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# The S-Network Space Index (SPACE)



**Index Rules and Methodology**

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## The S-Network Space Index (SPACE) Rule Book

This document provides the rules for calculating and maintaining The S-Network Space Index. Included in these rules are the following: 1) a description of The S-Network Space Index, 2) the design specifications for The S-Network Space Index, and 3) the index calculation and data elements.

### I. General Description

The S-Network Space Index tracks a portfolio of companies that derive substantial revenue from space-related activities. The companies span multiple economic sectors and are engaged in activities including telecommunications, television and radio broadcasting, rocket and satellite manufacturing and operation, ground equipment manufacturing, and space-based imagery and intelligence services.

The S-Network Space Index is a modified capitalization weighted, float and space revenue percentage adjusted equity index designed to serve as an equity benchmark for globally traded stocks that are materially engaged in the space business.

The S-Network Space Index comprises two main business segments (“the Segments”):

**Satellite Operators.** Companies whose principal business involves services provided by satellites that are owned and/or operated by the companies.

**Hardware.** Companies whose business involves the sale of space-related hardware, including:

- **Satellite Prime Manufacturers**
- **Launch Vehicle Prime Manufacturers**
- **Components and Ground Equipment**

The S-Network Space Index contains stocks selected from a universe of equity securities traded on recognized stock exchanges in a) the Americas, b) Europe, Middle East & Africa (EMEA) and c) Asia/Pacific, based on a set of objective screening criteria.

The selection criteria include requirements for industry participation and minimum average daily trading volume.

Each stock’s relative weighting in The S-Network Space Index will be based on its market capitalization within a tranche, adjusted for free float and modified by the space revenue percentage subject to certain restrictions, limitations and modifications.

### II. Index Values at Inception

The S-Network Space Index will have a value at inception of 1000.

### III. The Index Committee

The S-Network Space Index Committee (“The Committee”) will be composed of not less than three members. The Committee Chairman will have extensive experience in and expertise in financial markets and stock market characteristics. Two of the members will have some expertise in at least one of the above-named sectors.

The Committee will be responsible for maintaining a comprehensive list of companies that are principally engaged in one of the business segments, and the list will form the S-Network Space Index universe of stocks.

Impartial selection criteria will then be applied to these stocks to determine whether or not they should be included in the index.

The Committee will then review the stocks to be included in the S-Network Space Index and may reject any stock that it believes does not meet its overall standards for risk and sound business practice.

The Committee will meet twice a year, either in person or via teleconference, to discuss index issues and organize the semi-annual or special rebalancing.

The composition of the Committee may from time to time be changed to reflect changes in market conditions.

#### **IV. Eligibility Criteria**

Only companies that meet the following eligibility criteria for their applicable business segment may be considered for inclusion in The S-Network Space Index. To determine eligibility for inclusion in the S-Network Space Index, companies are initially screened according to the following criteria:

- i) The company must meet at least one of the following criteria of space-related activities:
  - The company was a prime manufacturer for a satellite in the past five years.
  - The company was a prime manufacturer or operator of a launch vehicle in the past five years.
  - The company currently operates satellites.
  - The company is substantially engaged in manufacturing space vehicle components (for satellites, launch vehicles, or other spacecraft).
  - The company is substantially engaged in manufacturing ground equipment used with satellite systems.

Although few, if any, public companies exist that pursue the following business activities currently, it is expected that such companies will emerge in the future:

- Space colonization/infrastructure
  - Space resource exploration/extraction
  - Space-based military/defense systems
  - Space tourism, including transportation and hospitality
  - Technologies that enable the space economy
- ii) The company's stock must trade on a recognized North American, European or Asian stock exchange. (National Stock Exchange, formerly NASDAQ, stocks must be "reported securities" under 11Aa3-1 of the Securities and Exchange Act, i.e., National

Market System stocks, and similar criteria apply to stocks with foreign listings.) Only actual common shares outstanding are eligible for inclusion. For companies with multiple share classes, the eligibility of each share class will be considered based upon overall liquidity (average daily trading volume) as if each represented a separate company.

