

# Guidelines

## **Human Capital Factor Unconstrained Index Methodology**

Last Updated February 24, 2022

This document summarizes methodology underlying the Human Capital Factor Unconstrained Index (“the Index”). Please see important notes and disclaimers at the end of this document. This is not a recommendation of the Index or any instrument tracking the Index.



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## Introduction

This document is to be used as a guideline with regard to the composition, calculation, and management of the Human Capital Factor Unconstrained Index (the “Index”). Any changes made to the guideline are initiated by the Committee specified in section 5. The Human Capital Factor Unconstrained Index is calculated and published by Solactive AG (the “Index Calculator”).

### 1 Index Overview

The Human Capital Factor Unconstrained Index (the “Index”) was developed to provide investors exposure to companies that best manage human capital. The Index is comprised of an equal weighted portfolio of equity securities of U.S. companies that possess strong human capital as determined by Irrational Capital (“Irrational Capital” or the “Index Provider”).

The Index is developed by Irrational Capital and uses a rules-based methodology defined in Section 2.1 based on Irrational Capital’s research in behavioral science and human capital. Considerations in the Index selection process includes the translation of non-financial information into metrics that offer insight into financial performance, i.e., quantifying the impact of corporate culture and employee motivation. Human capital is a broad, customizable, high capacity, and multi-faceted category, and the ability to unlock its potential in a systematic and replicable manner has largely been untapped. Irrational Capital has developed this Index that asserts that companies with the best human capital led to long-term value creation and superior equity returns.

The Index is reconstituted annually and rebalanced quarterly by Irrational Capital to equal weights for each company.

The Index is calculated and distributed by the Index Calculator.

The Index is calculated and published in USD.

#### 1.1 Index Details

The gross total return version of the Index is distributed under ISIN DE000SL0EAD0. The Index is published in Bloomberg under the ticker HAPYUTR Index.

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## 1.2 Initial Value

The Index is calculated since November 1, 2021 or as soon as reasonably practicable thereafter (the “Inception Date”). Backtest data is available since February 14, 2014. The index starts from a level of 100 (reference point) starting on its Inception Date.

## 1.3 Distribution

The Index is published via the price marketing services of Bloomberg and is distributed to all affiliated vendors. Each vendor decides on an individual basis as to whether the vendor will distribute/display the Index via the vendor’s information systems.

## 1.4 Prices and Calculation Frequency

The value of the Index is calculated on each Business Day based on the prices on the respective Exchanges on which the index components are listed. The most recent prices of all index components are used.

The Index is calculated every 15 seconds with the closing time being 4:50pm, EST. In the event that data cannot be provided to Bloomberg, the Index cannot be distributed.

Any incorrect calculation is adjusted on a retrospective basis according to Solactive correction policy ([https://www.solactive.com/wp-content/uploads/2019/08/Correction-Policy\\_1.2\\_30082019.pdf](https://www.solactive.com/wp-content/uploads/2019/08/Correction-Policy_1.2_30082019.pdf)).

## 1.5 Weighting

On each Adjustment Day (each Rescreening Date and Rebalance Date) each component of the Index is weighted equally. The selection process is described in section 2. Each component of the Index is reset to equal weight on the Rebalancing Days if it has deviated from the equal weight over the previous quarter.

## 1.6 Decision-making bodies

Using proprietary human resources survey responses and algorithms based on research by Irrational Capital, the Index Provider is responsible for all decisions regarding the composition of the Index as well as any amendments to the rules. The future composition of the Index is determined by Irrational Capital on the rescreening date according to the procedure outlined in Section 2 of this document as determined by the Index Provider. Irrational Capital shall also be the sole decision-making regarding the future composition of the Index. If any Extraordinary Events should occur resulting in the necessity to implement of any adjustments, Irrational Capital can make changes to the guideline subject to the approval of the Index Committee.

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## 1.7 Publication

All specific information relevant for calculating the Index are made available on the webpage of the Index Calculator (<http://www.solactive.com>) web page and sub-pages.

## 1.8 Historical Data

Historical data will be maintained from the launch of the Index on Inception Date.

