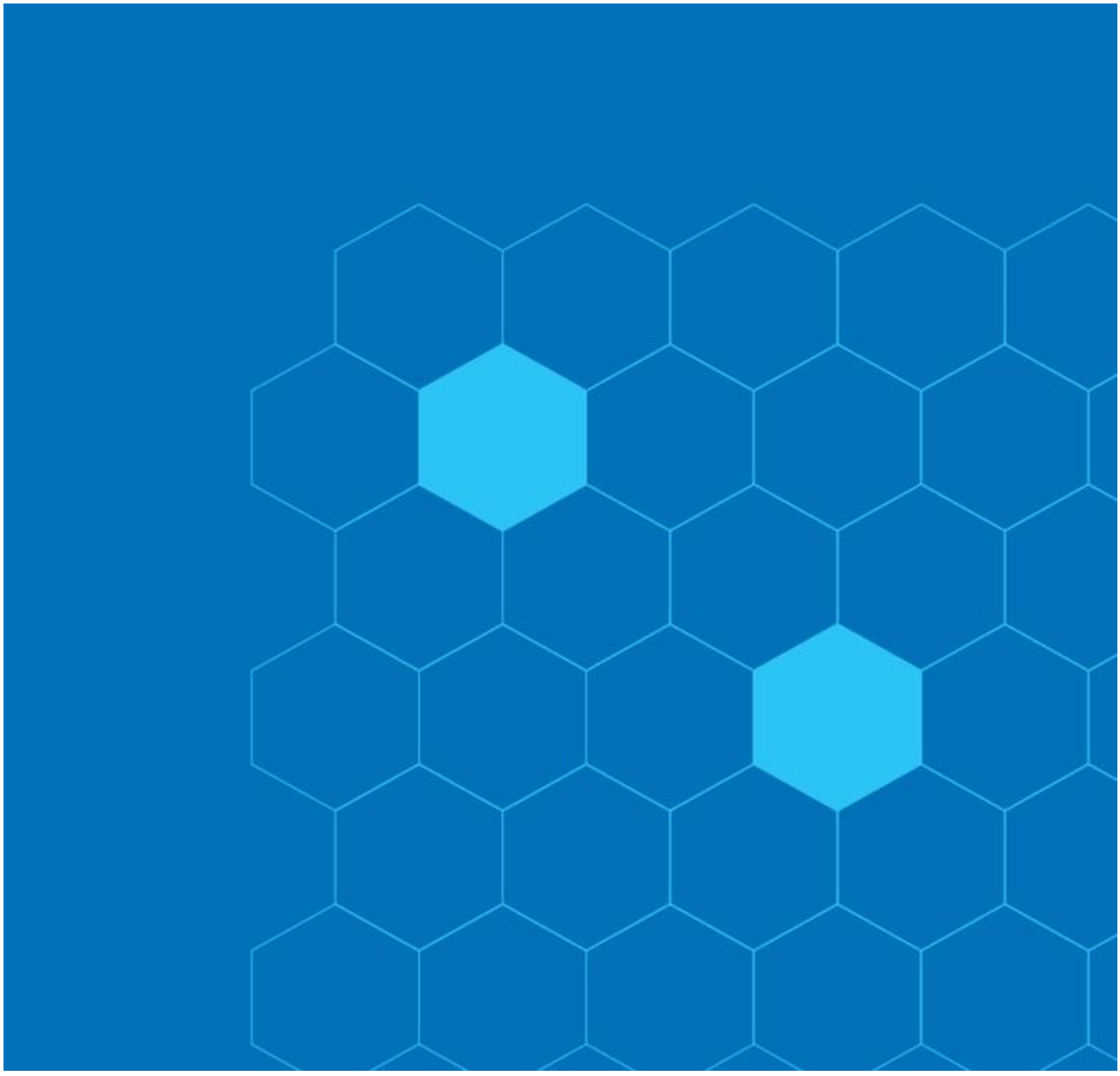
SEPTEMBER 2024

iSTOXX® UNIVEST SUSTAINABLE WORLD EXPANSION INDEX METHODOLOGY GUIDE



STOXX

CONTENTS

1. INTRODUCTION TO THE STOXX INDEX GUIDES

The STOXX index guides are separated into the following sub-sets:

- The **STOXX Calculation guide** provides information on the calculation of the STOXX indices, the dissemination, the index formulas and adjustments due to corporate actions
- The **STOXX Index Methodology guide** contains the index specific rules regarding the construction and derivation of the portfolio-based indices, the individual component selection process and weighting schemes
- The **STOXX Strategy guide** contains the formulas and description of all non-equity/strategy indices
- The **STOXX Dividend Points Calculation guide** describes the dividend points products
- The **STOXX Distribution Points Calculation guide** describes the distribution points products
- The **STOXX ESG guide** contains the index specific rules regarding the construction and derivation of the ESG indices, the individual component selection process and weighting schemes
- The **iSTOXX guide** contains the index specific rules regarding the construction and derivation of the iSTOXX indices, the individual component selection process and weighting schemes
- The **STOXX Reference Rates guide** contains the rules and methodologies of the reference rate indices
- The **STOXX Statistical Calculations** guide provides a detailed view of definitions and formulas of the statistical calculations as utilized in the reports, factsheets, indices and presentations produced by STOXX

All rule books are available for download on http://www.stoxx.com/indices/rulebooks.html

2. CHANGES TO THE GUIDEBOOK

2.1 HISTORY OF CHANGES TO THE GUIDE

» September 2024: Addition of iSTOXX Univest World Factor Index, iSTOXX Univest World ESG Carbon Index and iSTOXX Univest World Factor ESG Index.

3. GENERAL PRINCIPLES

3.1 INDEX RATIONALE

STOXX defines the index rationale as the basis for applying a certain methodology in order to achieve the index objective. STOXX performs intensive research and may conduct conversations with market participants and third parties for this purpose. STOXX discloses the index objective in every case.

3.2 METHODOLOGY REVIEW POLICIES

STOXX constantly monitors the execution of the index calculation rules in order to ensure the validity of the index methodology. STOXX also conducts general methodology reviews in a periodic and ad-hoc basis, to reflect economic and political changes and developments in the investment industry. As result of these activities, STOXX introduces changes to the methodology books. Material changes are notified to subscribers and the media through the usual communication channels. Clarifications of the methodology are updated in the rulebook. All changes are tracked in the section 2.1 History of changes to the guide.

