

# The S-Network Municipal Bond Closed-End Fund Index (CEFMX)

**Index Rules and Methodology** 

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## The S-Network Municipal Bond Closed-End Fund Index (CEFMX)

## Official Rule Book

## I. General Description

The CEFMX is a mutual fund index designed to serve as a benchmark for closed-end funds listed in the US that are principally engaged in asset management processes designed to produce federally tax-exempt annual yield. The CEFMX employs a modified total net assets weighting methodology designed to assure accurate investment exposure across the various business segments that together comprise the federally tax-exempt annual yield sector of the closed-end fund market.

The CEFMX divides into four main sectors ("the sectors"):

- Leveraged Municipal Fixed Income Closed-End Funds,
- Unleveraged Municipal Fixed Income Closed-End Funds,
- Leveraged High Yield Municipal Fixed Income Closed-End Funds,
- Unleveraged High Yield Municipal Fixed Income Closed-End Funds

The CEFMX contains closed-end funds selected from a universe of approximately 130 securities domiciled in the United States.

The selection criteria include requirements for sector inclusion, primary exchange listing, minimum market capitalization, minimum average daily trading volume, discount to NAV and management fee.

The CEFMX employs a weighting methodology based on Total Net Assets, adjusted for each closed-end fund's average discount for the previous 90 days. Capping procedures are applied when needed to assure that the index is in compliance with various US regulatory guidelines governing concentration of holdings.

#### II. The Index Committee

The S-Network CEFMX Index Committee ("The Committee") will be composed of not less than three members. The Committee Chairman will have extensive experience with

and expertise in US closed-end funds and US closed-end fund markets. The other members will have experience in financial markets, indexes and/or financial products.

The Committee will be responsible for maintaining a comprehensive list of closed-end funds, divided into sectors, which are determined based on the closed-end fund's stated investment style.

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

The Committee will then review the closed-end funds to be included in the CEFMX and may reject any fund that it believes does not meet its overall standards for risk and sound business practice.

The Committee will meet semi-annually, 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.

**Rule Change:** Through March 31, 2011, the index rebalanced and reconstituted quarterly. Starting with the March, 2011 rebalancing, the index will reconstitute on the last business day of the last month of each calendar half (March/September) and rebalance quarterly on the last business day of the last month of each calendar quarter. All subsequent references to quarterly rebalances have been amended to reflect this change.

#### III. Index Value at Inception

The S-Network Municipal Bond Closed-End Fund Index (Ticker: CEFMX) had a value at inception of 1000, on its inception date of December 31, 2005. CEFMX is calculated on both a Price Only and on a Total Return basis.

## IV. Eligibility Criteria

Only closed-end funds that meet the following eligibility criteria are included in the CEFMX.

- i) The closed-end fund must be organized under the laws of the United States and meet all legal and regulatory criteria pursuant primarily to the relevant sections (Section 4(a)(2) and Section 23) of the Investment Company Act of 1940, and also in compliance with the relevant sections of the Investment Company Acts of 1933 and 1934.
- ii) The closed-end fund must have as its stated objective one of the four categories used to distinguish sectors. These are a) Leveraged Municipal fixed income; b) Leveraged Municipal high yield fixed-income; c) Unleveraged Municipal fixed income; and d) Unleveraged Municipal High Yield fixed income