# 2 Index Construction Methodology

## 2.1 Index Universe

The initial rescreening date is 365 days from the Inception Date and each subsequent rescreening date is 365 calendar days from the prior rescreening (“Rescreening Date”).

The eligible “Index Universe” consists of all members of the Solactive GBS United States 1000 Index, with a minimum market capitalization of \$1 billion.

The Index Universe will exclude any shares where, in the determination of the Index Calculation Agent, there is a reasonable expectation that there may be a material reduction in the liquidity of a share in the period ending on the last Index Rebalancing Date following the next Rescreening Date (i.e., the last Index Rebalancing Date on which the share would exit the Index) as a consequence of an impending corporate action, regulatory action, delisting or other material event affecting a share (“Qualifying Shares”).

## 2.2 Index Construction Process

The index construction process is designed to reflect Irrational Capital’s quantitative measurement of wide-ranging behavioral and cultural traits that capture the depth and nuance of the relationship between a company and its employees. This is accomplished via the following steps:

### 2.2.1 Data is obtained from public and private data sources

Irrational Capital uses public and exclusive, non-public data as the building blocks of its proprietary Human Capital Factor (“HCF”) score.

Irrational Capital’s proprietary company scoring methodology is derived from assessments of intrinsic motivation (i.e., appreciation, pride, motivation, sense of caring, sense of purpose) and to a lesser degree, measurements of extrinsic employee motivation such as compensation. The data sets are aggregated, synthesized, and tested for integrity. This data is then used to score publicly traded companies.

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## **2.2.2 Combine the HCF elements to obtain the HCF score**

Proprietary, mathematical modeling and various data science techniques are used to bring approximately 30 underlying HCF characteristics (largely proprietary, motivational elements and themes) into the final HCF score. The combination of these underlying factors has been shown to statistically outperform both the market and a baseline portfolio of the scored universe. The Index provider reduces the dimensions into a single representative score for each company (the HCF score). The HCF score does not consider any financial metrics.

## **2.2.3 Score companies by HCF**

Companies are scored by their HCF performance. The same model is used across all sectors and industries. Companies with higher (lower) scores signal better (worse) human capital performance of a company.

## **2.2.4 Final index creation**

The index invests in the highest scoring companies based on the relative performance of the company's respective HCF score.

The index is composed of the 70 to 100 companies with the highest Human Capital Factor scores.

The total number of companies included in the index is determined by industry concentration so that no industry constitutes more than 25% of the index at the time of recasting, with a maximum of 25 stocks from a single industry. Stocks are equally weighted at the time of recast and rebalancing.

## **2.3 Ordinary Adjustment**

Prior to Rescreening and Rebalance Dates, the Calculation Agent will receive a list of the top human capital companies from Irrational Capital. Any firm on the list that is also in the Index Universe will be included in the Index.

Index components will be equally weighted at the start of each portfolio Rescreening Date and each Rebalancing Date.

## **2.4 Extraordinary Adjustment**

An extraordinary adjustment, if applicable, is triggered and applied in compliance with the rules set forth in the Solactive Guideline for Extraordinary Corporate Actions.

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### 3 Index Rebalancing

The Index is rebalanced quarterly. The Index “Rebalancing Date(s)” are on the closed subsequent trading day which falls 91 calendar days after the prior Rescreening or Rebalance Date.

### 4 Index Calculation and On-going Maintenance

The Index Calculator is responsible for calculating index levels based on the methodology specified in this document.

#### 4.1 Index Formula

The Index Value on a Business Day at the relevant time is calculated in accordance with the following formula:

$$Index_t = \frac{\sum_{i=1}^n x_{i,t} * p_{i,t} * f_{i,t}}{D_t}$$

with:

$x_{i,t}$  = Number of Index Shares of the index component  $i$  on Trading Day  $t$

$p_{i,t}$  = Price of index component  $i$  on Trading Day  $t$

$f_{i,t}$  = Foreign exchange rate to convert the Price of index component  $i$  on Trading Day  $t$  into the Index Currency

$D_t$  = Divisor on Trading Day  $t$

The initial Divisor on the Start Date is calculated according to the following formula:

$$D_t = \frac{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t})}{100}$$

After the close of trading on each Adjustment Day  $t$  the new Divisor is calculated as follows:

$$D_t = \frac{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t})}{Index_t}$$

This Divisor is valid starting the immediately following Business Day.