3.3 INDEX TERMINATION POLICY

For the termination of an index or index family for which outstanding products are present in the market to the knowledge of STOXX, a market consultation with the involved clients will be initiated by STOXX to consider their views and concerns related to the termination or transition. A consultation period will be opened. Its duration depends on the specific issue. After the consultation period and in case of further action needed, a notification will be issued and the process defined above will be followed. In the case of a transition, STOXX will launch the alternative index and will notify of its character as a suitable replacement for an existing index whose calculation should be discontinued in the future. This notification advices clients on the alternative recommended by STOXX as replacement. The timeframe in which both indices will be calculated in parallel will be disclosed in the notification’s text and will be no shorter than three months.

For the termination of an index or index family for which, to the knowledge of STOXX, no listed financial products are issued in the market, a press release notification or e-mail notification to subscribers will be communicated at least three months before coming into force. Clients or third parties with interest in the index or index family are urged to communicate as soon as possible their concerns to STOXX. Based on the feedback collected, STOXX may alter the index termination decision. For the termination of an index without financial product issued on there will be no market consultation. Changes to the original notification will be communicated in the same manner.

4. INDEX METHODOLOGY

4.1 iSTOXX UNIVEST WORLD FACTOR INDEX

4.1.1 OVERVIEW

The iSTOXX Univest World Factor Index provides exposure to the Univest Value, Momentum, Quality and Low Risk risk-premia factors, closely tracks the STOXX Developed World parent index with an ex-ante tracking error of 1% while ensuring tradability and diversification.
Parent Index: STOXX Developed World Index

Weighting scheme: The index is price-weighted with weighting factors determined according to an optimization process.

Base value and date: 100 on September 23, 2024

Index types and currencies: Price, Net and Gross return in EUR and USD

Dissemination calendar: STOXX Global calendar

4.1.2 INDEX REVIEW

Constituent selection and weighting:

The iSTOXX Univest World Factor Index is constructed by solving an optimization problem using Axioma's portfolio optimization software and the Axioma World-wide medium horizon fundamental factor risk model.

The optimization problem determines the compositions of the iSTOXX Univest World Factor Index by managing the risk, liquidity, and tradability of the portfolio while maximising the multi factor score of the portfolio.

The objective of the optimization problem is to maximize the exposure to the target factors.

$$\text{Maximize: } \alpha^{T}w$$

where:

w = Index weights
α = 0.25 * (Value + Momentum + Quality + Low Risk)
Further information on factor definitions is available to stakeholders via stoxx.com/indices.

The following constraints are applied during the optimization:

4. INDEX METHODOLOGY

Target	Constraint
Minimum weight	0.5 bps
Maximum weight	Max (Parent Index Weight, Min(8%, 6*Parent Index Weight))
Weight of stocks with zero or missing Trading Volume	Parent Index Weight
Concentration Capping	Apply tighter concentration capping 4.5/8/35%
Active sector (ICB Level 3) exposures	Within 0.1% of Parent Index
Active country exposures	Within 0.1% of Parent Index
Active untargeted style factor exposures	Within 0.25 standard deviations of Parent Index
Active targeted style factor exposures	> 0 vs Parent Index
Equal Risk Contribution by targeted factors	Equal Risk Contribution by targeted factors
Active Risk	Within 1% w.r.t. Parent Index
Limit turnover	7.5% one-way on a quarterly basis
Effective number of names	Minimum of 30% of the Parent Index
Percentile days to trade/liquidity constraint	Maximum bound using Percentile=10%, Strength=20 parameters

A brief description of the portfolio constraints and data elements is given below:

Axioma Risk Model: Axioma World-Wide Medium Horizon Fundamental Factor Risk Model with base currency USD.

Minimum weight: The minimum weight of each constituent not held at parent benchmark weight is limited to 0.5 bps.

Maximum weight: The maximum weight of each constituent is limited to the greater of the Parent Index weight and the lesser of 8% and six times the Parent Index weight.

Weight of stocks with zero or missing Trading Volume: Stocks with zero or missing 60-Day Median Daily Trading Volume data are forced to be held at their Parent Index weight.

Concentration Capping: The maximum weight of each issuer in the index is 8%. The sum of the weights of those issuers above 4.5% cannot exceed 35%.

Active sector exposures: The exposure to each ICB Sector is summed up for the Parent Index, and the exposure of the index must be within +/- 0.1% from the Parent Index exposures.

Active country exposures: The exposure to each country is summed up for the Parent Index, and the exposure of the index must be within +/- 0.1% from the Parent Index exposures.

Active untargeted style factor exposures: The exposures to each of the untargeted style factors should be within 0.25 standard deviations of the Parent Index's factor exposures. The untargeted style factors are Exchange Rate Sensitivity, Growth, Liquidity, and Size in the Axioma risk model.

4. INDEX METHODOLOGY

Active targeted style factor exposures: The exposures to each of the targeted style factors should be higher than the Parent Index's factor exposures. The targeted style factors are Momentum, Low Risk, Quality and Value.

Active Risk: The active risk of the index relative to the Parent Index is constrained to a maximum of 1%.

Limit turnover: The Index has a quarterly one-way turnover limit of 7.5%.

Effective number of names: The minimum effective number of names in the Index is 30% of the Parent Index.

Equal Risk Contribution by targeted factors: Risk Contributions across all targeted factors (Ex-ante Factor Tracking Error * Factor Exposure) are set to be equal. Ex-ante actor Tracking Error is calculated on a factor target market-cap weighted factor portfolio that is constructed with stocks in the top 25% factor scores of the parent index using the Axioma WW4 model.

Percentile days to trade/liquidity constraint: The maximum weight of each component in the Index is limited to twenty times its 60-day median daily trading volume multiplied by the ratio of benchmark weight and 60-day median daily trading volume of the representative stock p. The representative asset is the 10th percentile of all constituents in the Parent Index when sorted by the ratio of 60-day median trading volume divided by the Parent Index weight.

$$w_k \leq S\ V_k\ b_p/V_p$$

where:

w_k= the weight of the kth asset in the portfolio
p = the asset with the 10th percentile of V_k/b_k
b_k= the weight of the k-th asset in the benchmark
V_k = the daily trading volume for the kth asset
S = 20 (Strength)

Infeasibility Handling, II: If a solution that satisfies the above constraints cannot be found, the following constraints are relaxed iteratively minimizing constraint violations at each iteration in the following order: 1) Limit Turnover 2) Active Country exposures are relaxed; further details are available in the supplement section.