- iii) The closed-end fund's shares must trade on a recognized North American stock exchange that provides a "last closing price". (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.)
- iv) The minimum capitalization value for any closed-end fund will be greater than USD 100 million.
- v) Closed-end funds whose shares have traded at average premiums of 20% (plus or minus the average premium/discount for all eligible constituents) or more to their net asset values for the ten business days prior to the second Friday of the reconstitution month ("the record date") shall be excluded from the index.
- vi) A constituent of the index whose market capitalization falls below USD 60 million on the semi-annual record date shall be deleted from the index before the open of trade on the effective date of the next semi-annual rebalancing.
- vii) To meet eligibility requirements, a non-constituent must maintain a management fee below 1.25%, while a current constituent must maintain a management fee below 1.5%.
- viii) Component stocks that in the aggregate account for at least 70% of the weight of the index or portfolio (excluding such Derivative Securities Products) each shall have a minimum global monthly trading volume of 250,000 shares, or minimum global notional volume traded per month of \$25,000,000, averaged over the last six months.
- ix) Closed-end funds must have an average daily turnover (shares traded X share price) of more than USD .5 million per day for the three months prior to the record date to be eligible for inclusion in the index.
- x) A fund must have been trading for more than three calendar months ("Recent IPO") prior to a record date to be included in the index.
- xi) A current constituent of the CEFMX must trade at least 250,000 USD daily to remain in the index.
- xii) Once included in the index, a closed-end fund may fall outside the eligibility thresholds as defined in Section IV other than the turnover criterion in Section IV(ix), as specified in Section IV(xi), and the management fee criterion specified in Section IV(vii) by up to 25% of the eligibility threshold.
- xiii) A target-date fund must have a termination date of 3 or more years from the index reconstitution date to be eligible for addition to or continued inclusion in the index.

#### V. Constituent Weightings

- i) Closed-end funds are weighted based on their adjusted net assets. Net assets are adjusted based on the following formula: a) Net assets are multiplied by a factor of 1.3 for closed-end funds trading at a discount greater than 6% or more of the average premium/discount of all included funds; b) Net assets are multiplied by a factor of 1.2 for closed-end funds trading at a discount of greater than 3% but less than 6% of the average premium/discount of all included funds; c) Net assets are multiplied by a factor of 1.1 for closed-end funds trading at a discount greater than 0% but less than 3% of the average premium/discount of all included funds; d) Net assets are multiplied by a factor of .7 for closed-end funds trading at a premium greater than 6% of the average premium/discount of all included funds; b) Net assets are multiplied by a factor of .8 for closedend funds trading at a premium greater than 3% but less than 6% of the average premium/discount of all included funds; c) Net assets are multiplied by a factor of .9 for closed-end funds trading at a discount greater than 0% but less than 3% of the average premium/discount of all included funds.
- ii) Any stock with a weight greater than 8% of the CEFMX will be capped at 8% and the remaining weight shall be redistributed on a proportional basis to the remaining funds in the index.
- iii) The total weight of all the funds contained in the index with weights greater than 5%, following the capping described in Section VI(ii) shall be capped at 45%. The weights of the funds with weights over 5% shall be reduced on a proportional basis and added to the weights of the funds with weights under 5% on a proportional basis. Certain smoothing procedures may be applied to assure weighting consistency.

#### VI. Rules for Reconstitutions, Rebalances, and Index Changes

The CEFMX is calculated on an end-of-day basis by Alerian and S-Network Global Indexes (the "EOD Calculation Agent") and on an intraday basis by Refinitiv (the "Intraday Calculation Agent"). 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 Changes.** Index changes take place at each rebalancing date, except in the event of certain corporate actions, such as mergers, acquisitions, and delistings. In such cases, the change is applied on the effective date of the action, unless otherwise determined by the Index Committee. Share increases and decreases are reflected on the rebalancing date. Whenever possible, changes will be announced at least two business days prior to their implementation.

Index Reconstitutions. The Index is reconstituted semi-annually; during which the

Index Committee submits to the Compilation Agent a list of funds that are eligible for inclusion in CEFMX. At no time shall the number of constituents contained in CEFMX fall below 25. All candidates and current constituents are screened against the CEFMX 'Eligibility Criteria', and weights are applied based on the weighting methodology described in Section V.

**Additions and Deletions.** Additions and Deletions to the Indexes are made 1) at the close of trading on the semi-annual reconstitution dates (last business day of the calendar half) and 2) in the event of the deletion of a constituent stock due to a corporate action. When a stock is deleted, no replacement stock is added.

