

# **Index Rules and Methodology**

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# Alerian Global Alternative Energy Indexes (AGI) Rule Book (Section I)

This document provides the rules for calculating and maintaining the Alerian Global Alternative Energy Indexes, hereafter referred to as the "AGI Family". Included in these rules are the following: 1) a description of the AGI Family, 2) the design specifications for the AGI Family, and 3) the index calculation and data elements.

#### I. **General Description**

The Alerian Global Index<sup>SM</sup> (Composite) ("The Composite") is a capitalization weighted, float adjusted equity index designed to serve as an equity benchmark for globally traded stocks which are principally engaged in the field of Alternative Energy Technologies, including renewable energy, alternative fuels and related enabling technologies.

The Composite comprises five main business segments:

Alternative Energy Resources. Companies whose technologies are involved with:

- Solar Power- including photo-voltaic (PV) and thermal
- BioEnergy- including power and fuel
- Wind Power
- Hydro Power, Tidal Power and Wave Power
- **Geothermal Power**

Distributed Generation. Companies whose technologies produce power at or near the end user. These technologies include:

- **Micro Turbines**
- Diesel Engines
- Fuel Cells
- **Hydrogen Generation and Storage**

**Energy Efficiency.** Companies whose technologies are involved with:

- Lighting
- White Tags
- Cogeneration
- Energy Recycling
- Advanced Metering
- **Demand Response**

**Enabling Technologies.** Companies whose technologies are involved with:

- **Power Electronics**
- **Advanced Battery Chemistries**
- **Flvwheels**
- **Superconductors**
- **Ultracapacitors**
- Advanced Materials

Environmental Technologies. Companies whose technologies are involved with:

- **Air Quality and Emission Mitigation**
- **Clean Coal**

The Composite is a capitalization weighted, float adjusted equity index containing stocks selected from a universe of equity securities traded on recognized stock exchanges in a) North America, b) South and Central America, c) 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, primary exchange listing, minimum capitalization (adjusted for free float), minimum price and average daily trading volume. Stocks that meet the screening criteria at inception or on a rebalancing date will be included in the Composite. unless otherwise determined by the Index Committee. Each stock's relative weighting in the Composite will be based on its market capitalization, adjusted for free float, relative to the overall market capitalization, adjusted for free float, of the Composite, subject to certain restrictions. limitations and modifications.

The weight of any stock contained in the Composite will be capped at 20% of the total market capitalization of the Composite and the aggregate weight of all stocks with individual weights of 5% or more will be capped at 45% of the total market capitalization of the Composite.

#### II. **Regional Sub-Indexes**

The companies contained in the Global Index will be divided into four regional groupings to form the regional sub-indexes. The regional sub-indexes are:

North America. Companies whose principle place of doing business is North America and whose securities have their primary listings on North American Stock Exchanges.

Europe, Middle East, & Africa (EMEA). Companies whose principle place of doing business is Europe, Africa or the Middle East and whose securities have their primary listing on stock exchanges in those regions.

Asia/Pacific. Companies whose principle place of doing business is Asia, including, Japan, Korea, Southeast Asia, Indonesia, Taiwan, the Philippines, Australia and New Zealand and whose securities have their primary listing on stock exchanges in this region. (Not Presently compiled or calculated.)

**South and Central America**. Not presently compiled or calculated.

Companies whose securities trade in ADR or GDR form, or whose securities are listed on a foreign exchange, are assigned to the region in which their principal place of doing business is located.

#### III. **Sector Sub-Index**

The companies contained in the Global Index that are engaged in the production of Solar Energy and related products or services form the Alerian Solar Energy Index (SOLRX). The SOLRX includes companies in three primary sectors: 1) Photovoltaic, Concentrated Solar Power, and Solar Thermal Power; 2) Solar Integrators; and 3) Related Technologies.

#### IV. The Index Committee

The AGI Index Committee ("The Committee") will be composed of not less than four members. The Committee Chairman will have extensive experience in the overall field of alternative and renewable energy. Two of the members will have some expertise in at least one of the above-named segments. The fourth member will have extensive experience and expertise in financial markets and stock market characteristics.

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 Composite 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 Composite and may reject any stock that it believes does not meet its overall standards for risk and sound business practice.

The Committee will meet quarterly, either in person or via teleconference, to discuss index issues and organize the quarterly or special rebalancings.