- iii) The company's stock must have a three-month average daily trading volume (the "turnover") of at least USD 1,000,000 on the snapshot date of the semi-annual reconstitution.
- iv) If a company has been trading for fewer than three calendar months ("Recent IPO") but more than 22 trading days, the company's average daily trading volume for its entire trading history shall be used to calculate turnover. Such companies may be added to the S-Network Space Index on any reconstitution date at the discretion of the Committee. Recent IPOs in non-US jurisdictions will be added only after meeting relevant US regulations with respect to qualifications for US ownership.

## V. Constituent Weightings

- i) The S-Network Space Index is divided into two tranches, representing diversified and non-diversified business activities. The diversified tranche represents 20% of the total weight of the S-Network Space Index on each record date. The non-diversified tranche represents 80% of the total weight of the S-Network Space Index on each record date.
- ii) Index constituents within the diversified tranche will be weighted within the tranche by market capitalization adjusted for free float and modified by the percentage of revenues derived from space-based activities. (Market Capitalization \* Float Factor \* Space Revenue Percentage = Modified Market Cap)
- iii) Within-tranche weights for the diversified tranche are capped at 12%, with the excess weight redistributed proportionally to the remaining constituents within the same tranche.
- iv) Index constituents within the non-diversified tranche will be weighted within the tranche by market cap adjusted for free float.
- v) Within-tranche weights for the non-diversified tranche are capped at 6%, with the excess weight redistributed proportionally to the remaining constituents within the same tranche.
- vi) The final index weight of each stock will then be the product of its within-tranche weight and the overall weight assigned to that stock's tranche (the tranche weight).

## VI. Rules for Calculation and Dissemination

The S-Network Space Index is calculated by S-Network Global Indexes ("Calculation Agent"). The Calculation Agent is also responsible for index maintenance and price dissemination. The calculation, maintenance and dissemination rules are as follows:

**Index Changes.** Shares outstanding totals for component stocks are updated during the

quarterly review; however, if the number of float-adjusted shares outstanding for an index component changes by more than 5% due to a corporate action, the shares' total will be adjusted immediately after the close of trading on the date of the event. Whenever possible, changes will be announced at least two business days prior to its implementation. The effective date for changes in shares outstanding due to stock dividends, splits and other corporate actions are adjusted at the discretion of the index committee or its designee.

**Index Reconstitutions.** The Index is reconstituted semi-annually, during which time the Index Committee submits to the Calculation Agent a candidate list of all identifiable companies worldwide that are principally engaged in the business (as described above) including current Index constituents and recent IPOs. All candidates and current constituents are screened against the S-Network Space Index selection criteria. Once the Committee has approved additions and deletions, the Indexes are rebalanced to reflect all changes.

**Additions and Deletions.** Additions to the Indexes are made at the close of trading on the annual reconstitution dates (third Fridays of June and December). Additions are made to the index only when an index vacancy is created by an index deletion at the close of trading on the date the deletion becomes effective. Additions may be made to the S-Network Space Index at the close of trading on the quarterly rebalancing dates (third Friday of last month of the calendar quarter) in the case of certain recent Initial Public Offerings that occurred more than 22 trading days prior to the rebalancing date.

Deletions to the Indexes are made 1) at the close of trading on the annual reconstitution dates (third Fridays of June and December) for companies that fail to meet the inclusion criteria and 2) at any time, in the event a company is de-listed, files for bankruptcy, is acquired or merges with another company.

## **VII. Roles of Parties in the Annual Reconstitutions.**

- i) The Committee, or its designee, will submit to the Calculation Agent a list of index constituents for possible inclusion in the S-Network Space Index at the close of US markets on the Monday following the third Friday of the month prior to the rebalancing month.
- ii) The Calculation Agent will use the remaining criteria in IV to statistically screen the list of index constituents to confirm their eligibility for the index based on closing prices and values as of last trading date of the second month of each calendar quarter (the "Snapshot date").
- iii) On the first Friday of the rebalancing month, the Calculation Agent shall provide the Committee, or its designee, with a list of constituents for the S-Network Space Index.
- iv) The Committee shall approve or reject the changes and notify the calculation agent of its decisions not later than the Wednesday following the first Friday of the rebalancing month.
- v) Not later than the Wednesday following the first Friday of the rebalancing month, the Index Committee or its designee will issue a press release announcing additions and deletions to the S-Network Space Index. The press release will be posted on the S-Network Space Index web site. (Announcement date.)

