunnelling, blasting, training, and other contract-based, coal-related services) and wholesaling of coal. Involvement in thermal coal mining at a level of 30% or more of turnover is determined regardless of industry classification. Companies classified in the iron and steel industry are not considered in the computation of coal reserves. Utilities with power-generation capacity are companies with such capacity classified in the TRBC Utilities and Financials economic sectors. In regards to the fuel mix and in the event the coal ratio is not available, the thermal ratio ("brown" share) is used in its stead to ensure the assessment of exposure remains conservative. Institutional Shareholder Services data are relied upon to measure coal involvement beyond industry classification.

ESG Conduct

The Ethical Norms Metrics report index exposure to companies associated with high risk of gross violations of fundamental ethical norms and companies facing critical environmental, social or governance (ESG) controversies in respect of their fundamental responsibilities.

Ethical Norms as of 30-Jun-2019

The table shows the cumulated weight of index constituents with controversial conduct. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Companies excluded from Norway...	1.20 %	0.97 %	23.38 %
Companies ineligible to join the UN...	5.47 %	12.74 %	-57.09 %

Analytics are calculated at the end of the latest quarter and with ESG data updated at the beginning of the penultimate month of the quarter.

Companies are put on the exclusion list of Norway's Government Pension Fund Global (GPFG) if there is an unacceptable risk that they continue to contribute to, or to be responsible for, gross violations of fundamental ethical norms and after the Central Bank of Norway has considered whether other measures, including the exercise of ownership rights, are not better suited to reduce this risk or more appropriate for other reasons. Companies ineligible to join the Global Compact are those that i) are subject to a United Nations (UN) sanction; or ii) are listed on the UN Ineligible Vendors List for ethical reasons; or iii) derive revenue from the production, sale and/or transfer of antipersonnel landmines or cluster bombs; or iv) derive revenue from the production and/or manufacturing of tobacco. In reference to the framework defined by the Office of the UN High Commissioner for Human Rights (OHCHR, 2011), a critical controversy relates to a fundamental issue and has high adverse impact on a large scope. Fundamental issues are in relation to the four areas covered by the Global Compact, i.e. human rights, labour, environment and anti-corruption. The data for exclusion in respect of ineligibility to, or existence of a critical controversy in the areas covered by, the Global Compact are provided by Vigeo-Eiris.

The Non-Voting Shares Metrics report index exposure to companies that only offer non-voting stocks to the public.

Non-Voting Shares as of 30-Jun-2019

The table shows the cumulated weight of index constituents with controversial conduct. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Companies offering only non-voting stocks to the public	0.10 %	0.04 %	182.14 %

Analytics are calculated at the end of the latest quarter and with ESG data updated at the beginning of the penultimate month of the quarter.

The data for exclusion in respect of non-voting shares are generated from public sources.

Carbon Footprinting and Exposure

Carbon Exposure analytics measure portfolio exposure to carbon-intensive companies and sectors.

Carbon Footprinting as of 30-Jun-2019

The table shows the relevant carbon footprinting metrics for the index and the Broad cap-weighted reference index (Broad CW) at the last quarterly rebalancing, along with the exposure of the index relative to that of the Broad cap-weighted reference, where relevant. For the Broad cap-weighted index, it is possible to compute a total capitalisation and corresponding Total Emissions.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Total Emissions (S1+2, Gt)	n/r	4.33	n/r
Total Emissions (S1+2+3, Gt)	n/r	17.34	n/r
Current Total Capitalisation (FF, M$)	n/r	37 133 520	n/r
Carbon Footprint (S1+2, kt/B$)	171	117	46.14 %
Carbon Footprint (S1+2+3, kt/B$)	650	467	39.02 %
Carbon Intensity (S1+2, t/M$)	214	199	7.22 %
Carbon Intensity (S1+2+3, t/M$)	813	797	2.00 %

Analytics are calculated at the end of the latest quarter and with emissions data updated annually in June on the basis of the figures reported at the end of the previous year. For Carbon Intensity calculations, corporate revenues are those of the year for which greenhouse gas emissions are reported. For Carbon Footprint calculations, corporate capitalisations are taken at end-of-quarter. Constituent weights used for all carbon footprinting metrics are end-of-quarter weights.