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

# V. Design Specifications

The Composite will contain stocks that meet the following criteria:

- i) The company has been classified by the Committee as being principally engaged (>50% of gross revenues derived from business of alternative energy) in one of the five business segments described above.
- 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. See "Appendix A" for a list of approved exchanges.
- iii) The minimum capitalization value for each stock will be determined at index inception and will be revised with each quarterly rebalancing to reflect current market levels. To qualify for inclusion, the minimum capitalization value for any stock will be greater than USD 100 million, or the equivalent amount in its listing currency.
- iv) To qualify for inclusion, the minimum free float for any stock will be greater than USD 50 million, or the equivalent amount in its listing currency.
- v) A constituent whose capitalization falls below 50% of the minimum on the date of the quarterly rebalancing shall be deleted from the AGI after the close on the effective date of the rebalancing.
- vi) A constituent whose free float falls below USD 50 million on the date of the quarterly rebalancing shall be deleted from the AGI before the open of trade on the effective date.
- vii) A liquidity ratio, R-Score, is defined as the average 3-month daily trading volume (in thousands, USD) divided by the average 3-month market

- capitalization (in million). A non-component with R-Score less than 25% as of the snapshot date will be removed from the Composite selection pool.
- viii) Current constituents with R-Score less than 15% shall be deleted from the Composite before the open of trade on the quarterly rebalancing effective date.
- For AGIXL and SOLRX, companies representing at least 90% of the total ix) weight of the respective indexes must have turnover (shares traded X average share price) of at least USD 1 million per day for the three months preceding the last trading date of the second month of each calendar guarter.
- For AGIXL and SOLRX, pre-existing index constituents with share turnover of X) less than 600,000 USD average daily trading volume shall be deleted from the index.
- xi) For a recent IPO (less than three months of trading history) to be included in the Composite selection pool, the stock will require at least 15 trading days as of the snapshot date. R-Score will be based on the entire trading history if the company's trading history is less than three calendar months. Such companies may be added to the Composite on any rebalancing date at the discretion of the Committee. Recent IPOs in non-US jurisdictions will be added only after meeting relevant US regulations with respect qualifications for US ownership.
- Certain companies that are not principally engaged in one or more of the five xii) segments, but that derive significant revenues from businesses in one or more of the five segments may be included in the Composite at the discretion of the Index Committee on a capitalization-adjusted basis, provided 1) such revenues represent more than 20% of the company's total revenues and such revenues are independently reported in the company's financial reports, 2) applicable revenues are likely to have a material impact on the company's overall share price performance, and 3) the company's applicable business is likely to have a significant impact on the alternative energy sector as a whole.

#### VI. **Constituent Weightings**

- Each index constituent's stock is capitalization weighted, using each stock's i) actual shares outstanding multiplied by the closing price on the primary listing exchange on the inception or rebalancing date. Each constituent's capitalization is then adjusted to reflect the actual free float of the company's shares. Free float is the market capitalization after eliminating government holdings, industrial cross-holdings, restrictions of foreign investment and similar factors.
- Index constituents shall be subject to limitation on their float-adjusted ii) capitalization weighting in the Composite.
  - a) No stock's weight shall exceed 20%.
  - b) The aggregate weight of stocks exceeding 5% shall not exceed 45%.

- iii) The following procedure shall be used to ensure that no Composite constituent weighting exceeds a pre-determined maximum weight on the rebalancing date:
  - Step 1: Sort the Composite constituents by float market capitalization in descending order. Starting with the second largest company in the index, calculate a float market capitalization ratio for each company to the next largest company in the index.

Step 2: Adjust this ratio by the following formula:

$$NewRatio = 1 - \left(\frac{1 - OriginalRa\ tio}{Factor}\right)$$

### where:

Original Ratio = the float market capitalization ratio of each company to the next largest company calculated in Step 1.

Factor = a divisor, that starts with 1, that increases the ratio calculated in Step1

- Step 3: Calculate new float market capitalization using the New Ratio for each company.
- Step 4: Calculate the new weights for each company based on the new float market capitalization and check to see if the weight limits described in V(ii) are satisfied.
- Step 5: If the weight limits are not satisfied, repeat Steps 2 to 4, increasing the Factor by .01 for each round until the weight limits are satisfied.
- Step 6: Once the weight limits are satisfied, calculate the final cap factors for each company using the float market capitalization calculated in Step 3 such that the smallest company in the index has a cap factor of 1.0.
- iv) The foregoing methodology shall be applied to all indexes included in the AGI Family, except the Extra Liquid indexes for North America and EMEA, which shall follow a different weighting/capping procedure. For these indexes the aggregate weight of the top five constituents shall be capped at 60% and the weights of each of the top five constituents shall be reduced by the excess weight in proportion to their respective relative weights in the top five index constituents. The excess weight will then be added to the bottom ten constituents in proportion to their respective relative weights among the bottom ten constituents.