Weighting factors: Weighting factors are based on the closing prices in EUR (pi) of the second Friday of the review month:

Weighting factor = (1,000,000,000,000 x wi / pi), rounded to the nearest integer value.

where:
$p_i = closing\ price\ of\ stock\ i\ in\ EUR$
$w_i = weight\ of\ stock\ i\ in\ the\ index$

4. INDEX METHODOLOGY

Review frequency: The indices are reviewed on a quarterly basis in March, June, September, and December together with the respective parent index. The review cut-off date for risk model data is the second Friday of the review month.

4.1.3 INDEX REVIEW SUPPLEMENT

Factor Definitions

Factor	Sector specific definitions	Component signals with weights
Momentum	Not Applicable	+1/2 Annual Return Excl Prev Month +1/2 Earnings Revision*
Low Risk	Not Applicable	-1/2 Volatility 125 Day -1/2 Regional Market Sensitivity 250 Day
Quality	Banks	+1/5 Earnings Growth Annual -1/5 Debt to Assets Annual -1/5 Debt to Equity Annual +1/5 Return on Assets Annual +1/5 Return on Equity Annual
	Non-Banks	+1/5 Earnings Growth Annual -1/5 Debt to Assets Annual +1/5 Cash Flow to Assets Annual +1/5 Gross Margin Annual +1/5 Return on Assets Annual
Value	Banks	+1/3 Earnings to Price Annual +1/3 Dividend Yield Annual +1/3 Tangible Book Yield*
	Non-Banks	+1/4 Earnings to Price Annual +1/4 Est Earnings to Price Annual +1/2 Cash Flow Yield*

*All component signals in the above table except Earnings Revision, Tangible Book Yield and Cash Flow Yield are taken from the Axioma World-wide Model Factor Library.

Earnings Revision is derived from IBES as the ratio of number of net upgrades (upgrades - downgrades) to the total number of changes in analyst forecasts for the next two financial years, over the last three months. The review cut-off date for IBES data is the second Friday of the review month.

Tangible Book Yield is computed as the ratio of (Total Assets – Long Term Debt – Preferred Stock – Intangible Assets) to total issuer market capitalization. Missing Preferred Stock and Intangible Assets information is replaced with zeroes.

Cash Flow Yield is computed as the ratio of (Operating Net Cash Flow – Capital Expenditures) to total issuer market capitalization. Cash flow information is often missing for Financial stocks. In

4. INDEX METHODOLOGY

such cases missing Operating Net Cash Flow is replaced by (Annual Income - Depreciation and Amortization).

Banks stocks are identified using the ICB Super Sector Banks classification.

If one or more but not all component signals are missing values for an asset, then the weights of the rest of the component signals will be rescaled so that the absolute sum of the weights is equal to 1. If all component signals are missing values for an asset, then the factor score of this asset will be computed as the average factor score of all the stocks with factor scores from the same ICB Super Sector.

4.1.4 ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX calculation guide available on stoxx.com

4. INDEX METHODOLOGY

4.2 iSTOXX UNIVEST WORLD ESG CARBON INDEX

4.2.1 OVERVIEW

The iSTOXX Univest World ESG Carbon Index is designed to achieve sustainable carbon reduction in terms of greenhouse gas emissions and intensities over time, while tracking the STOXX Developed World Index. The index also tilts away from companies that are laggards in corporate governance, and other social criteria. In addition, the index aims to reduce its greenhouse gas emissions and intensity by at least half by December 2024 (versus the baseline values of STOXX Developed World Index in December 2019) and aims to track the STOXX Developed World Index with a tracking error close to 1%.

Weighting scheme: The index is price-weighted with weighting factors determined according to an optimization process.

Base value and date: 100 on September 23, 2024

Index types and currencies: Price, Net and Gross return in EUR and USD

Dissemination calendar: STOXX Global calendar

4.2.2 INDEX REVIEW

Constituent selection and weighting:

The iSTOXX Univest World ESG Carbon Index is constructed by solving an optimization problem using Axioma's portfolio optimization software and the Axioma World-wide medium horizon fundamental factor risk model.

The optimization problem determines the compositions of the Index by managing the risk, liquidity, and tradability of the portfolio while minimising the active risk to the Parent Index and satisfying the Climate, Social and Governance constraints.

The objective of the optimization problem is to minimize tracking error to the parent index.

$$\text{Minimize: } (w - w_{Parent})^T Q(w - w_{Parent})$$

where:

w = Index weights
w_{Parent} = Parent weights
Q = covariance matrix from Axioma Worldwide Medium Horizon Fundamental Factor Risk Model

The following constraints are applied during the optimization:

4. INDEX METHODOLOGY

Target	Constraint
Minimum weight	0.5 bps
Maximum weight	Max (Parent Index Weight, Min(8%, 6*Parent Index Weight))
Weight of stocks with zero or missing Trading Volume	Parent Index Weight
Concentration Capping	Apply tighter concentration capping 4.5/8/35%
Active sector (ICB Level 3) exposures	Within 0.1% of Parent Index
Active country exposures	Within 0.1% of Parent Index
Active untargeted style factor exposures	Within 0.25 standard deviations of Parent Index
Limit turnover	7.5% one-way on a quarterly basis
Effective number of names	Minimum of 30% of the Parent Index
Percentile days to trade/liquidity constraint	Maximum bound using Percentile=10%, Strength=20 parameters
Social & Governance Constraints	Further details are available in the supplement section
Climate Constraints	Further details are available in the supplement section
Scope 1 + 2 GHG emission reduction (Carbon Trajectory)	Minimum GHG emission reduction of the index is specified using an annual pathway; further details are available in the supplement section
GHG Intensity reduction (Carbon Trajectory)	Minimum GHG intensity reduction of the index is specified using an annual pathway; further details are available in the supplement section

A brief description of the portfolio constraints and data elements is given below:

Axioma Risk Model: Axioma World-Wide Medium Horizon Fundamental Factor Risk Model with base currency USD.