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## 4.2 Accuracy

The value of the Index will be rounded to 2 decimal places.

Trading Prices and foreign exchange rates will be rounded to six decimal places.

Divisors will be rounded to six decimal places.

## 4.3 Adjustments

Indices need to be adjusted for systematic changes in prices once these become effective. This requires the new Number of Index Shares of the affected index component and the Divisor to be calculated on an ex-ante basis.

Following the Irrational Capital Committee's decision, the Index is adjusted for distributions, capital increases and stock splits.

This procedure ensures that the first ex quote can be properly reflected in the calculation of the Index. This ex-ante procedure assumes the general acceptance of the Index calculation formula as well as open access to the parameter values used. The calculation parameters are provided by the Index Calculator.

## 4.4 Dividends and other distributions

Dividend payments and other distributions are included in the Index. They cause an adjustment of the Divisor. The new Divisor is calculated as follows:

$$D_{t+1} = D_t * \frac{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t}) - (x_{i,t} * y_{i,t} * g_{i,t})}{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t})}$$

$p_{i,t}$  = Price of index component i on Trading Day t

$f_{i,t}$  = Foreign exchange rate to convert the Price of index component i on Trading Day t into the Index Currency

$x_{i,t}$  = Number of Index Shares of the index component i on Trading Day t

$y_{i,t}$  = Distribution of index component i with ex date t+1 multiplied by the Dividend Correction Factor

$g_{i,t}$  = Foreign exchange rate to convert the amount of the distribution of index component i on Trading Day t into the Index Currency

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$D_t$  = Divisor on Trading Day  $t$

$D_{t+1}$  = Divisor on Trading Day  $t+1$

## 4.5 Corporate actions

### 4.5.1 Principles

Following the announcement by an issuer of index components of the terms and conditions of a corporate action the Index Calculator determines whether such corporate action has a dilutive, concentrative or similar effect on the price of the respective index component. If this should be the case the Index Calculator shall make the necessary adjustments that are deemed appropriate in order to take into account the dilutive, concentrative or similar effect and shall determine the date on which this adjustment shall come into effect.

Amongst other things the Index Calculator can take into account the adjustment made by an Affiliated Exchange as a result of the corporate action with regard to option and futures contracts on the respective share traded on this Affiliated Exchange.

### 4.5.2 Capital increases

In the case of capital increases with ex date  $t+1$  the Index is adjusted as follows:

$$x_{i,t+1} = x_i * \frac{1+B}{1} \quad \text{with:}$$

$x_{i,t+1}$  = Number of Index Shares of index component  $i$  on Trading Day  $t+1$

$x_{i,t}$  = Number of Index Shares of index component  $i$  on Trading Day  $t$

$B$  = Shares received for every share held

$$p_{i,t+1} = \frac{p_{i,t} + s * B}{1+B} \quad \text{with:}$$

$p_{i,t}$  = Price of index component  $i$  on Trading Day  $t$

$p_{i,t+1}$  = Hypothetical Price of index component  $i$  on Trading Day  $t+1$

$s$  = Subscription Price in the index component currency

$$D_{t+1} = D_t * \frac{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t}) + \sum_{i=1}^n [(x_{i,t+1} * p_{i,t+1} * f_{i,t}) - (x_{i,t} * p_{i,t} * f_{i,t})]}{\sum_{i=1}^n (p_{i,t} * f_{i,t} * x_{i,t})}$$

with:

$p_{i,t}$  = Price of index component  $i$  on Trading Day  $t$

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$f_{i,t}$  = Foreign exchange rate to convert the Price of Index component i on Trading Day t into the Index Currency

$x_{i,t}$  = Number of Index Shares of the index component i on Trading Day t

$P_{i,t+1}$  = Hypothetical price of index component i on Trading Day t+1

$x_{i,t+1}$  = Number of Index Shares of the index component i on Trading Day t+1