### VII. Division into Regional Sub-Indexes

- i) Upon completion, the Composite will then be divided into three regional subindexes based on the regional description contained in Section II.
- ii) The weighting of each of the stocks contained in the sub-index shall be adjusted upward on a proportional basis so that the combined weights of these stocks equals 100%.
- iii) The procedures applied to section V(i) through V(iii) herein shall then be applied to each regional sub-index.

## VIII. Extra Liquid (XL) Series

- i) Upon completion, the Composite and the North American and EMEA subindexes will each be reduced to a subset of the most liquid stocks contained in the Composite or relevant sub-index.
- ii) The Alerian Global Index (Extra Liquid) ("AGI Extra Liquid") will contain a total of 30 stocks and each of the regional (N.A. and EMEA) sub-indexes will contain a total of 15 stocks.
- iii) All stocks contained in the Extra Liquid Series shall meet the inclusion criteria defined herein for the Composite.
- iv) Certain stock exchange listings, which qualify a stock for inclusion in the Composite or Regional Indexes, are not considered qualified exchanges for inclusion in the Extra Liquid Series. See "Appendix A" for a list of qualified exchanges for the Extra Liquid Series.
- v) The stocks contained in the Extra Liquid Series shall in the case of the AGI Extra Liquid be the 30 stocks with the highest average rank of float market capitalization and average daily dollar turnover for the previous three months and shall in the case of the North American and EMEA indexes be the 15 stocks with the highest average rank.
- vi) The Committee will screen the constituents to make sure that no constituent's average daily turnover as a percentage of its market capitalization (float adjusted) is inconsistent with sound market trading patterns. If in the opinion of the Committee a constituent presents such inconsistent trading patterns, it will not be included in the index and the next most actively traded stock will be selected in its place.
- vii) The weighting of each of the stocks contained in the AGI Extra Liquid shall be determined on a capitalization-weighted, float-adjusted basis, using methodology contained in Section VI herein.
- viii) The weighting of each of the stocks contained in the North America and EMEA Extra Liquid Indexes shall be capitalization-weighted, float-adjusted, but weightings of those stocks whose weights exceed the limits defined in Section VI(i)-V(iii) will not be adjusted as described in those sections. Instead, a different formulation will be used to insure that the aggregate weight of the five largest constituents does not exceed 60% of the weight of the index.
- ix) At each reconstitution the constituent turnover of the various Extra Liquid indexes will be smoothed using the following methodology. For the AGI Extra Liquid, no stock will be added to the index unless it statistically ranks among the top 25 candidate stocks and no stock will be deleted from the index unless it ranks lower than the 35<sup>th</sup> most liquid candidate. For the AGI regional Extra Liquid indexes, a stock must rank among the top 12 candidate stocks to be added and will not be deleted from the index unless it ranks lower than the 18<sup>th</sup> most liquid candidate.

#### IX. **Sector Sub-Index**

- i) Upon completion those companies contained in the Composite that have been identified as "Solar Energy Companies" by the Index Committee will be used to form the SOLRX.
- ii) In addition to the eligibility criteria applied to the Composite, companies must have average daily trading volume of more than USD 1 million for the ninety days prior to the rebalancing date, or in the case of recent IPOs, companies must have average daily trading volume of more than USD 1 million for their entire trading history, provided the companies have traded more than 22 days and less than 90 days.
- iii) A constituent whose three-month average daily trading volume falls below USD 600,000 on the date of the quarterly rebalancing shall be deleted from the SOLRX before the open of trading on the effective date.
- The weighting of each of the stocks contained in the SOLRX shall be iv) determined on a modified capitalization weighted, float adjusted basis. The four largest constituents are equal-weighted at 10% each and the next four constituents are equal-weighted at 4.5% each. The remainder of the stocks in the index are capitalization weighted, adjusted for free float and the largest of the remaining stocks are capped at 4.4%.