- vi) The Calculation Agent will provide final share weights to the Committee or its designee on the second Friday of the rebalancing month. Weights will be based on prices as of the close of trading on the preceding Thursday, or the Thursday prior to the second Friday of the rebalancing month (the “Record date”).
- vii) The S-Network Space Index Committee or its designee will approve the final share weights prior to the close of US markets on the second Friday.
- viii) The Calculation Agent will distribute final share weights to all approved parties via email and FTP after the close of US markets on the second Friday.

The effective date of the rebalancing will be the third Friday of the rebalancing month. The Calculation Agent will post all final rebalancing data and information on its FTP server on the second Friday of the rebalancing.

- ix) The S-Network Space Index will post all rebalancing data on its website prior to the open on the next business day following the rebalancing date.

#### **VIII. Calculation of Index Values**

- i) The Calculation Agent will calculate index values using price data on each reported trade it receives on each component security.
- ii) The Calculation Agent will distribute index values to vendors at set 15-second intervals, provided the index value has changed from the previously distributed value.
- iii) The index calculations will start at 18:00 (EST - US) for the next trading day (opening price). At that time, the index will begin changing as new prices or exchange rates are processed.
- iv) Index calculation will cease each trading day at 17:00 (EST-US) and official summaries will be disseminated between 17:00 (EST-US) and 19:00 (EST-US) (closing price).
- v) Each week, the indexes will be calculated starting Sunday night at 18:00 through Friday night at 17:00.
- vi) If, during periods when the index is calculated, one or more markets are closed, the index calculation will continue using the last closing price for those stocks that trade on the closed exchange(s).
- vii) Stocks denominated in foreign currencies will be converted to USD with each reported price using exchange rates derived from Reuters. Official closing prices for the indexes will be calculated using the WM Rates (4PM London fixing).
- viii) The indexes will be calculated and disseminated in USD and EUR.
- ix) The indexes will also be calculated and disseminated in USD and EUR using Luxembourg Dividend Tax Rates to calculate net total return.

#### **IX. Dissemination**

Index values will be disseminated in US dollars via the NYSE Global Index Feed (GIF) using the following tickers:

<u>Index</u>	<u>Ticker</u>
The S-Network Space Index	SPACE
The S-Network Space Index Gross Total Return	SPACET

Index values will be disseminated in EUR via the NYSE GIF using the following tickers:

<u>Index</u>	<u>Ticker</u>
The S-Network Space Index EURO	SPACEE
The S-Network Space Index EURO Gross Total Return	SPACEET

## **X. Ongoing Maintenance**

- i) In addition to the scheduled quarterly reviews, the S-Network Space Index is reviewed on an ongoing basis. Changes in index composition and related weight adjustments are necessary whenever there are extraordinary events such as delisting, bankruptcy, mergers or takeovers involving index components. In these cases, each event will be taken into account as soon as it is effective. Whenever possible, the changes in the index's components will be announced at least two business days prior to their implementation date.
- ii) Changes of Eligible Securities. In the event that a component no longer meets the eligibility requirements described in Section IV herein, it will be removed from the index.
- iii) Changes of Industry Classification. Companies are eligible for inclusion in the S-Network Space Index based on the revenues received from its applicable business segment. Mergers, takeovers, spin-offs, or organic growth in a company's business segments may cause a company to lose its eligibility. In such a circumstance, the company will be deleted from the index. A company's classification may also require an immediate change as the result of a special event such as a merger, takeover or spin-off.
- iv) Splits and Spin-offs. If an index constituent splits or spins off a portion of its business to form one or more new companies, all of the companies involved in the spin-off will be immediately included in the S-Network Space Index, if they would otherwise qualify for membership.
- v) Mergers. If two index constituents merge, their component positions will be replaced by the surviving company immediately. The Calculation Agent will adjust the float-adjusted shares outstanding for the surviving company to reflect the changes in both its total shares and any float blocks, regardless of the percentage changes in the survivor. If an index constituent merges with a non-component company, its component position will be replaced by the new company, if the new company meets all eligibility criteria described in Section IV herein. In the event of mergers of equals, the combined trading history of the predecessor companies shall be used for evaluation.
- vi) Takeovers. If an index component is taken over by another component company, the former will be removed from the index immediately upon