Carbon footprinting metrics are computed in respect of Scope 1 plus Scope 2 emissions (direct emissions from sources owned or controlled by the reporting company and emissions from the combustion of fuels to generate electricity, steam, heating, and cooling purchased and consumed by the reporting company, respectively) and in respect of the former plus Scope 3 emissions (all indirect emissions beyond Scope 2 emissions that occur in the value chain of the reporting company). Emissions provided by Institutional Shareholder Services are relied upon to compute emission-based carbon metrics.

Carbon Exposure as of 30-Jun-2019

The table shows the Weighted Average Carbon Intensity of constituents and the cumulated weight of constituents qualifying as Carbon-related Assets. Figures are shown for the index and the Broad cap-weighted reference index (Broad CW) at the last quarterly rebalancing, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Weighted Average Carbon Intensity (S1+2, t/M$)	230	175	30.88 %
Weighted Average Carbon Intensity (S1+2+3, t/M$)	861	700	23.04 %
Exposure to Carbon-Related Assets	10.21 %	8.96 %	13.96 %
of which Fossil Fuels	5.97 %	5.59 %	6.77 %
of which Fossil Fuel Utilities and IPPs	0.23 %	0.19 %	15.97 %
of which Other Utilities and IPPs	4.01 %	3.17 %	26.53 %
WACI of Carbon-Related Assets (S1+2, t/M$)	1 407	1 176	19.67 %

Analytics are calculated at the end of the latest quarter and with emissions data updated annually in June on the basis of the figures reported at the end of the previous year. For Weighted Average Carbon Intensity calculations, corporate revenues are those of the year for which greenhouse gas emissions are reported. Constituent weights used for all carbon exposure metrics are end-of-quarter weights.

The Weighted Average Carbon Intensity is computed in respect of Scope 1 plus Scope 2 emissions (direct emissions from sources owned or controlled by the reporting company and emissions from the combustion of fuels to generate electricity, steam, heating, and cooling purchased and consumed by the reporting company, respectively) and in respect of the former plus Scope 3 emissions (all indirect emissions beyond Scope 2 emissions that occur in the value chain of the reporting company). Exposure to Carbon-related Assets is based on the Thomson Reuters Business Classification (TRBC) and aggregates investments into i) the Energy - Fossil Fuels Business Sector, where fossil fuels are understood as Coal, Oil and Gas; ii) the Fossil Fuel Utilities and Independent Power Producers (IPPs) Activities; and iii) Other Utilities and IPPs with the exception of those identified under Nuclear or Renewable Utilities or IPPs (this covers the Electric Utilities; Independent Power Producers; Heating & Air-Conditioning Supply and Multiline Utilities Activities). Note that the Reserved Emissions, Fossil Fuels and Power Generation Metrics allow for finer grain analysis of Stranding Risk. Emissions provided by Institutional Shareholder Services are relied upon to compute emission-based carbon metrics.

WACI Decomposition

WACI Decomposition is a single-period, holding-based method that breaks down the Weighted Average Carbon Intensity of the index relative to that of its cap-weighted reference into sector-weighting, intra-sector stock-selection and interaction effects.

WACI Decomposition as of 30-Jun-2019

The table shows the results of analysis in the spirit of Brinson, Hood and Beebower (1986), in which the index's WACI relative to its cap-weighted reference is broken down into stock effect, sector effect, and interaction effect.