#### X. **Rules for Calculation and Dissemination**

The Alerian Global Alternative Energy Extra-Liquid Index (AGIXL) and the Alerian Solar Energy Index (SOLRX) are calculated on an intraday basis by Refinitiv (the "Intraday Calculation Agent") and on an end-of-day basis by Alerian and S-Network Global Indexes (the "EOD Calculation Agent").

The remaining Alerian Global Alternative Energy Indexes are calculated by Alerian and S-Network Global Indexes (the "EOD Calculation Agent") on an end-of-day basis only.

The EOD Calculation Agent is also responsible for index maintenance and EOD price dissemination, and the Intraday Calculation Agent is responsible for intraday price dissemination.

The calculation, maintenance and dissemination rules are as follows:

Index Rebalancing. The Indexes are reconstituted on a quarterly basis and rebalanced on a quarterly basis, during which the Index Committee submits to Compilation Agent (Alerian and S-Network Global Indexes) 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 Composite selection criteria, and additions to and deletions from the Composite and related sub-indexes are determined. Once the Committee has approved additions and deletions, the Indexes are rebalanced to reflect all changes. The snapshot date for Index reconstitutions and rebalancings is the last business day of the month prior to the effective month.

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 10% 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. Changes in shares outstanding due to stock dividends, splits and other corporate actions also are adjusted immediately after the close of trading on the day they become effective.

Additions and Deletions. Additions to the Indexes are made at the close of trading on the third Friday of the last month of each calendar quarter. Additions are made to the Extra Liquid Series when an index vacancy is created by an index deletion at the close of trade on the date the deletion becomes effective. Additions may be made to the Composite 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 quarterly rebalancing dates for companies that fail to meet the eligibility criteria and 2) at any time, in the event a company is de-listed, files for bankruptcy, is acquired or merges with another company.

#### XI. Roles of Parties in the Quarterly Reconstitutions.

- The Committee, or its designee, will submit to the Compilation Agent (Alerian and i) S-Network Global Indexes) a list of index constituents for possible inclusion in AGI at the close of US markets on the Monday following the third Friday of the month prior to the rebalancing month.
- ii) The Compilation Agent will use the remaining criteria in V 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.
- iii) On the first Friday of the rebalancing month, the Compilation Agent shall provide the Committee, or its designee, with a list of constituents for the AGI.
- iv) The Committee shall approve or reject the changes and notify the EOD Calculation Agent of its decisions not later than the Wednesday following the first Friday of the rebalancing month.
- Not later than the Wednesday following the first Friday of the rebalancing month, v) the Index Committee or its designee will issue a press release announcing additions and deletions to AGI. The press release will be posted on the AGI web site. (Announcement date.)
- The Compilation Agent will provide final share weights to the Committee or its vi) 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 AGI Index Committee or its designee will approve the final share weights vii) prior to the close of US markets on the second Friday. Share weights will be disseminated to all licensees immediately following the Index Committee or its designee's approval.

- viii) The Compilation Agent will distribute final share weights to all approved parties via email and FTP after the close of US markets on the second Friday.
- ix) The effective date of the rebalancing will be the third Friday of the rebalancing month. The Compilation Agent will post all final rebalancing data and information on its FTP server on the second Friday of the rebalancing month barring the Index Committee Approval.
- x) AGI will post all rebalancing data on its website prior to the open on the next business day following the rebalancing date.

#### XII. **Calculation of Index Values**

- i) The Intraday Calculation Agent will calculate index values using price data on each reported trade it receives on each component security.
- ii) The Intraday Calculation Agent will distribute index values to vendors at set 15second 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 at approximately 17:40 (closing price).
- Each week, the indexes will be calculated starting Sunday night at 18:00 through v) 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).
- Stocks denominated in foreign currencies will be converted to USD with each v) reported price using exchange rates derived from Reuters. Official closing prices for the indexes will be calculated using the Reuters Rates (4PM GMT).
- vi) The indexes will also be calculated and disseminated in EUR.
- vii) The indexes will also be calculated and disseminated in USD and EUR using Luxembourg Dividend Tax Rates to calculate net total return.