$D_t$  = Divisor on Trading Day t

$D_{t+1}$  = Divisor on Trading Day t+1

### 4.5.3 Share splits

In the case of share splits with ex-date on Trading Day t+1 it is assumed that the prices change in ratio of the terms of the split. The new Number of Index Shares is calculated as follows:

$$x_{i,t+1} = x_{i,t} * B$$

$x_{i,t}$  = Number of Index Shares of the affected index component on Trading Day t

$x_{i,t+1}$  = Number of Index Shares of the affected index component on Trading Day t+1

B = Shares after the share split for every share held before the split

### 4.5.4 Share distributions

In the case of stock distributions with ex-date on Trading Day t+1 it is assumed that the prices change according to the terms of the distribution. The new Number of Index Shares is calculated as follows:

$$x_{i,t+1} = x_{i,t} * (1 + B)$$

$x_{i,t}$  = Number of Index Shares of the affected index component on Trading Day t

$x_{i,t+1}$  = Number of Index Shares of the affected index component on Trading Day t+1

B = Shares received for every share held

## 4.6 Calculation of the Index in the event of a Market Disruption Event

The Index is not calculated in the event of a Market Disruption Event or Force Majeure Event. If the Market Disruption Event or Force Majeure Event continues over a period of eight Trading Days, then the Committee will determine the necessary action (including but not limited to taking into account the market conditions prevailing at this point in time, the last quoted Trading

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Price for each of the index components as well as any other conditions that it deems relevant for calculating the Index value) such that the affected securities resulting from the Market Disruption Event are no longer causing such disruption to occur.

## 5 Amendments and Exceptions to this Methodology

The Index Committee, comprised of Irrational Capital employees, is responsible for decisions regarding the composition of the Index as well as any amendments to the rules (in this document referred to as the “Committee” or the “Index Committee”).

This document is updated to reflect any changes approved by the Index Committee.

## 6 Definitions

An “**Affiliated Exchange**” is with regard to an index component an exchange, a trading or quotation system on which options and futures contracts on the index component in question are traded, as specified by the Index Calculator.

“**Business Day**” means a day on which the New York Stock Exchange is open.

An index component is “**Delisted**” if the Exchange announces pursuant to the Exchange regulations that the listing of, the trading in or the issuing of public quotes on the index component at the Exchange has ceased immediately or will cease at a later date, for whatever reason (provided delisting is not because of a Merger or a Takeover bid), and the index component is not immediately listed, traded or quoted again on an exchange, trading or listing system, acceptable to the Index Calculator.

“**Exchange**” means the New York Stock Exchange or any other appropriate successor.

In particular an “**Extraordinary Event**” is

- a Merger
- a Takeover bid
- a delisting
- a change in domiciled country
- the Nationalization of a company
- Insolvency

The Trading Price for this index component on the day the event came into effect is the last available market price for this index component quoted on the Exchange on the day the event came into effect (or, if a market price is not available for the day the event came into effect, the last available market price quoted on the Exchange on a day specified as appropriate by the Index Calculator), as determined by the Index Calculator, and this price is used as the Trading Price of the particular index component until the end of the day on which the composition of the Index is next set.

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In the event of the Insolvency of an issuer of an index component the index component shall remain in the Index until the next Adjustment Day. As long as a market price for the affected index component is available on a Business Day, this shall be applied as the Trading Price for this index component on the relevant Business Day, as determined in each case by the Index Calculator. If a market price is not available on a Business Day the Trading Price for this index component is set to zero. The Committee may also decide to eliminate the respective index component at an earlier point in time prior to the next Adjustment Day. The procedure in this case is identical to an elimination due to and Extraordinary Event.

The “**Index Calculator**” or “**Calculation Agent**” is Solactive AG or any other appropriately appointed successor in this function.

“**Index component**” is each share currently included in the Index.

The “**Index Currency**” is the US dollar.

“**Insolvency**” occurs with regard to an index component if (A) all shares of the respective issuer must be transferred to a trustee, liquidator, insolvency administrator or a similar public officer as result of a voluntary or compulsory liquidation, insolvency or winding-up proceedings or comparable proceedings affecting the issuer of the index components or (B) the holders of the shares of this issuer are legally enjoined from transferring the shares.