completion of the takeover. If an index component is taken over by a non-component company, it will be replaced by the acquiring company immediately, if the acquiring company meets all the eligibility criteria described in Section IV herein.

vii) **Share Offerings, Tenders and Purchases.** If a component is involved in a secondary share offering, rights offering, or conversion of debt or preferred stock to common shares that results in an increase of more than 5% in float-adjusted shares outstanding, the Calculation Agent will adjust the shares outstanding and float as soon as practicable following completion of the transaction, subject to a two-day notification period. The Calculation Agent also will adjust float-adjusted shares outstanding decreases of 5% or more due to Dutch auctions, share repurchase programs, and block purchases by insiders, subject to a two-day notification period.

viii) **Removal of Companies Due to Delisting, Bankruptcy or Extreme Financial Distress.** If an index constituent is de-listed by its primary market, or is in bankruptcy proceedings, it will be removed from the index.

\* If an index component is de-listed by its primary market due to failure to meet financial or regulatory requirements, it will be removed from the index.

\* If an index component enters bankruptcy proceedings, it will be removed from the index and will remain ineligible for re-inclusion until it has emerged from bankruptcy. However, the Committee may, following a review of the bankrupt company and the issues involved in the filing, decide to keep the company in the index.

\* The Committee may, at its discretion, remove a company it has determined to be in extreme financial distress from the S-Network Space Index if the Committee deems the removal necessary to protect the integrity of the index and the interests of investors in products linked to that index.

ix) **Pricing of Stocks in Extreme Financial Distress for Index Maintenance.**

\* When a stock is suspended from trading due to financial distress and subsequently de-listed by its primary market prior to resumption of trading, the Calculation Agent will use the best-available alternate pricing source to determine the value at which the company should be removed from the index.

\* If the stock's primary market price is no longer available due to its suspension or de-listing, a current price from another exchange, such as a regional or electronic marketplace, may be used. In the absence of those prices in the case of U.S. securities, OTC Bulletin Board, OTC Equity (non-OTCBB stocks), and Pink Sheet traded prices could be applied in that order.

\* If neither a traded price nor a bid/asked range is available, the Committee will evaluate the status of the suspended stock. The Committee may consult with managers of portfolios linked to indexes in which the stock is a constituent in determining the value of the stock. If the Committee concludes that the security has become worthless or is likely to remain too illiquid to be traded, it will be removed from the index at .01 local currency of the stock.

## **XI. Float Adjustment**

The S-Network Space Index is constructed and weighted using free-float market capitalization. Float-adjusted rather than full market capitalization is used to reflect the number of shares actually available to investors.

- i) **Qualifications.** A company's outstanding shares are adjusted by block ownership to reflect only truly tradable and investable shares. The following four types of block ownership are considered during float adjustment:
  - \* Cross ownership – shares that are owned by other companies (including banks and life insurance companies)
  - \* Government ownership – shares that are owned by governments (central or municipal) or their agencies
  - \* Private ownership – shares that are owned by individuals, families or charitable trusts and foundations
  - \* Restricted shares – shares that are not allowed to be traded during a certain time period. However, a company's outstanding shares are not adjusted by institutional investors' holdings, which include, but are not limited to, the following categories:
- ii) **Threshold.** A company's outstanding shares are adjusted if, and only if, an entity in any of the four qualified categories listed above owns 5% or more of the company. Its shares will not be adjusted if the block ownership is less than 5%.
- iii) **Foreign Restriction.** The float adjustment rules also apply to foreign companies that have cross ownership of 5% or more. If a government has a foreign ownership restriction of 5% or more, the lesser of free-float shares or the portion that is available for foreign investment will be used for index calculation.