#### XIII. Dissemination

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

<u>Index</u>	<u>Ticker</u>

Alerian Global Index (Composite) **AGIGL**  Alerian Global Index (Extra Liquid)
AGIXL
AGI North America
AGINA
AGI North America Extra Liquid
AGI EMEA
AGI EMEA
AGI EMEA
AGI EMEA
AGIEMXL
Alerian Solar Energy Index
AGIXL

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

Tickor

<u>index</u>	TICKEL
Alerian Global Index (Composite)	AGIGLE
Alerian Global Index (Extra Liquid)	AGIXLE
AGI North America	AGINAE
AGI North America Extra Liquid	AGINAXLE
AGI EMEA	AGIEME
AGI EMEA	AGIEMXLE
Alerian Solar Energy Index	SOLERX

Values for the price only indexes are distributed in "real-time," that is, in 15-second snapshots, starting at approximately 18:30PM (ET) on Sunday through approximately 16:30 PM (ET) the next day. The following day's price calculation resumes at approximately 18:30PM (ET). Index values are not calculated from 16:30PM on each Friday through 18:30PM (ET) on each Sunday.

# XIV. Ongoing Maintenance

Indov

In addition to the scheduled quarterly reviews, the AGI Family 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.

- i) 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.
- ii) Changes of Primary-Market Listing. When a company's primary market listing changes from one region to another, it will be removed from its current regional index when it is de-listed and will be considered for addition to its new regional index.
- iii) Changes of Industry Classification. Companies are eligible for inclusion in the Composite based on the revenues received from one or more applicable business segments. Mergers, takeovers, and spin-offs, as well as 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 AGI Family, if they would otherwise qualify for membership. Inclusion of a spin-off or deletion due to a spin-off in an Extra Liquid Index will be determined by the Committee.

- v) Mergers. If two index constituents merge, their component positions will be replaced by the surviving company immediately. The EOD 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. The Committee will provide the EOD Calculation Agent a watch list of eligible replacement companies, in the event a constituent of one of the Extra Liquid indexes is taken over.
- vii) Share Offerings, Tenders and Purchases. All share offerings, tenders and purchases that result in an increase of shares will be held constant and will be implemented at the quarterly review.
- 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 any AGI Family index to which it belongs, 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.

#### XV. **Corporate Action Replacement Treatment**

In the event of a delisting the following procedure applies

- Take the float adjusted market cap for the acquired and replacement companies 3 days prior to the corporate action
- If weight of acquired company is less than 3% of the total weight of the index the replacement will be treated weight in/weight out
- If the market cap of the replacement company is greater than or equal to 2/3 of the acquired company the replacement will be treated weight in/weight out
- If the market cap of the replacement company is less than 2/3 of the acquired company and more than 3% of the total weight of the index...
  - The replacement company will be added at the ratio above\*the acquired company's price weighted market cap
  - o Redistribute original weight less replacement weight to the remaining constituents on a proportional basis based on the closing prices of T-3.

#### XVI. **Float Adjustment**

The AGI Family indexes are 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. Float factors will be determined at the quarterly rebalancing and will be held constant until the following rebalancing.

- 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:

- \* Custodian nominees
- \* Trustee companies
- \* Mutual funds (open-end and closed-end funds)
- \* Investment companies
- 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.

### XVII. Total Return Index Value

Total Return values reflect dividends net of withholding taxes. See appendix B for schedule.

## XVIII. 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 Dt is different for the two indexes (return index and price index).

The index is computed as follows:

$$Index_{t} = \frac{\sum_{i=1}^{n} \left( p_{it} \times q_{it} \times r_{it} \times f_{it} \right)}{C_{t} \times \sum_{i=1}^{n} \left( p_{i0} \times q_{i0} \times r_{i0} \times f_{i0} \right)} \times Base Index Value = \frac{M_{t}}{B_{t}} \times Base Index Value$$

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

### 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

the number of shares of company i at the base date

r<sub>io</sub> = the exchange rate from local currency to USD at the base date

f<sub>io</sub> = the float factor of company i at the base date

 $p_{it}$  = the price of stock i at time (t)

 $q_{it}$  = the number of shares of company i at time (t)

r<sub>it</sub> = the exchange rate from local currency to USD at time (t)

 $f_{it}$  = the float factor of company i at time (t)

C<sub>t</sub> = the adjustment factor for the base date market capitalization

t = the time the index is computed

 $M_{\star}$  = market capitalization of the index at time (t)

B<sub>t</sub> = 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.
  - \* 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.)

$$\mathbf{D}_{t+1} = \mathbf{D}_{t} \times \frac{\sum \left( \mathbf{p}_{it} \times \mathbf{q}_{it} \times \mathbf{r}_{it} \times \mathbf{f}_{it} \right) \pm \Delta \mathbf{MC}_{t+1}}{\sum \left( \mathbf{p}_{it} \times \mathbf{q}_{it} \times \mathbf{r}_{it} \times \mathbf{f}_{it} \right)}$$

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)

 $r_{it}$  = the exchange rate from local currency to USD at time (t)

 $f_{it}$  = the float factor 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).

