

Guide to the

RepuStars® Variety Corporate Reputation Indexes



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(1) Summary

The RepuStars® Variety Corporate Reputation Indexes are quantitative strategy indexes. The strategy reflects the reputation-driven performance of up to 57 company stocks, selected algorithmically for value on the authority of Steel City Re® Corporate Reputation Index metrics.¹

The reputation metrics are calculated through a proprietary algorithm that quantifies the expectations held by stakeholders. These behaviors directly impact company revenues and operating costs. Expectations of these behaviors therefore impact expectations of company value. This value is usually captured by stock price. But not always.

At times, stakeholders may reasonably disagree and hold different expectations. The times when equity stakeholders have low expectations, and other stakeholder have high expectations are value opportunities.

The RepuStars® family of composite indices represent a quantitative strategy of reputation arbitrage built on the authority of Steel City Re® Corporate Reputation Index metrics.

The RepuStars Variety Corporate Reputation Indexes reflect the reputation-driven performance of up to 57 company stocks, selected algorithmically 3 companies at a time from each of nineteen 19 commercial sectors.

The RepuStars Variety Corporate Reputation Indexes are reconstituted annually and are denominated in US dollars.

The patent-pending selection algorithm² underpinning the RepuStars Variety Corporate Reputation Indexes is designed to identify these value opportunities. The algorithm selects up to three (3) companies from each of nineteen (19) commercial sectors where value opportunities are implied by a high reputation value and a low stock price.

The RepuStars® Variety Corporate Reputation Indexes are denominated in US dollars. The components trade on US exchanges and are screened for price and market cap.

There are two versions. The RepuStars® Variety Corporate Reputation Index reflects stock price. The RepuStars® Variety Corporate Reputation Total Return Index reflects adjusted stock price with dividends reinvested.

The RepuStars® Variety Corporate Reputation Indexes are calculated by Dow Jones Indexes, the marketing name and a licensed trademark of CME Group Index Services LLC. This rulebook describes the methodology for these indexes. The family is expected to expand to cover additional quantitative strategies built on the authority of Steel City Re® Corporate Reputation Index metrics.

(2) Background

The RepuStars® Variety Corporate Reputation Indexes comprise unique applications of metrics developed to quantify corporate reputation and its management. Reputational management is taken to mean control of the business processes underpinning reputation and enterprise value. These processes fall loosely into six general categories: ethics, innovation, quality, safety, sustainability, and security.

¹ “RepuStars” and “Steel City Re” are registered trademarks of C Huygens & Co. LLC.

² Pending patent owned by C Huygens & Co. LLC and the covered technology is used by Technology Option Capital, LLC under license.

The forward-looking impressions by stakeholders—call them expectations—collectively constitute corporate reputation. These expectations can be measured, quantified, and characterized statistically over time. Through measurement, they can be compared to metrics of peers in absolute terms, in ratios, and in rank orders.

There are alternative ways to measure reputation such as surveys and media tone analysis. The method used to underpin the Steel City Re Corporate Reputation Index is economic behavioral analysis which posits that “people put their money where their hearts and mouths are.”

Equity investors are an important stakeholder group, but there are others. Customers, employees, creditors, vendors, and regulators all form their own expectations. The selection rules underpinning the Reputation-linked indices help identify companies whose reputational value suggests that equity investors, as a group, have probably not yet assigned a proper market value.

Other applications of the reputational metrics include operational business intelligence tools³; and a family of reputational value insurances⁴ offered in cooperation with Steel City Re.

The reputational metrics have been tested and validated over several years of empirical research. Articles on various aspects of the indices may be found in a number of journals. In addition, a book published in 2010 titled, *Mission: Intangible* provides background on the relationship between reputation and value.

(3) Index Attributes

Base Dates and Base Values

Each of the RepuStars Variety Corporate Reputation Indexes have a base date of December 31, 2001, and a base value of 1000.

³ Expected to be available through a third party provider Q1 2012.

⁴ Expected to be available through a third party provider Q4 2011.