## **XII. Calculation and Adjustments**

- i) **Input Data Sources**
  - \* Real-time stock prices are provided by Reuters. The latest trading price is used for index calculation.
  - \* The number of shares is determined separately for each class of stock. This information is obtained from regulatory filings and a variety of data vendors. The data also may be sourced from the companies themselves.
  - \* Corporate actions are sourced from public news services, regulatory filings and data vendors. The companies themselves may be used as an additional source.
  - \* Float data are obtained from a variety of sources including data vendors, exchanges, regulators and the companies themselves.
- ii) **Index Formula.** The index is calculated using a Laspeyres formula. This formula is used for the calculation of the return index and the price index. The only difference is that the divisor  $D_t$  is different for the two indexes (return index and price index).

The index is computed as follows:

$$\text{Index}_t = \frac{\sum_{i=1}^n (p_{it} \times q_{it})}{C_t \times \sum_{i=1}^n (p_{i0} \times q_{i0})} \times \text{Base Index Value} = \frac{M_t}{B_t} \times \text{Base Index Value}$$

The above mentioned formula can be simplified as:  $\text{Index}_t = \frac{M_t}{D_t}$

Where:

$$D_t = \frac{B_t}{\text{base index value}} = \text{divisor at time (t)}$$

- n = the number of stocks in the index
- $p_{i0}$  = the closing price of stock i at the base date (December 31, 2014)
- $q_{i0}$  = the number of shares of company i at the base date (December 31, 2014)
- $p_{it}$  = the price of stock i at time (t)
- $q_{it}$  = the number of shares of company i at time (t)
- $C_t$  = the adjustment factor for the base date market capitalization
- t = the time the index is computed
- $M_t$  = market capitalization of the index at time (t)
- $B_t$  = adjusted base date market capitalization of the index at time (t)

Dividend payments are not taken into account in the price indexes, whereas dividend payments are reinvested in the index samples of the total return indexes.

- iii) Divisor Adjustments. Corporate actions affect the share capital of component stocks and therefore trigger increases or decreases in the index. To avoid distortion, the divisor of the index is adjusted accordingly.
- iv) Changes in the index's market capitalization due to changes in the composition (additions, deletions or replacements), weighting (following quarterly reviews or changes of more than 10% in a single component's share number) or corporate actions (mergers, spin-offs, rights offerings, repurchase of shares, public offerings, return of capital, or special cash or stock distributions of other stocks) result in a divisor change to maintain the index's continuity. By adjusting the divisor, the index value retains its continuity before and after the event.

\* Formulae for Divisor Adjustment. The following formulae will be used for divisor adjustments. (Note: No divisor adjustments are necessary for stock splits, since market capitalization does not change and the share number and share price are adjusted prior to the opening of trading on the split's ex-date.)

$$D_{t+1} = D_t \times \frac{\sum (p_{it} \times q_{it}) \pm \Delta MC_{t+1}}{\sum (p_{it} \times q_{it})}$$

Where:

- $D_t$  = divisor at time (t)
- $D_{t+1}$  = divisor at time (t+1)
- $p_{it}$  = stock price of company i at time (t)
- $q_{it}$  = number of shares of company i at time (t)

$\Delta MC_{t+1}$  = add new components' market capitalization and adjusted market capitalization (calculated with adjusted closing prices and shares effective at time t+1 and/or minus market capitalization of companies to be deleted (calculated with closing prices and shares at time t)

Note: If the current trading price of an issue is unavailable, the previous trading session's closing price is used. However, if the issue is affected by any corporate action that requires an adjustment, then the adjusted price is used.