Adjusted price = [closing price \* A + 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). adjusted price = [closing price \* A + 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)

Adjusted price = [closing price \* A + subscription price \* C] / [A + B + C] New number of shares = old number of shares \* [A + B + C]

iv) 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.

#### XIX. **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.
- v) 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 pre-vent an error from being carried forward.
- vi) 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.

### XX. APPENDIX REVIEW SCHEDULE

Shares Updates Frequency: Quarterly

Effective date: The close of trading on the 3rd Friday of the last month of each calendar

Advance notice: At least two business days

Constituent Review Frequency: Quarterly

Effective date: The close of trading on the 3rd Friday of the last month of each calendar

quarter

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.

# XXI. APPENDIX A: List of Approved Exchanges

EXCHANGE	COUNTRY
ASE	AUSTRALIA
ASX	AUSTRALIA
Australian	AUSTRALIA
Vienna	AUSTRIA
EN Brussels	BELGIUM
Euron. Brussels	BELGIUM
Sao Paulo	BRAZIL
Toronto	CANADA
Sant. Comerc	CHILE
Sant. Elec	CHILE
SANTIAGO	CHILE
Hong Kong	CHINA
Shanghai	CHINA
Shenzen	CHINA
Shenzhen	CHINA
Singapore	CHINA
Prague	CZECH REPUBLIC
Prague-SPAD	CZECH REPUBLIC
Copenhagen	DENMARK
Reykjavik	DENMARK
Cairo	EGYPT
Egypt (EGX)	EGYPT, ARAB REP.
Tallin	ESTONIA
Tallinn	ESTONIA
Helsinki	FINLAND
EN Paris	FRANCE
Euronext Paris	FRANCE
Berlin	GERMANY
Dusseldorf	GERMANY
Frankfurt	GERMANY
Munich	GERMANY
Athens	GREECE
Hong Kong	Hong Kong
NASDAQ CM	HONG KONG
Budapest	HUNGARY
Indonesia	INDONESIA
Indonesia SE	INDONESIA
Dublin	IRELAND
Tel Aviv	ISRAEL
Brsaltaliana	ITALY
Milan	ITALY
Fukuoka	JAPAN
Jasdaq	JAPAN
Nagoya	JAPAN
Osaka	JAPAN

EXCHANGE	COUNTRY
Tokyo	JAPAN
КО	Korea, Rep.
Luxembourg	LUXEMBOURG
Bursa Malays	MALAYSIA
Bursa Malaysia	MALAYSIA
Kuala Lumpur	MALAYSIA
Malaysia ACE Mkt	MALAYSIA
Mexico	MEXICO
Mexico City	MEXICO
EN Amsterdam	NETHERLANDS
Euron. Amsterdam	NETHERLANDS
New Zealand	NEW ZEALAND
NZX	NEW ZEALAND
Oslo	NORWAY
Philippine SE	PHILIPPINES
Philippines	PHILIPPINES
Warsaw	POLAND
Warsaw Continuou	POLAND
EN Lisbon	PORTUGAL
Euronext Lisbon	PORTUGAL
Catalist	SINGAPORE
Johannesburg	SOUTH AFRICA
Lagos	SOUTH AFRICA
Korea	SOUTH KOREA
Korea SE	SOUTH KOREA
KOSDAQ	SOUTH KOREA
Continuous	SPAIN
Madrid	SPAIN
Madrid-SIBE	SPAIN
Nordic GM	SWEDEN
Stockholm	SWEDEN
SIX Swiss	SWITZERLAND
SIX Swiss Ex	SWITZERLAND
Taiwan	TAIWAN
Istanbul	TURKEY
London	UNITED KINGDOM
LONDON INTL	UNITED KINGDOM
London Plus Mkt	UNITED KINGDOM
Nasdaq	UNITED STATES
NASDAQ GM	UNITED STATES
NASDAQ GS	UNITED STATES
New York	UNITED STATES
NYSE Amex	UNITED STATES
NYSE ARCA	UNITED STATES