

STANDARD  
& POOR'S

# S&P NATIONAL AMT-FREE MUNICIPAL VRDO INDEX

INDEX METHODOLOGY

September 2009

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# Introduction

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The S&P National AMT-Free Municipal VRDO Index seeks to measure the performance of variable rate demand obligations issued by municipalities.

## **Highlights**

Variable Rate Demand Obligations (VRDO) are short-term tax-exempt fixed income instruments whose coupon rate is reset on a periodic basis.

VRDO securities tend to be issued with long maturities of up to 30 or 40 years. However, they are considered short-term instruments because they include a bondholder put provision coinciding with the periodic coupon rate reset, which allows the bondholder to redeem the bond at face value.

The S&P National AMT-Free Municipal VRDO Index seeks to measure the performance of VRDO securities issued by municipalities, with maturities greater than or equal to one month.

Index constituents are rebalanced monthly. The weight of each security in the Index is determined based on market value.

The Index is rules based, although the S&P National AMT-Free Municipal Bond Index Committee reserves the right to exercise discretion, when necessary. The hallmark of a rules-based index is transparency and, broadly speaking, predictability. As an aide to transparency, this document sets out the rules by which the Index is governed, index calculation and management procedures, and the various formulae used to calculate index returns and other statistics.

# Eligibility Criteria

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## **Eligibility Factors**

**Issuer.** The issuer is a state (including the Commonwealth of Puerto Rico and US territories such as the U.S. Virgin Islands and Guam) or local government or agency such that interest on the security is exempt from U.S. federal income taxes.

**Priced at Par.** The security must be priced at par to be included in the index.

**Pricing.** The security must be included in Ipreo's VRDO pricing universe.

**Ratings.** A security must be rated by at least one of Standard & Poor's, Moody's or Fitch in order to qualify for the index and must have a rating of at least A-3, VMIG-3, or F-3 respectively.

**Maturity.** The security must have a maturity greater than or equal to one month.

**Deal Size.** Seventy-five percent (75%) of the number of total index constituents must be a part of a deal where the deal's original offering amount was at least US\$ 100 million. The remaining twenty-five percent (25%) of index constituents have no minimum deal size criteria.

**Yield:** The remaining 25% of index constituents, which have no minimum deal size criteria as described above, are the highest yielding constituents, meeting all other eligibility criteria at each monthly rebalancing.

**Minimum Par Amount.** The amount outstanding, or par amount, is used to determine the weight of the security in the Index. The security must have a minimum par amount of US\$ 10 million to be eligible for inclusion. To remain in the index, securities must maintain a minimum Par Amount greater than or equal to US\$ 10 million as of the next reference date.

**Yield Reset.** The security must have a weekly yield reset.

**Credit Enhancement.** The security must have a credit or liquidity support facility.

**Number of Issues per Issuer.** At any time, each issuer may have a maximum of 10 issues in the index as determined by its six-digit CUSIP base. On a given monthly rebalancing date, if there are more than 10 eligible issues for a given issuer, the 10 issues with the largest par amount are chosen.

# Index Construction

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## **Approaches**

The S&P National AMT-Free Municipal VRDO Index seeks to measure the performance of variable rate demand obligations issued by municipalities.

## **Index Calculations**

The S&P National AMT-Free Municipal VRDO Index is a market-value-weighted index. Ipreo LLC provides Standard & Poor's with the coupon and outstanding amounts of each security in the index. The prices used in the index calculation add the accrued interest for each security. All periodic yield resets are fully accounted for.

The total return is calculated by aggregating the interest return, reflecting the return due to paid and accrued interest, and price return, reflecting the gains or losses due to changes in the end-of-day price and principal repayments. Coupon payments are assumed to be reinvested into the index.

*For further details regarding Index Calculations, please refer to the Appendix.*

# Index Maintenance

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The index is maintained in accordance with the following rules:

- Eligible securities are added to the index on the next rebalancing date, subject to the schedule of the monthly rebalancing procedures.
- Any index constituent that fails to meet any one of the eligibility factors or that has a term to maturity and/or call date less than or equal to one calendar month plus one calendar day, as of the next rebalancing date, is removed from the index on that rebalancing date. Any security that is no longer priced at par is removed from the index on the next rebalancing date.
- Par amounts are adjusted on the rebalancing date to reflect any changes that have occurred since the previous rebalancing date.
- If Ipreo LLC is no longer able to provide a coupon or other constituent level data required by S&P, the constituent will be maintained at the last available coupon and removed at the next rebalancing.

## **Rebalancing**

The S&P National AMT-Free Municipal VRDO Index is reviewed and rebalanced on a monthly basis. The rebalancing occurs after the close of the last business day of the month.

Publicly available information, up to and including the close on the sixth (6<sup>th</sup>) business day preceding the rebalancing date (“the Reference Date”), is considered in the rebalancing.

- Additions, deletions and other changes to the Index arising from the monthly rebalancing are published, after the close of business, three business days prior to the last business day of the month (“the Announcement Date”).
- Index changes published in the announcement will not normally be subject to revision and will become effective after the close on the last business day of the month (“the Rebalancing Date”). However, if Ipreo can no longer provide a coupon on an index constituent or if there is a credit rating change that occurs on or before the day prior to the Rebalancing Date, these changes will be reflected in the rebalancing. An Amended Rebalancing Report will be published at the close of business on the day prior to the Rebalancing Date announcing such changes.