Minimum weight: The minimum weight of each constituent not held at parent benchmark weight is limited to 0.5 bps.

Maximum weight: The maximum weight of each constituent is limited to the greater of the Parent Index weight and the lesser of 8% and six times the Parent Index weight.

Weight of stocks with zero or missing Trading Volume: Stocks with zero or missing 60-Day Median Daily Trading Volume data are forced to be held at their Parent Index weight.

Concentration Capping: The maximum weight of each issuer in the index is 8%. The sum of the weights of those issuers above 4.5% cannot exceed 35%.

Active sector exposures: The exposure to each ICB Sector and the exposure of the index must be within +/- 0.1% from the Parent Index exposures.

Active country exposures: The exposure to each country is summed up for the Parent Index, and the exposure of the index must be within +/- 0.1% from the Parent Index exposures.

4. INDEX METHODOLOGY

Active untargeted style factor exposures: The exposures to each of the untargeted style factors should be within 0.25 standard deviations of the Parent Index's factor exposures. The untargeted style factors are Exchange Rate Sensitivity, Growth, Liquidity, and Size in the Axioma risk model.

Active Risk: The active risk of the index relative to the Parent Index is constrained to a maximum of 1%.

Limit turnover: The Index has a quarterly one-way turnover limit of 7.5%.

Effective number of names: The minimum effective number of names in the Index is 30% of the Parent Index.

Percentile days to trade/liquidity constraint: The maximum weight of each component in the Index is limited to twenty times its 60-day median daily trading volume multiplied by the ratio of benchmark weight and 60-day median daily trading volume of the representative stock p. The representative asset is the 10th percentile of all constituents in the Parent Index when sorted by the ratio of 60-day median trading volume divided by the Parent Index weight.

$$w_k \leq S\ V_k\ b_p/V_p$$

where:

w_k= the weight of the kth asset in the portfolio
p = the asset with the 10th percentile of V_k/b_k
b_k= the weight of the kth asset in the benchmark
V_k = the daily trading volume for the k-th asset
S = 20 (Strength)

Social & Governance Constraints: Constraints are applied against several Social and Governance criteria; further details are available in the supplement section.

Climate Constraints: Constraints are applied against several Climate criteria; further details are available in the supplement section.

Scope 1 + 2 GHG emission reduction (Carbon Trajectory): Stock level emissions from ISS ESG defined as (Scope 1 + Scope 2 Emissions) rescaled by Enterprise Value Including Cash (EVIC) are used to compute the total Index emissions. The minimum GHG emission reduction of the index is specified using an annual pathway; further details are available in the supplement section.

GHG Intensity reduction (Carbon Trajectory): Stock level GHG Intensities from ISS ESG defined as (Scope 1 + Scope 2 Emissions)/(Revenues in USD), are used for this constraint. The minimum GHG intensity reduction of the index is specified using an annual pathway; further details are available in the supplement section.

4. INDEX METHODOLOGY

Infeasibility Handling, II: If a solution that satisfies the above constraints cannot be found, the following constraints are relaxed iteratively minimizing constraint violations at each iteration in the following order: 1) Limit Turnover 2) Active Country exposures, 3) Certain climate and liquidity constraints are relaxed; further details are available in the supplement section.

Weighting factors: Weighting factors are based on the closing prices in EUR (pi) of the second Friday of the review month:

Weighting factor = (1,000,000,000,000 x wi / pi), rounded to the nearest integer value.

Where:
$p_i = closing\ price\ of\ stock\ i\ in\ EUR$
$w_i = weight\ of\ stock\ i\ in\ the\ index$

Review frequency: The indices are reviewed on a quarterly basis in March, June, September, and December together with the respective parent index. The review cut-off date for risk model data is the second Friday of the review month.

4.2.3 INDEX REVIEW SUPPLEMENT

Social & Governance Constraints

Target	Constraint
Human Rights*	Include negligible, low risk and medium risk stocks identified by Sustainalytics in Human Rights and Human Rights Supply Chain
Human Capital Risk Score*	Reduce Human Capital Score by 0.25 standard deviation against Parent Index
Corporate Governance Risk Score*	Reduce Corporate Governance Risk Score by 0.25 standard deviation against Parent Index
Controversial Weapons Screen	Do not hold stocks that Sustainalytics identifies to be involved in anti-personnel mines, cluster weapons, depleted uranium
Global Standards Screening	Exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment.
UNGC	Do not hold stocks with UNGC Non-Compliant Flag

*These constraints have been applied to the backtest starting from 2019 as the underlying data from Sustainalytics are available from March 2019.

Human Rights: STOXX will include companies that Sustainalytics identifies to have negligible, low risk or medium risk in Human Rights or Human Rights Supply Chain.

Human Capital Risk Score: The Human Capital Risk MEI Score from Sustainalytics is z-scored and the weighted average z-score of the Index is constrained to be less than 0.25 standard deviations compared to the Parent Index.

4. INDEX METHODOLOGY

Corporate Governance Risk Score: The Corporate Governance MEI Risk Score from Sustainalytics is z-scored and the weighted average z-score of the Index is constrained to be less than 0.25 standard deviations compared to the Parent Index.

Controversial Weapons Screen: STOXX will exclude the companies that Sustainalytics identifies to be involved in anti-personnel mines, cluster weapons, depleted uranium. The criteria for involvement are:

» Internal production or sale

» The ultimate holding company owns >50% of voting rights of an involved company

» >50% of voting rights of a company is owned by the involved company

The cut-off date for Sustainalytics data is the last dissemination day of the month preceding the review month.

Global Standards Screening: Exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

UNGC: STOXX will exclude the companies that are identified to be UNGC Non-Compliant.