Index Calculation

Index Formula Overview

The RepuStars Variety Corporate Reputation Indexes comprise stocks whose recent prices seem improbably low relative to the price implied by their reputation metrics and trajectories. Both the Price and Total Returns indexes comprise up to 57 components, equally dollar-weighted, and rebalanced annually after the close of business on the third Friday of January.

Input Data

—Real-time prices of the index components are provided by vendors to Dow Jones Indexes for the purpose of calculating the index.
—Corporate actions of the index components are researched by Dow Jones Indexes staff using news services, regulatory filings and information provided by the companies themselves.

Stock Prices

Intraday index values for the RepuStars Variety Corporate Reputation Indexes are computed using each component’s last-traded price on its primary exchange. End of day index values are calculated using each component’s primary-exchange closing price. If trading in a stock is suspended while the market is open, the last-traded price for that stock is used for all subsequent index computations until trading resumes. If trading is suspended before the opening, the stock’s last adjusted closing price is used to calculate the index. The adjusted closing price reflects the ex-distribution effects on a share’s price of corporate actions such as spinoffs, stock splits or returns of capital implemented after the close of trading on the day prior to their ex-dates.

Computational Precision

Index values and divisors are available up to six decimal places. Values derived by the index calculation engine from a corporate action used

for the divisor adjustments and index computations are rounded to six decimal places.

Dissemination

The price-return versions of the RepuStars Variety Corporate Reputation Indexes are disseminated via data vendors every 15 seconds during U.S. stock exchange trading hours while the total return versions are disseminated as summary only values at the end of each trading day. Index licensees also may access data on index values and index constituents through end-of-day dissemination via the Dow Jones Indexes FTP site.

(4) Index Construction Methodology

Index Universe

The selection universe for the RepuStars Variety Corporate Reputation Indexes includes all common stocks on the US major exchanges whose companies have at the time of selection a market cap no less than \$1.5B and a stock price greater than \$5.00, a trading history of not less than 13 weeks, and a reputational metrics history of not less than 13 weeks. All stocks require a current Steel City Re Corporate Reputation Index rank.

Stock Selection

C Huygens calculates Steel City Re® Corporate Reputation Index™ metrics for each company in the index universe, subject to the availability of underlying reputational statistics. From these data, Technology Option Capital then selects stocks based on a combination of factors involving stock price and reputational value that indicate an improbably low stock price in the setting of the calculated reputational metrics.

The selection process comprises three steps. In the first step, stock candidates are filtered for certain price and reputation attributes. In the second step the filtered list is ranked by share price vector. Last the top 3 stocks for each

commercial sector are selected for the RepuStars Variety Corporate Reputation Indexes.

Criteria-based Filtration

The four criteria and their respective parameters are as follows:

- ➔Relative to the prior 13 weeks, the current corporate reputation rank is no more that 1.5 standard deviations above the mean
- ➔Current corporate reputation index rank is above the bottom quartile and less than or equal to the 85th percentile of the distribution of values over the prior 13 weeks
- ➔The 13-week corporate reputation rank trend is positive
- ➔Relative to the prior 13 weeks, the current share price is below the mean

Ranking by Price Vector

The list of stocks in each of the sectors is sorted and arranged on the basis of the Share Price Vector in ascending order beginning with the most negative or smallest value. Price vector is a proprietary measure of volatility comprising the 13-week average price value divided by standard deviation of that price value multiplied by the 13 week slope of that price value.

$$V_p = \frac{P_{avg}}{P_\sigma} * P_m$$

where:

- V_p = stock price vector
- P_{avg} = 13-week stock price average
- P_σ = 13-week stock price standard deviation
- P_m = 13-week stock price slope

Stratifying by Sector

C Huygens assigns each stock on which it provides reputational metrics a unique industry sector from a proprietary⁵ list of 19 defined sectors as follows:

⁵ The sector associations are based on data provided to C Huygens & Co. LLC by its commercial data vendor.