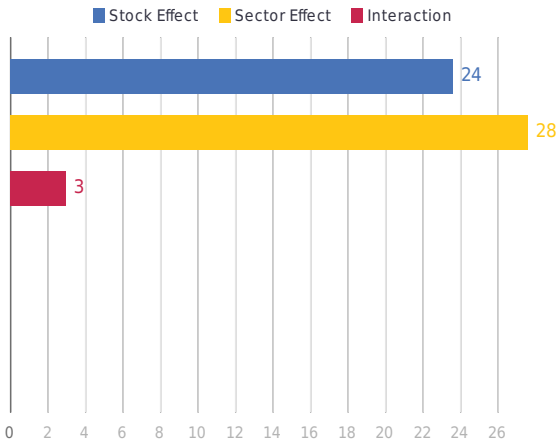
SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index Sector Weight	Index Sector WACI	Index Sector Contr.	Broad CW Sector Weight	Broad CW Sector WACI	Broad CW Sector Contr.	Excess	Stock	Sector	Inter.
Energy	6.09 %	513	31	5.65 %	505	29	2.68	0.41	2.24	0.03
Basic Materials	4.85 %	758	37	4.01 %	765	31	6.09	-0.27	6.42	-0.06
Industrials	12.55 %	140	18	12.22 %	117	14	3.27	2.81	0.38	0.07
Cyclical Consumer	12.73 %	42	5	12.58 %	44	6	-0.19	-0.26	0.07	-0.00
Non-Cyclical Consumer	9.17 %	66	6	8.86 %	55	5	1.19	0.98	0.17	0.03
Financials	18.28 %	48	9	19.21 %	32	6	2.61	3.06	-0.30	-0.15
Healthcare	12.12 %	22	3	12.76 %	22	3	-0.10	0.04	-0.14	-0.00
Technology	16.80 %	35	6	18.26 %	16	3	2.93	3.45	-0.24	-0.28
Telecoms	3.06 %	73	2	2.95 %	76	2	-0.02	-0.10	0.09	-0.00
Utilities	4.35 %	2 595	113	3.49 %	2 209	77	35.71	13.49	18.91	3.31
Total	Index WACI		230	Ref. WACI		175	54.16	23.61	27.59	2.96

Analytics are calculated at the end of the latest quarter and with emissions data updated annually in June on the basis of the figures reported at the end of the previous year. For Weighted Average Carbon Intensity calculations, corporate revenues are those of the year for which greenhouse gas emissions are reported. Constituent weights used for all carbon exposure metrics are end-of-quarter weights. The sector classification used is the Thomson Reuters Business Classification. The analysis is performed over the latest quarter.

Emissions provided by Institutional Shareholder Services are relied upon to compute emission-based carbon metrics.

WACI Decomposition as of 30-Jun-2019

The figure displays the breakdown of the index's WACI difference in relation to that of its cap-weighted reference index into stock effect, sector effect, and interaction effect.



Emissions provided by Institutional Shareholder Services are relied upon to compute emission-based carbon metrics.

Reserved Emissions

The Reserved Emissions report shows the potential carbon dioxide emissions associated with the burning of fossil-fuel reserves controlled by an investment portfolio.

Reserved Emissions as of 30-Jun-2019

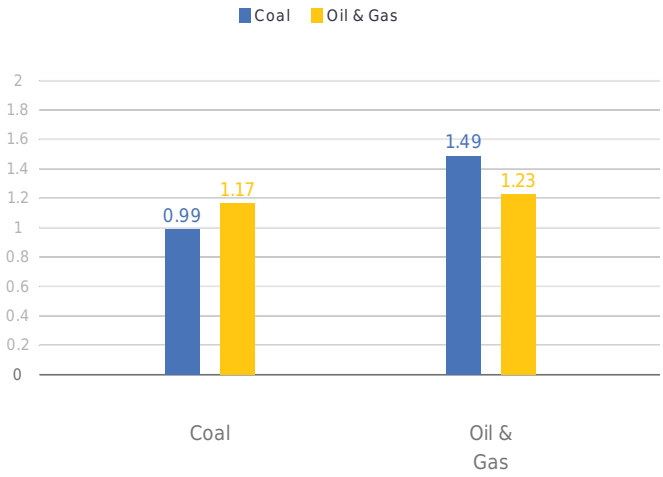
The table shows the carbon dioxide that would be emitted by the burning of the fossil fuel reserves controlled by an USD1bn investment in the index. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Potential CO2 Emissions (Mt/B$)	2.47	2.39	3.44 %
Of which from Coal reserves	0.99	1.17	-15.28 %
Of which from Oil and Gas reserves	1.49	1.23	21.20 %

Analytics are calculated at the end of the latest quarter and with ESG data updated at the beginning of the penultimate month of the quarter.