Climate Constraints

Target	Constraint
Thermal Coal Mining or Power Generation	Do not hold stocks that derive more than 35% of revenues from thermal coal mining or power generation from coal.
Weight of stocks in HESS with CDP F or D-	Do not hold
Weight of stocks in HESS with CDP F or D- missing carbon emissions or emissions intensity or EVIC data	Do not hold
Weight of stocks missing or zero carbon emissions or emissions intensity or EVIC data	Hold at Parent Index weight
Minimum weight of SBTI Approved or CDP A stocks in HESS	Parent Index weight
Minimum weight of SBTI Committed or CDP A- rated stocks in HESS	0.5 x Parent Index weight
Maximum weight of stocks in HESS missing CDP Rating or Not available or Private score	Parent Index weight
Maximum weight of stocks in HESS with CDP Score “Not scored”	Do not hold if last year’s CDP score = F Parent Index weight if last year’s CDP > F
Active sector (ICB Level 3) exposures	Within 0.1% of Parent Index

4. INDEX METHODOLOGY

Alignment with Sustainable Development Scenario (SDS) pathway	The emissions pathway of the indices must be below the carbon budget for the SDS pathway of the current year and 2050
Minimum green share / brown share ratio compared to the Parent Index	At least equivalent
* HESS = High Emitting Super Sectors	

Exclude companies with significant proportion of revenues coming from thermal coal: Do not hold companies that ISS identifies to have more than 50% of revenues coming from thermal coal mining or from generation of electric power using coal. The maximum percentage of recent year's revenues for the company's involvement is being used.

Weight of CDP F or D- rated stocks missing or zero carbon emissions or emissions intensity or EVIC data: Do not hold companies in High Emitting Super Sectors with CDP rating F or D-, that are missing carbon emissions or emissions intensity or Enterprise Value Including cash (EVIC) data. The EVIC data is based on the fiscal year data for the end of the last calendar year.

Weight of stocks missing or zero carbon emissions or emissions intensity or EVIC data: Any stocks missing carbon emissions or emissions intensity or Enterprise Value Including cash (EVIC) data are forced to be held at their Parent Index weight.

Minimum weight of SBTI Approved or CDP A rated stocks: The minimum weight of each stock in High Emitting Super Sectors that has Approved verified science-based targets in accordance with SBTI or CDP Performance band of A is limited at Parent Index weight.

Minimum weight of SBTI Committed or CDP A- rated stocks: The minimum weight of each stock in High Emitting Super Sectors that has committed to reducing its GHG emissions but does not have science-based targets approved by SBTI yet, or has CDP Performance band of A-, is limited at half of the Parent Index weight.

Weight of CDP F or D- rated stocks: Do not hold companies in High Emitting Super Sectors with CDP rating F or D-.

Maximum weight of stocks missing CDP Rating data: The maximum weight of stocks in High Emitting Super Sectors with CDP Rating missing or "Not available" or "Private score" is the benchmark weight.

Maximum weight of stocks with CDP Score "Not scored": The maximum weight of stocks in High Emitting Super Sectors with CDP Score 'Not scored' will depend on the previous year CDP Score. If the previous year's score was an F or "Not scored", the company is excluded. If the previous year's score was higher than F, the company is held at most benchmark weight.

The above asset bounds are applied sequentially, stopping at the first category that applies.

4. INDEX METHODOLOGY

High Emitting Super Sectors are considered the following ICB Super Sectors, Basic Resources (5510), Chemicals (5520), Construction & Materials (5010), Energy (6010), Utilities (6510) and the ICB Subsector Airlines (40501010).

Alignment with Sustainable Development Scenario (SDS) pathway: The emission pathway of the Index must be below its carbon budget for the SDS pathway of the current year and 2050. This is to ensure that the Index is aligned with the SDS pathway decarbonization trajectory until 2050.

Minimum green share / brown share ratio compared to the Parent Index: The green revenue share / brown revenue share of the index, is at least equivalent to that of the Parent Index.

CDP Scores are updated annually and the cut-off date is the last day of the previous year.

Carbon Trajectory

Target	Constraint
Scope 1 + 2 GHG emissions reduction (up to Dec 2019)	50% reduction against the Parent Index
Scope 1 + 2 GHG emission reduction (after Dec 2019)	Minimum GHG emission of: 1) 50% reduction against the Parent Index 2) 10% year-on-year reduction from Dec 2019 values 3) previous quarter index emissions
GHG Intensity reduction (up to Dec 2019)	50% reduction against Parent Index
GHG Intensity reduction (after Dec 2019)	Minimum GHG intensity of: 1) 50% reduction against the Parent Index 2) 10% year-on-year reduction from Dec 2019 values 3) previous quarter index GHG intensity

Scope 1 + 2 GHG emission reduction up to Dec 2019: Up to December 2019, the GHG emissions of the Index are reduced by 50% compared to the Parent Index. Subsequently, emissions are reduced by 10% year-on-year in addition to the 50% reduction from the Parent Index as described below.

Scope 1 + 2 GHG emission reduction after Dec 2019: After December 2019, the GHG emissions of the Index are the minimum emissions between 1) 50% reduction against the Parent Index, and 2) 10% year-on-year reduction from Dec 2019 values (87.437690), and 3) the emissions of the previous quarter, effectively achieving 70% reduction by the end of 2024. Stock level emissions from ISS ESG defined as (Scope 1 + Scope 2 Emissions) rescaled by Enterprise Value Including Cash (EVIC) are used to compute the total Index emissions.

GHG Intensity reduction up to Dec 2019: Up to December 2019, the GHG Intensity of the Index is reduced by 50% compared to the Parent Index. Subsequently, emissions are reduced by 10% year-on-year in addition to the 50% reduction from the Parent Index as described below.

GHG Intensity year-on-year reduction after Dec 2019: After December 2019, the GHG Intensity of the Index is the minimum intensity value between 1) 50% reduction against the Parent Index,

4. INDEX METHODOLOGY

and 2) 10% year-on-year reduction from Dec 2019 values (183.128868), and 3) the emissions intensity of the previous quarter, effectively achieving 70% reduction by the end of 2024. Stock level GHG Intensities from ISS ESG defined as (Scope 1 + Scope 2 Emissions)/(Revenues in USD), are used for this constraint.

4.2.4 ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX calculation guide available on stoxx.com

4. INDEX METHODOLOGY

4.3 iSTOXX UNIVEST WORLD FACTOR ESG INDEX

4.3.1 OVERVIEW

The iSTOXX Univest World Factor ESG Index is designed to achieve sustainable carbon reduction in terms of greenhouse gas emissions and intensities over time, while tracking the STOXX Developed World Index and providing exposure to Value, Momentum, Quality and Low Risk risk-premia factors. The iSTOXX Univest World Factor ESG Index also tilts away from companies that are laggards in corporate governance, and other social criteria. In addition, the Index aims to reduce its greenhouse gas emissions and intensity by at least half by December 2024 (versus the baseline values of STOXX Developed World Index in December 2019) and aims to track the STOXX Developed World Index with a tracking error close to 1%.