Deletions are made at any time, in the event a fund is liquidated, de-listed, files for bankruptcy, is acquired or merges with another fund. Upon deletion, the weight of the removed fund is reallocated proportionately to the remaining constituents. Additions are made only upon the effective date of the semi-annual reconstitution.

#### VII. Roles of Parties in the Semi-Annual Reconstitutions.

- i) The Committee, or its designee, will submit to the Compilation Agent (Alerian and S-Network Global Indexes) a list of index constituents for possible inclusion in CEFMX at the close of US markets on the first Friday of the last month of each calendar half ("reconstitution month").
- ii) The Compilation Agent will use the remaining criteria in Section IV to statistically screen the list of index constituents to confirm their eligibility for the index based on closing prices and values as of the close of trading on the second Friday of the reconstitution month (record date).
- iii) On the Wednesday prior to the third Friday of the reconstitution month, the Compilation Agent shall provide the Committee, or its designee, with a list of constituents for the CEFMX.
- iv) The Committee shall approve or reject the changes and notify the EOD Calculation Agent of its decisions not later than the third Friday of the reconstitution month.
- v) Not later than the Monday following the third Friday of the reconstitution month, the Index Committee or its designee will issue a press release announcing additions and deletions to CEFMX. The press release will be posted on the CEFMX web site.
- vi) For rebalancings, the Compilation Agent will provide final share weights to the Committee or its designee on the Tuesday following the third Friday of the last month of each calendar quarter. Weights will be based on prices as of the close of trading on the preceding business day.
- vii) The CEFMX Index Committee or its designee will approve the final share weights prior to the close of US markets on the same business day and will distribute this information to the EOD Calculation Agent and all CEFMX licensees.

- viii) The effective date of the reconstitution will be on the close of business on the last business day of the reconstitution month. The Compilation Agent will post all final reconstitution data and information on its FTP server prior to the open on the next business day following the reconstitution date.
- ix) The effective date of the rebalancing will be on the close of business on the last business day of the rebalancing month. The Compilation Agent will post all final rebalancing data and information on its FTP server prior to the open on the next business day following the rebalancing date.
- x) CEFMX 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 Intraday Calculation Agent will calculate price-only 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 15-second intervals.
- The index calculations will start each Monday at approximately 9:00AM (EST US) (opening price) and will cease calculation each trading day at approximately 4:30PM (EST-US) (closing price). The index calculation will recommence the following trading day at approximately 9:00AM (EST US) and will cease calculation each trading day at approximately 4:30PM (EST US) (closing price).
- iv) The Indexes will be calculated and disseminated in USD.
- v) The Intraday Calculation Agent will also distribute total return index values immediately following the close of trading on US stock markets on each business day.

#### IX. Dissemination

Index values are disseminated in US Dollars via the New York Stock Exchange Global Index Feed (NYSE GIF) using the following tickers:

Total Return Index CEFMXTR
Price Index CEFMX

Values for the price only index (CEFMX) are distributed in "real-time," that is, in 15-second snapshots, between approximately 6:00PM (EST) and 4:30PM (EST) Sunday through Friday, excluding exchange holidays. Values for the total return index (CEFMXTR) are distributed once daily, at approximately 4:30PM (EST), Monday through Friday, excluding exchange holidays.