Reserved Emissions as of 30-Jun-2019

The figure displays the normalised potential CO2 emissions from the reserves controlled by the index and the Broad cap-weighted reference index (Broad CW) at the last quarterly rebalancing.



Data sourced from Institutional Shareholder Services are relied upon to compute emissions-based carbon metrics. Coal reserves are the sum of proven and probable reserves based on the last reported reserves amount by mine and are allocated to companies based on percentage ownership of individual mines. Oil and gas reserves are proven reserves (1P) net of royalty payments. The calculation of CO2 emission potential requires several conversions to the raw reserves figures; the methodological framework is the IPCC Revised 1996 Guidelines for National Greenhouse Gas Inventories. The data covers the top publicly-traded coal and oil and gas reserve holders globally (circa 500 companies) ranked by the potential carbon emissions content of their reported reserves.

Fossil Fuels

The Fossil Fuels report measures investment exposure to the fossil fuels industry and companies with significant fossil fuel involvement.

Fossil Fuels as of 30-Jun-2019

The table shows the cumulated weight of index constituents for targeted sector or industry and the cumulated of constituents with involvement in the activity of interest irrespective of sector or industry, along with their Weighted Average Carbon Intensity. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change	Index WACI	Broad CW WACI	Change
Companies classified in the Energy Sector	6.09 %	5.65 %	7.87 %	513	505	1.43 %
Companies classified in the Energy - Fossil Fuels Bus Sector	5.97 %	5.59 %	6.77 %	519	510	1.85 %
Of which in the Coal Industry Group	0.05 %	0.09 %	-44.34 %	163	163	0.00 %
Of which in the Oil & Gas Industry Groups	5.17 %	4.45 %	16.24 %	552	524	5.43 %
Companies with 25-50% of turnover from Fossil Fuels	2.41 %	1.88 %	28.20 %	1 422	818	73.90 %
Companies with 50-100% of turnover from Fossil Fuels	8.32 %	7.85 %	6.02 %	1 320	1 164	13.39 %
Companies with 30% or more of turnover from thermal coal mining	0.00 %	0.00 %	n/r	0	0	n/r

Analytics are calculated at the end of the latest quarter. Emissions data are updated annually in June on the basis of the figures reported at the end of the previous year; other ESG data updated at the beginning of the penultimate month of the quarter. For Weighted Average Carbon Intensity calculations, corporate revenues are those of the year for which greenhouse gas emissions are reported. Constituents weights used for all metrics are end-of-quarter weights. The sector classification used is the Thomson Reuters Business Classification.

Industry classification is as per the Thomson Reuters Business Classification (TRBC); the Energy sector is comprised of the Energy - Fossil Fuels; Renewable Energy; and Uranium Business Sectors. The Energy - Fossil Fuels Business Sector is comprised of the Coal; Oil & Gas and Oil & Gas Related Equipment and Services Industry Groups; we group the latter two under the heading Oil & Gas Industry Groups. Involvement in fossil fuels at a level of 25-50% and 50%-100% of turnover and in thermal coal mining at a level of 30% or more of turnover is determined regardless of industry classification. Institutional Shareholder Services data are relied upon to measure fossil fuel involvement beyond industry classification and compute emissions-based carbon metrics.

Power Generation

The Power Generation report measures investment exposure to power-generation along with its fuel mix and Weighted Average Carbon Intensity.