“**Market Capitalization**” is with regard to each of the shares in the Index on a Rescreening Day or Ordinary Adjustment Day the value published as the Market Capitalization for this day. As at the date of this document Market Capitalization is defined as the value of a company calculated by multiplying the number of shares outstanding of the company by its share price.

A “**Market Disruption Event**” is defined as a Business Day where the index component is not published.

With regard to an index component a “**Merger**” is

- i. a change in the security class or a conversion of this share class that results in a transfer or an ultimate definite obligation to transfer all the shares in circulation to another legal person,
- ii. a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer to exchange shares with another legal person (except in a merger or share exchange under which the issuer of this index component is the acquiring or remaining company and which does not involve a change in security class or a conversion of all the shares in circulation),

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- iii. a takeover offer, exchange offer, other offer or another act of a legal person for the purposes of acquiring or otherwise obtaining from the issuer 100% of the shares issued that entails a transfer or the irrevocable obligation to transfer all shares (with the exception of shares which are held and controlled by the legal person), or
- iv. a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer of the share or its subsidiaries to exchange shares with another legal person, whereby the issuer of the share is the acquiring or remaining company and it does not involve a change in the class or a conversion of the all shares issued, but the shares in circulation directly prior to such an event.

The **“Merger Date”** is the date on which a Merger is concluded or the date specified by the Index Calculator if such a date cannot be determined under the law applicable to the Merger.

**“Nationalization”** is a process whereby all shares or the majority of the assets of the issuer of the shares are nationalized or are expropriated or otherwise must be transferred to public bodies, authorities or institutions.

**“Number of Shares”** is in respect of an index component and any given Business Day the number or fraction of shares included in the Index. It is calculated for any index component as the ratio of (A) the Percentage Weight of an index component multiplied by the Index value and (B) its Trading Price.

**“Index Rebalancing Date”** is the 10th Trading Day of February each year.

**“Percentage Weight”** of an index component is the ratio of its Trading Price multiplied by its Number of Shares divided by the Index value.

**“Rescreening Date”** is the last Trading Day of January each year.

**“Stock Substitute”** includes in particular American Depository Receipts (ADR) and Global Depository Receipts (GDR).

A **“Takeover bid”** is a bid to acquire, an exchange offer or any other offer or act of a legal person that results in the related legal person acquiring as part of an exchange or otherwise more than 10% and less than 100% of the voting shares in circulation from the issuer of the index component or the right to acquire these shares, as determined by the Index Calculator based on notices submitted to public or self-regulatory authorities or other information considered by the Index Calculator to be relevant.

**“Trading Day”** means a day on which the New York Stock Exchange is open.

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With regard to an index component (subject to the provisions given above under **“Extraordinary Events”** the **“Trading Price”** in respect of a Trading Day is the closing price on this Trading Day determined in accordance with the Exchange regulations. If the Exchange has no closing price for an index component, the Index Calculator shall determine the Trading Price and the time of the quote for the share in question in a manner that appears reasonable to him.

## **Legal Notices & Disclosures**

The Index is maintained by Irrational Capital LLC (“Irrational Capital”). Nothing in this Methodology is intended to be or should be interpreted as a recommendation or investment advice. The Index is a rules-based index that is calculated based on a specified set of rules with the intention of producing a grouping of companies that demonstrate high employee engagement, based on scores produced by Irrational Capital. No assurance is given by Harbor Capital Advisors, Inc. (“Harbor”) nor Irrational Capital and its affiliates that the Index will achieve the goals it is designed to address, that its construction or calculation will not include errors or that use of the Index will be suitable for any person.

This document shall not constitute an offer to sell nor the solicitation of any offer to buy any financial instrument or security, including, without limitation any instruments managed or sub-advised by Harbor nor Irrational Capital.

While all the information prepared in this document is believed to be accurate, Harbor nor Irrational Capital make any warranty as to its completeness or accuracy.

The information in this Methodology summary is only current as of the date indicated, and may be superseded by subsequent market events or for other reasons.

An investor cannot invest directly in an index. Indices are unmanaged and are not subject to fees and expenses and is not available for direct investment.

Investing entails risks and there can be no assurance that any investment will achieve profits or avoid incurring losses.

Harbor Capital Advisors, Inc.

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