\* Adjustments for Corporate Actions. An index divisor may decrease (▼) or increase (▲) or keep constant (■) when corporate actions occur for a component stock. Assuming shareholders receive "B" new shares for every "A" share held for the following corporate actions:

▼ A) CASH DIVIDEND (applied for return index only)

adjusted price = closing price - dividend announced by the company

▼ B) SPECIAL CASH DIVIDEND (applied for price and return index)

adjusted price = closing price - dividend announced by the company

■ C) SPLIT AND REVERSE SPLIT

adjusted price = closing price \* A / B new number of shares = old number of shares \* B / A

■ D) RIGHTS OFFERING

adjusted price = (closing price \* A + subscription price \* B) / (A + B) new number of shares = old number of shares \* (A + B) / A

■ E) STOCK DIVIDEND

adjusted price = closing price \* A / (A + B) new number of shares = old number of shares \* (A + B) / A

▼ F) STOCK DIVIDEND OF A DIFFERENT COMPANY SECURITY

adjusted price = (closing price \* A - price of the different company security \* B) / A

▼ G) RETURN OF CAPITAL AND SHARE CONSOLIDATION

adjusted price = (closing price - dividend announced by company) \* A / B new number of shares = old number of shares \* B / A

▼ H) REPURCHASE SHARES-SELF TENDER

adjusted price = [(price before tender \* old number of shares) - (tender price \* number of tendered shares)] / (old number of shares - number of tendered shares)

new number of shares = old number of shares - number of tendered shares

▼ I) SPIN-OFF

adjusted price = (closing price \* A - price of spun-off shares \* B) / A

▲ J) COMBINATION STOCK DISTRIBUTION (DIVIDEND OR SPLIT) AND RIGHTS OFFERING

Shareholders receive B new shares from the distribution and C new shares from the rights offering for every A shares held:

\* If rights are applicable after stock distribution (one action applicable to other).  $\text{adjusted price} = [\text{closing price} * A + \text{subscription price} * C * (1 + B / A)] / [(A + B) * (1 + C / A)]$  new number of shares = old number of shares \*  $[(A + B) * (1 + C / A)] / A$

\* If stock distribution is applicable after rights (one action applicable to other).  $\text{adjusted price} = [\text{closing price} * A + \text{subscription price} * C] / [(A + C) * (1 + B / A)]$  new number of shares = old number of shares \*  $[(A + C) * (1 + B / A)]$

▲ K) STOCK DISTRIBUTION AND RIGHTS (NEITHER ACTION IS APPLICABLE TO THE OTHER)  $\text{adjusted price} = [\text{closing price} * A + \text{subscription price} * C] / [A + B + C]$  new number of shares = old number of shares \*  $[A + B + C]$

- v) Computational Precision. Index values are rounded to two decimal places and divisors are rounded to integers. Any values derived by the index calculation engine from a corporate action used for the divisor adjustments and index computations are rounded to seven decimal places.

### XIII. 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 every effort is taken 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.

- i) Intraday Corrections. Reasonable efforts are employed to prevent erroneous data from affecting the indexes. Corrections will be made for bad prices and incorrect or missing corporate actions as soon as possible after detection.
- vi) 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 practicable.
- ii) Index-Related Data and Divisor Corrections. Incorrect pricing and corporate action data for individual issues in the database will be corrected upon detection. In addition, an incorrect divisor of an index, if discovered within five days of its occurrence, will always be fixed on the day it is discovered to prevent an error from being carried forward.
- vii) If a divisor error is discovered more than five days after occurrence, the adjustment will depend upon how significant the error is, how far back the error occurred and the feasibility of performing the adjustment.

### XIV. APPENDIX REVIEW SCHEDULE

Share Updates

Frequency: Quarterly

Effective date: The Monday after the 3rd Friday of that month

Advance notice: At least two business days

Reconstitutions

Frequency: Semi-Annual

Effective date: The Monday after the 3rd Friday of that month

Advance notice: At least two business days

News Notification\*

Frequency: As needed

Effective date: As announced

Advance notice: At least two business days whenever possible

\* Includes events such as de-listings, mergers, bankruptcies and other extraordinary events.

\* Based on available news.