## X. Ongoing Maintenance

- i) In addition to the scheduled quarterly and semi-annual reviews, CEFMX is reviewed on an ongoing basis. Changes in index composition and related weight adjustments are necessary whenever there are extraordinary events such as liquidations, conversions, delistings, bankruptcies, mergers or takeovers involving index components. In these cases, each event will be taken into account on its effective date. A rebalance of the index affected by these events will be at the discretion of the Index Committee in the event a significant component is affected. 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 V herein, it will be removed from the index on the effective date of the next rebalancing.
- iii) Changes of Sector Classification. Funds are eligible for inclusion in the CEFMX based on their inclusion in an applicable sector. Mergers, takeovers, and spin-offs, as well as changes in a fund's investment approach, may cause a fund to lose its eligibility. In such a circumstance, the fund will be deleted from the index on the effective date of the next rebalancing. A fund's classification may also require an immediate change as the result of a special event such as a merger, takeover or spin-off.
- iv) Mergers. If two index constituents merge, their component positions will be replaced by the surviving fund immediately. If an index constituent merges with a non-component fund, its component position will be replaced by the new fund, if the new fund meets all eligibility criteria described in Section IV herein. In the event of mergers of equals, the combined trading history of the predecessor funds shall be used for evaluation. If the combined fund fails to meet all eligibility criteria described in Section IV herein, it will be deleted from the index unless otherwise determined by the Index Committee. If deleted, the weight of the merged index constituent shall be redistributed proportionately to the remaining constituents in the index.
- v) Takeovers. If an index component is taken over by another component fund, 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 fund, it will be replaced by the acquiring fund immediately, if the acquiring fund meets all the eligibility criteria described in Section IV herein. If the acquiring fund does not meet eligibility criteria described in Section IV herein, the weight of the removed fund will be reallocated proportionately to the remaining constituents in the index.
- vi) Conversions. If an index component is converted to a non-eligible financial security, it will be deleted from the index 5 business days following the effective date of the conversion and the weight of the removed fund will be

- reallocated proportionately to the remaining constituents in the index, unless otherwise determined by the Index Committee.
- vii) Increases and/or decreases in shares outstanding are changed as of the next quarterly rebalancing, except in the case of an in the money Rights Offering. If a Rights Offering is in the money, the rights are exercised and the newly acquired shares are applied to the company issuing the rights. A divisor change is made to reduce the holdings of the remaining constituents in order to settle the acquisition of the rights. If the rights offering is out of the money, it expires worthless.
- viii) Removal of Funds 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 and its weight will be reallocated to the remaining constituents in 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 fund and the issues involved in the filing, decide to keep the fund in the index.
  - \* The Committee may, at its discretion, remove a fund it has determined to be in extreme financial distress from the CEFMX, if the Committee deems the removal necessary to protect the integrity of the index and the interests of investors in products linked to the index.
- ix) Pricing of Stocks in Extreme Financial Distress for Index Maintenance.
  - \* When a fund is suspended from trading due to financial distress and subsequently de-listed by its primary market prior to resumption of trading, the EOD Calculation Agent will use the best-available alternate pricing source to determine the value at which the fund should be removed from the index.
  - \* If the fund'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. Calculation and Adjustments

- i) Input Data Sources
  - \* Real-time stock prices are provided by Refinitiv. 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 funds themselves.
  - \* Corporate actions are sourced from public news services, regulatory filings and data vendors. The funds themselves may be used as an additional source.
- 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:

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

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

 $q_{i0}$  = the number of shares of fund i at the base date

 $r_{io} = 1$ 

 $f_{io} = 1$ 

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

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

 $r_{it} = 1$ 

f. –

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 constituents of the total return index on a proportional basis.

- 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, = divisor at time (t)

 $D_{t+1}$  = divisor at time (t+1)

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

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

 $r_{it} = 1$ 

 $f_{it} = 1$ 

 $\Delta MC_{t+1}$ 

= 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 funds 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 fund
  - ▼ B) SPECIAL CASH DIVIDEND (applied for price and return index) adjusted price = closing price dividend announced by the fund

- 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 FUND SECURITY adjusted price = (closing price \* A price of the different fund security \* B) / A
- ▼G) RETURN OF CAPITAL AND SHARE CONSOLIDATION adjusted price = (closing price dividend announced by fund) \* A / B new number of shares = old number of shares \* B / A
- lacktriangle I) 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)]
- $\blacktriangle$  J) 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.

#### XII. 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.
- ii) 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.
- iii) 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.
- iv) 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.

#### XIII. APPENDIX REVIEW SCHEDULE

Constituent Changes Frequency: Semi-annual

Effective date: The first business days of April and October

Advance notice: Approximately 2 weeks

Rebalancings

Frequency: Quarterly

Effective date: The first business day 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.