Parent Index: STOXX Developed World Index

Weighting scheme: The index is price-weighted with weighting factors determined according to an optimization process.

Base value and date: 100 on September 23, 2024

Index types and currencies: Price, Net and Gross return in EUR and USD

Dissemination calendar: STOXX Global calendar

4.3.2 INDEX REVIEW

Constituent selection and weighting:
The iSTOXX Univest World Factor ESG Index is constructed by solving an optimization problem using Axioma's portfolio optimization software and the Axioma World-wide medium horizon fundamental factor risk model.

The optimization problem determines the compositions of the iSTOXX Univest World Factor ESG Index by managing the risk, liquidity, and tradability of the portfolio while maximising the multi factor score of the portfolio and satisfying the Climate, Social and Governance constraints.

The objective of the optimization problem is to maximize the exposure to the target factors.

$$\text{Maximize: } \alpha^T w$$

where:
w = Index weights
α = 0.25 * (Value + Momentum + Quality + Low Risk)

Further information on factor definitions is available to stakeholders via stoxx.com/indices.

4. INDEX METHODOLOGY

The following constraints are applied during the optimization:

Target	Constraint
Minimum weight	0.5 bps
Maximum weight	Max (Parent Index Weight, Min(8%, 6*Parent Index Weight))
Weight of stocks with zero or missing Trading Volume	Parent Index Weight
Concentration Capping	Apply tighter concentration capping 4.5/8/35%
Active sector (ICB Level 3) exposures	Within 0.1% of Parent Index
Active country exposures	Within 0.1% of Parent Index
Active untargeted style factor exposures	Within 0.25 standard deviations of Parent Index
Active targeted style factor exposures	> 0 vs Parent Index
Equal Risk Contribution by targeted factors	Equal Risk Contribution by targeted factors
Active Risk	Within 1% w.r.t. Parent Index
Limit turnover	7.5% one-way on a quarterly basis
Effective number of names	Minimum of 30% of the Parent Index
Percentile days to trade/liquidity constraint	Maximum bound using Percentile=10%, Strength=20 parameters
Social & Governance Constraints	Further details are available in the supplement section
Climate Constraints	Further details are available in the supplement section
Scope 1 + 2 GHG emission reduction (Carbon Trajectory)	Minimum GHG emission reduction of the index is specified using an annual pathway; further details are available in the supplement section
GHG Intensity reduction (Carbon Trajectory)	Minimum GHG intensity reduction of the index is specified using an annual pathway; further details are available in the supplement section

A brief description of the portfolio constraints and data elements is given below:

Axioma Risk Model: Axioma World-Wide Medium Horizon Fundamental Factor Risk Model with base currency USD.

Minimum weight: The minimum weight of each constituent not held at parent benchmark weight is limited to 0.5 bps.

Maximum weight: The maximum weight of each constituent is limited to the greater of the Parent Index weight and the lesser of 8% and six times the Parent Index weight.

Weight of stocks with zero or missing Trading Volume: Stocks with zero or missing 60-Day Median Daily Trading Volume data are forced to be held at their Parent Index weight.

Concentration Capping: The maximum weight of each issuer in the index is 8%. The sum of the weights of those issuers above 4.5% cannot exceed 35%.

4. INDEX METHODOLOGY

Active sector exposures: The exposure to each ICB Sector is summed up for the Parent Index, and the exposure of the index must be within +/- 0.1% from the Parent Index exposures.

Active country exposures: The exposure to each country is summed up for the Parent Index, and the exposure of the index must be within +/- 0.1% from the Parent Index exposures.

Active untargeted style factor exposures: The exposures to each of the untargeted style factors should be within 0.25 standard deviations of the Parent Index's factor exposures. The untargeted style factors are Exchange Rate Sensitivity, Growth, Liquidity, and Size in the Axioma risk model.

Active targeted style factor exposures: The exposures to each of the targeted style factors should be higher than the Parent Index's factor exposures. The targeted style factors are Momentum, Low Risk, Quality and Value.

Active Risk: The active risk of the index relative to the Parent Index is constrained to a maximum of 1%.

Limit turnover: The Index has a quarterly one-way turnover limit of 7.5%.

Effective number of names: The minimum effective number of names in the Index is 30% of the Parent Index.

Equal Risk Contribution by targeted factors: Risk Contributions across all targeted factors (Factor Tracking Error * Factor Exposure) are set to be equal. Factor Tracking Error is calculated on the following portfolio. For each factor, a factor portfolio is constructed with stocks of the top 25% factor score in the Parent Index, re-weighted to 100%.

Percentile days to trade/liquidity constraint: The maximum weight of each component in the Index is limited to twenty times its 60-day median daily trading volume multiplied by the ratio of benchmark weight and 60-day median daily trading volume of the representative stock p. The representative asset is the 10th percentile of all constituents in the Parent Index when sorted by the ratio of 60-day median trading volume divided by the Parent Index weight.

$$w_k \leq S\ V_k\ b_p/V_p$$

where:
w_k= the weight of the kth asset in the portfolio
p = the asset with the 10th percentile of V_k/b_k
b_k= the weight of the kth asset in the benchmark
V_k = the daily trading volume for the k-th asset
S = 20 (Strength)

Social & Governance Constraints: Constraints are applied against several Social and Governance criteria; further details are available in the supplement section.

Climate Constraints: Constraints are applied against several Climate criteria; further details are available in the supplement section.

4. INDEX METHODOLOGY

Scope 1 + 2 GHG emission reduction (Carbon Trajectory): Stock level emissions from ISS ESG defined as (Scope 1 + Scope 2 Emissions) rescaled by Enterprise Value Including Cash (EVIC) are used to compute the total Index emissions. The minimum GHG emission reduction of the index is specified using an annual pathway; further details are available in the supplement section.

GHG Intensity reduction (Carbon Trajectory): Stock level GHG Intensities from ISS ESG defined as (Scope 1 + Scope 2 Emissions)/(Revenues in USD), are used for this constraint. The minimum GHG intensity reduction of the index is specified using an annual pathway; further details are available in the supplement section.