- ➔ Commercial Services
- ➔ Communications
- ➔ Consumer Durables
- ➔ Consumer Non-Durables
- ➔ Consumer Services
- ➔ Distribution Services
- ➔ Electronic Technology
- ➔ Energy Minerals
- ➔ Finance
- ➔ Health Services
- ➔ Health Technology
- ➔ Industrial Services
- ➔ Non-Energy Minerals
- ➔ Process Industries
- ➔ Producer Manufacturing
- ➔ Retail Trade
- ➔ Technology Services
- ➔ Transportation
- ➔ Utilities

The RepuStars Variety Corporate Reputation Indexes comprise up to three stocks from each of 19 sectors.

If there are no stocks that meet the above selection criteria for a given sector, or if there are insufficient stocks for the full allocation of 3 per sector, then the sector is left unrepresented or underrepresented in the RepuStars Variety Corporate Reputation Indexes.

(5) Ongoing Review

Shares and Float

Because the RepuStars Variety Corporate Reputation Indexes are equally weighted at the time of rebalancing, free float factors and shares outstanding changes do not affect the calculation of the indexes. Stock offerings and stock buybacks also do not affect the indexes.

Ongoing Maintenance

Spinoffs

If a component company spins off a child, the child company will not be added to the indexes.

Adjustments for Corporate Actions

All price adjustments due to corporate actions are applied in accordance with standard Dow Jones Indexes methodology. In the event of a rights offering or stock split/stock dividend, Dow Jones Indexes will adjust the price and weight factor of the component based on terms on the day prior to the ex-date. The adjusted weight factor will offset the changes and maintain weight in the Index respectively. In the event of a special cash dividends, Dow Jones Indexes will adjust the price of the component by the amount of the special cash dividend on the ex-date; and in the event of a regular cash dividend (total return only), Dow Jones Indexes will adjust total return using either the gross or net dividend, depending on the customary tax-related treatments.

Component Deletions

If a company is removed from the indexes, it will not be replaced until the indexes are rebalanced.

Composition Reviews

The constituent members of the RepuStars Variety Corporate Reputation Indexes are rebalanced annually after the close of business on the third Friday in January. The index is equally weighted using closing prices as of the Tuesday prior the third Friday in January, and changes are implemented after the close of business on the third Friday in January.

(6) Calculations and Adjustments

Index Formula

Returns are calculated using the standard return-on-investment formula for an equally-dollar weighted index.

Divisor Adjustments

Index divisors will be adjusted to maintain index continuity in the event of corporate actions or

other events that may cause distortions in index value.

(7) Data Correction Policy

To maintain a high standard of data integrity, a series of procedures have been implemented to ensure accuracy, timeliness and consistency. Input prices are monitored using a variety of computerized range-check warning systems for both ticker-plant and real-time index systems. Fault tolerant methods are employed in the collection of market and corporate action data. Various verification and audit tasks are performed to ensure the quality of the real-time data feeds and related market data.

While efforts are made to ensure the accuracy of the information used for the index calculation, an index error may occur due to incorrect or missing data, including trading prices, exchange rates, shares outstanding and corporate actions, due to operational errors or other reasons.

Intraday Corrections

Corrections will be made for bad prices and incorrect or missing corporate actions as soon as reasonably possible after detection. Since the indexes are calculated on a real-time basis, an

incorrect index value tick will not be fixed retroactively. Incorrect daily high/low index values will be corrected as soon as reasonably practicable.

Index-Related Data Corrections

Incorrect pricing and corporate action data for individual issues in the database will be corrected upon detection.

(8) Methodology Changes

Because the reputational statistics serve multiple applications, the methods used to calculate the reputation metrics underpinning the Steel City Reputational Index metrics—a key input into the selection of components of the RepuStars Variety Corporate Reputation Indexes—are tightly controlled and validated on a regular basis.

However, the selection rules that are applied to these metrics to yield the RepuStars Variety Corporate Reputation Indexes are specific to this family of index products. Technology Option Capital reserves the right to modify the index methodology at any time.

For more information on the RepuStars Variety Corporate Reputation Indexes, email RepuStars@tocllc.com Learn more. Visit the Intangible Asset Finance Society at www.iafinance.org.

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