Power Generation as of 30-Jun-2019

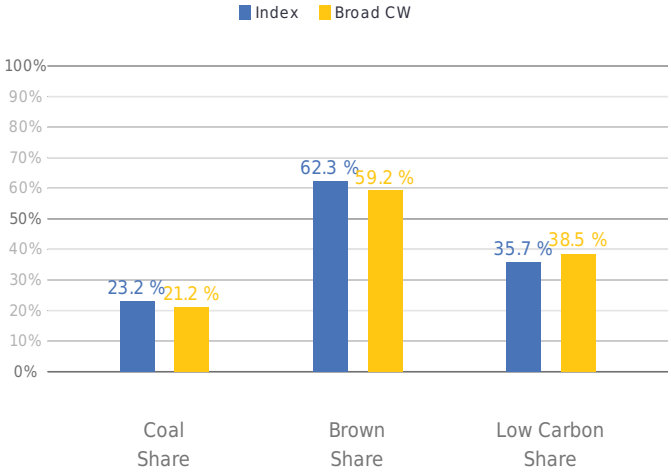
The table shows the power generation capacity of Utilities controlled by an USD1bn investment in the index and its fuel mix along with the cumulated weight of power-generating Utilities in the index and their Weighted Average Carbon Intensity. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Controlled Power Generation Capa... (MW/B$)	32.92	27.67	18.95 %
Brown share	62.31 %	59.21 %	5.23 %
Of which Coal	23.17 %	21.20 %	9.29 %
Of which Gas	34.95 %	33.41 %	4.61 %
Of which Oil	4.19 %	4.60 %	-8.99 %
Renewables	20.03 %	24.64 %	-18.71 %
Nuclear	15.67 %	13.89 %	12.81 %
Others	1.99 %	2.26 %	-11.76 %
Weight of analysed utilities	3.94 %	3.96 %	-0.58 %
WACI of analysed utilities	2 788	1 953	42.77 %

Analytics are calculated at the end of the latest quarter and with ESG data updated at the beginning of the penultimate month of the quarter.

Power Generation as of 30-Jun-2019

The figure displays the Coal, Brown and Low Carbon shares of the Utilities with power generation capacity controlled by the index and the Broad cap-weighted reference index (Broad CW) at the last quarterly rebalancing.



Utilities with power-generation capacity are companies with such capacity classified in the TRBC Utilities and Financials economic sectors. The equity share method is used to allocate the relevant share of a company's total power generation capacity to the index. Brown share refers to the share of the power generation capacity relying on high carbon emitting fossil fuels, i.e. coal, oil and gas. Renewables refer to Geothermal, Solar, Wind, Biomass and Hydroelectricity. Institutional Shareholder Services data are relied upon to measure power generation capacity and fuel mix and compute emissions-based carbon metrics.

Physical Risks

The Physical Risks report presents the estimated exposure of index constituents to the long-term and acute physical risks from climate change.

Physical Risks as of 30-Jun-2019

The table shows the cumulated weight of index constituents that are classified as having Low, Medium or High exposure to long-term and acute physical risks from climate change, respectively. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

SciBeta Dev HFInt Div MBeta MStrat (Sct-ntr) 6F4S-EW	Index	Broad CW	Change
Exposure to long-term physical risks			
Low	79.65 %	81.04 %	-1.70 %
Medium	20.35 %	18.96 %	7.28 %
High	0.00 %	0.00 %	n/r
Exposure to acute physical risks			
Low	54.57 %	61.11 %	-10.71 %
Medium	37.27 %	31.21 %	19.43 %
High	8.16 %	7.68 %	6.23 %

The table shows the cumulated weight of index constituents that are classified as having Low, Medium or High exposure to long-term and acute physical risks from climate change, respectively. The corresponding figures for the Broad cap-weighted reference index (Broad CW) are also reported, along with the exposure of the index relative to that of the Broad cap-weighted reference.

Institutional Shareholder Services data are relied upon to compute the above exposure.

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