Infeasibility Handling, II: If a solution that satisfies the above constraints cannot be found, the following constraints are relaxed iteratively minimizing constraint violations at each iteration in the following order: 1) Limit Turnover 2) Active Country exposures 3) Certain climate and liquidity constraints are relaxed; further details are available in the supplement section.

Weighting factors: Weighting factors are based on the closing prices in EUR (pi) of the second Friday of the review month:

Weighting factor = (1,000,000,000,000 x wi / pi), rounded to the nearest integer value.

Where:
$p_i = closing\ price\ of\ stock\ i\ in\ EUR$
$w_i = weight\ of\ stock\ i\ in\ the\ index$

Review frequency: The indices are reviewed on a quarterly basis in March, June, September, and December together with the respective parent index. The review cut-off date for risk model data is the second Friday of the review month. The cut-off date for ISS ESG data is the last dissemination day of the month preceding the review month.

4.3.3 INDEX REVIEW SUPPLEMENT

Social & Governance Constraints

Target	Constraint
Human Rights*	Include negligible, low risk and medium risk stocks identified by Sustainalytics in Human Rights and Human Rights Supply Chain
Human Capital Risk Score*	Reduce Human Capital Score by 0.25 standard deviation against Parent Index
Corporate Governance Risk Score*	Reduce Corporate Governance Risk Score by 0.25 standard deviation against Parent Index
Controversial Weapons Screen	Do not hold stocks that Sustainalytics identifies to be involved in anti-personnel mines, cluster weapons, depleted uranium
Global Standards Screening	Exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment.
UNGC	Do not hold stocks with UNGC Non-Compliant Flag

4. INDEX METHODOLOGY

*These constraints have been applied to the backtest starting from 2019 as the underlying data from Sustainalytics are available from March 2019.

Human Rights: STOXX will include companies that Sustainalytics identifies to have negligible, low risk or medium risk in Human Rights or Human Rights Supply Chain.

Human Capital Risk Score: The Human Capital Risk MEI Score from Sustainalytics is z-scored and the weighted average z-score of the Index is constrained to be less than 0.25 standard deviations compared to the Parent Index.

Corporate Governance Risk Score: The Corporate Governance MEI Risk Score from Sustainalytics is z-scored and the weighted average z-score of the Index is constrained to be less than 0.25 standard deviations compared to the Parent Index.

Controversial Weapons Screen: STOXX will exclude the companies that Sustainalytics identifies to be involved in anti-personnel mines, cluster weapons, depleted uranium. The criteria for involvement are:

» Internal production or sale

» The ultimate holding company owns >50% of voting rights of an involved company

» >50% of voting rights of a company is owned by the involved company

The cut-off date for Sustainalytics data is the last dissemination day of the month preceding the review month.

Global Standards Screening: Exclude companies that are non-compliant based on the Sustainalytics Global Standards Screening assessment. Global Standards Screening identifies companies that violate or are at risk of violating commonly accepted international norms and standards, enshrined in the United Nations Global Compact (UNGC) Principles, the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights (UNGPs), and their underlying conventions.

UNGC: STOXX will exclude the companies that are identified to be UNGC Non-Compliant

Climate Constraints

Target	Constraint
Thermal Coal Mining or Power Generation	Do not hold stocks that derive more than 35% of revenues from thermal coal mining or power generation from coal.
Weight of stocks in HESS with CDP F or D-	Do not hold
Weight of stocks in HESS with CDP F or D- missing carbon emissions or emissions intensity or EVIC data	Do not hold
Weight of stocks missing or zero carbon emissions or emissions intensity or EVIC data	Hold at Parent Index weight

4. INDEX METHODOLOGY

Minimum weight of SBTI Approved or CDP A stocks in HESS	Parent Index weight
Minimum weight of SBTI Committed or CDP A- rated stocks in HESS	0.5 x Parent Index weight
Maximum weight of stocks in HESS missing CDP Rating or Not available or Private score	Parent Index weight
Maximum weight of stocks in HESS with CDP Score "Not scored"	Do not hold if last year's CDP score = F Parent Index weight if last year's CDP > F
Active sector (ICB Level 3) exposures	Within 0.1% of Parent Index
Alignment with Sustainable Development Scenario (SDS) pathway	The emissions pathway of the indices must be below the carbon budget for the SDS pathway of the current year and 2050
Minimum green share / brown share ratio compared to the Parent Index	At least equivalent
* HESS = High Emitting Super Sectors	

Exclude companies with significant proportion of revenues coming from thermal coal: Do not hold companies that ISS identifies to have more than 50% of revenues coming from thermal coal mining or from generation of electric power using coal. The maximum percentage of recent year's revenues for the company's involvement is being used.

Weight of CDP F or D- rated stocks missing or zero carbon emissions or emissions intensity or EVIC data: Do not hold companies in High Emitting Super Sectors with CDP rating F or D-, that are missing carbon emissions or emissions intensity or Enterprise Value Including cash (EVIC) data. The EVIC data is based on the fiscal year data for the end of the last calendar year.

Weight of stocks missing or zero carbon emissions or emissions intensity or EVIC data: Any stocks missing carbon emissions or emissions intensity or Enterprise Value Including cash (EVIC) data are forced to be held at their Parent Index weight.

Minimum weight of SBTI Approved or CDP A rated stocks: The minimum weight of each stock in High Emitting Super Sectors that has Approved verified science-based targets in accordance with SBTI or CDP Performance band of A is limited at Parent Index weight.

Minimum weight of SBTI Committed or CDP A- rated stocks: The minimum weight of each stock in High Emitting Super Sectors that has committed to reducing its GHG emissions but does not have science-based targets approved by SBTI yet, or has CDP Performance band of A-, is limited at half of the Parent Index weight.

Weight of CDP F or D- rated stocks: Do not hold companies in High Emitting Super Sectors with CDP rating F or D-.

Maximum weight of stocks missing CDP Rating data: The maximum weight of stocks in High Emitting Super Sectors with CDP Rating missing or "Not available" or "Private score" is the benchmark weight.

4. INDEX METHODOLOGY

Maximum weight of stocks with CDP Score "Not scored": The maximum weight of stocks in High Emitting Super Sectors with CDP Score 'Not scored' will depend on the previous year CDP Score. If the previous year's score was an F or "Not scored", the company is excluded. If the previous year's score was higher than F, the company is held at most benchmark weight.

The above asset bounds are applied sequentially, stopping at the first category that applies.

High Emitting Super Sectors are considered the following ICB Super Sectors, Basic Resources (5510), Chemicals (5520), Construction & Materials (5010), Energy (6010), Utilities (6510) and the ICB Subsector Airlines (40501010).

Alignment with Sustainable Development Scenario (SDS) pathway: The emission pathway of the Index must be below its carbon budget for the SDS pathway of the current year and 2050. This is to ensure that the Index is aligned with the SDS pathway decarbonization trajectory until 2050.

Minimum green share / brown share ratio compared to the Parent Index: The green revenue share / brown revenue share of the index, is at least equivalent to that of the Parent Index.CDP Scores are updated annually and the cut-off date is the last day of the previous year.

Carbon Trajectory

Target	Constraint
Scope 1 + 2 GHG emissions reduction (up to Dec 2019)	50% reduction against the Parent Index
Scope 1 + 2 GHG emission reduction (after Dec 2019)	Minimum GHG emission of: 1) 50% reduction against the Parent Index 2) 10% year-on-year reduction from Dec 2019 values 3) previous quarter index emissions
GHG Intensity reduction (up to Dec 2019)	50% reduction against Parent Index
GHG Intensity reduction (after Dec 2019)	Minimum GHG intensity of: 1) 50% reduction against the Parent Index 2) 10% year-on-year reduction from Dec 2019 values 3) previous quarter index GHG intensity

Scope 1 + 2 GHG emission reduction up to Dec 2019: Up to December 2019, the GHG emissions of the Index are reduced by 50% compared to the Parent Index. Subsequently, emissions are reduced by 10% year-on-year in addition to the 50% reduction from the Parent Index as described below.

Scope 1 + 2 GHG emission reduction after Dec 2019: After December 2019, the GHG emissions of the Index are the minimum emissions between 1) 50% reduction against the Parent Index, and 2) 10% year-on-year reduction from Dec 2019 values (87.437690), and 3) the emissions of the previous quarter, effectively achieving 70% reduction by the end of 2024. Stock level emissions from ISS ESG defined as (Scope 1 + Scope 2 Emissions) rescaled by Enterprise Value Including Cash (EVIC) are used to compute the total Index emissions.

4. INDEX METHODOLOGY

GHG Intensity reduction up to Dec 2019: Up to December 2019, the GHG Intensity of the Index is reduced by 50% compared to the Parent Index. Subsequently, emissions are reduced by 10% year-on-year in addition to the 50% reduction from the Parent Index as described below.

GHG Intensity year-on-year reduction after Dec 2019: After December 2019, the GHG Intensity of the Index is the minimum intensity value between 1) 50% reduction against the Parent Index, and 2) 10% year-on-year reduction from Dec 2019 values (183.128868), and 3) the emissions intensity of the previous quarter, effectively achieving 70% reduction by the end of 2024. Stock level GHG Intensities from ISS ESG defined as (Scope 1 + Scope 2 Emissions)/(Revenues in USD), are used for this constraint.

Factor Definitions

Factor	Sector specific definitions	Component signals with weights
Momentum	Not Applicable	+1/2 Annual Return Excl Prev Month +1/2 Earnings Revision*
Low Risk	Not Applicable	-1/2 Volatility 125 Day -1/2 Regional Market Sensitivity 250 Day
Quality	Banks	+1/5 Earnings Growth Annual -1/5 Debt to Assets Annual -1/5 Debt to Equity Annual +1/5 Return on Assets Annual +1/5 Return on Equity Annual
	Non-Banks	+1/5 Earnings Growth Annual -1/5 Debt to Assets Annual +1/5 Cash Flow to Assets Annual +1/5 Gross Margin Annual +1/5 Return on Assets Annual
Value	Banks	+1/3 Earnings to Price Annual +1/3 Dividend Yield Annual +1/3 Tangible Book Yield*
	Non-Banks	+1/4 Earnings to Price Annual +1/4 Est Earnings to Price Annual +1/2 Cash Flow Yield*

*All component signals in the above table except Earnings Revision, Tangible Book Yield and Cash Flow Yield are taken from the Axioma World-wide Model Factor Library.

Earnings Revision is derived from IBES as the ratio of number of net upgrades (upgrades - downgrades) to the total number of changes in analyst forecasts for the next two financial years, over the last three months. The review cut-off date for IBES data is the second Friday of the review month.

Tangible Book Yield is computed as the ratio of (Total Assets – Long Term Debt – Preferred Stock – Intangible Assets) to total issuer market capitalization. Missing Preferred Stock and Intangible Assets information is replaced with zeroes.

4. INDEX METHODOLOGY

Cash Flow Yield is computed as the ratio of (Operating Net Cash Flow – Capital Expenditures) to total issuer market capitalization. Cash flow information is often missing for Financial stocks. In such cases missing Operating Net Cash Flow is replaced by (Annual Income - Depreciation and Amortization).

Banks stocks are identified using the ICB Super Sector Banks classification.

If one or more but not all component signals are missing values for an asset, then the weights of the rest of the component signals will be rescaled so that the absolute sum of the weights is equal to 1. If all component signals are missing values for an asset, then the factor score of this asset will be computed as the average factor score of all the stocks with factor scores from the same ICB Super Sector.

Infeasibility Handling, I: If a solution that satisfies the above constraints cannot be found, the Active sector exposures constraint is relaxed. The constraint is only relaxed if necessary to find a solution.

Infeasibility Handling, II: If a solution that satisfies the above constraints cannot be found, the following constraints are relaxed in a pre-defined order, minimizing constraint violations at each stage. A constraint is only relaxed if necessary to find a solution. The order is the following, starting with the constraint most likely to be relaxed: 1) Limit Turnover 2) Active country exposures 3) Active sector exposures 4) Percentile days to trade/liquidity constraint.

In case of violations, a notification with the list of constraint violations shall be sent to Univest.

4.3.4 ONGOING MAINTENANCE

Replacements: Deleted companies are not replaced.

Fast exit: Not applicable.

Fast entry: Not applicable.

Spin-offs: Spin-offs are not added permanently

Corporate Actions: All components are maintained for corporate actions as outlined in the STOXX calculation guide available on stoxx.com