The S&P National AMT-Free Municipal Bond Index Committee, nevertheless, reserves the right to make adjustments to the Index at any time that it believes appropriate.

**Base Date**

The index base date is August 3, 2009. The base value on that date is 100.

# Index Governance

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## **Index Committee**

An index committee maintains the S&P National AMT-Free Municipal VRDO Index. The Committee is comprised of employees or agents of Standard & Poor's. All members of the S&P National AMT-Free Municipal Bond Index Committee are full-time professionals at Standard & Poor's. Meetings are held whenever deemed appropriate.

The Committee oversees the maintenance and inclusion policies, and any other matters affecting the Index.

In fulfilling its responsibilities, the Committee has full and complete discretion to (i) amend, apply, or exempt the application of Index rules and policies as circumstances may require and (ii) add, remove, or by-pass any security in determining the composition of an Index.

The Committee may rely on any information or documentation submitted to it or gathered by it that the Committee believes to be accurate. The Committee reserves the right to reinterpret publicly available information and to make changes to the Index based on a new interpretation of that information at its sole discretion. All S&P National AMT-Free Municipal VRDO Index Committee discussions are confidential.

# Index Policy

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## **Announcements**

Announcements of any relevant information pertaining to the S&P National AMT-Free Municipal VRDO Index are made at approximately 05:30 PM ET. Press Releases are posted on Standard & Poor's Web site at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com).

## **Holiday Schedule**

The S&P National AMT-Free Municipal VRDO Index is calculated when the Securities Industry and Financial Markets Association (SIFMA®) recommends the U.S. fixed income markets to be open.

## **End-of-Day Calculation**

The levels of the indices are calculated at the end of each Business Day, at approximately 05:00 PM ET. The current day's index levels are published via Standard & Poor's Web site. On Business Days that SIFMA® recommends closing the U.S. fixed income markets early, index levels may be calculated at a time in accordance with the recommended early close time set for that day. S&P National AMT-Free Municipal VRDO Bond Index levels will also be posted on major quote vendors and other media outlets as noted below.

## **Index Releases**

Index Releases are issued by S&P at the end of the business day. Release time is generally 05:30 P.M. ET.

# Index Dissemination

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## **Tickers**

<b>Index</b>	<b>Bloomberg</b>	<b>Reuters</b>
S&P National AMT-Free Municipal VRDO Index	SPMUVRDO	.SPMUVRDO

## **FTP**

Additional daily index data is available via FTP by subscription.

For further information, please refer to Standard & Poor's Web site at [www.indices.standardandpoors.com](http://www.indices.standardandpoors.com).

# Appendix

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## Calculation of Market Values and Relative Weights

A market value is calculated for each security in the index as of the close on each day, as follows:

$$MV_t = PAR_{RB} * \frac{(P_t + AI_t)}{100} \quad (1)$$

where:

- $MV_t$  = Market value of the security on day  $t$
- $PAR_{RB}$  = Par Amount of the security as of the last monthly rebalancing.
- $P_t$  = Price of the security on day  $t$
- $AI_t$  = Accrued interest<sup>1</sup> on the security up to and including day  $t$

If the valuation date is not a trading day, the market value will be based on the price as of the immediate prior trading day, plus interest accrued up to the valuation date. As VRDO securities are generally always priced at par except in rare circumstances, the market value of the security will generally be based on the par value plus interest accrued up to the valuation date.

The relative weight of a security  $i$  is defined as the market value of that security expressed as a percentage of the aggregate market value of all securities in the index, as follows:

$$weight_i = \frac{MV_i}{\sum_i MV_i} \quad (2)$$

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<sup>1</sup>  $AI_t$  in (1) is calculated on a calendar date basis and uses the conventions for settlement date appropriate to the asset class. Accordingly, accrued interest will be zero on a coupon payment date.

## Calculation of Security Returns

Returns are calculated for all securities, on every calendar day.

### Total Return

The total return ( $TR$ ) of a security on day  $t$  is the sum of the market price return and the interest return on day  $t$ :

$$TR_t = IR_t + PR_t \quad (3)$$

where:

$$\begin{aligned} IR_t &= \text{Interest return on day } t. \\ PR_t &= \text{Market price return on day } t. \end{aligned}$$

Price return measures the return due to the change in the market price of the security. Interest return (or coupon return) includes the return due to the interest earned on that security.

### Interest Return

The formula for the interest return on an individual security on day  $t$  is as follows:

$$IR_t = \frac{\left( PAR_t * \frac{AI_t}{100} - PAR_{t-1} * \frac{AI_{t-1}}{100} \right) + Int_t}{MV_{Beg}} \quad (4)$$

where:

$$\begin{aligned} IR_t &= \text{Interest return at time } t \\ AI_t &= \text{Accrued interest, up to and including day } t \\ AI_{t-1} &= \text{Accrued interest, up to and including day } t-1 \\ PAR_t &= \text{Par amount as of the last monthly rebalancing adjusted for principal} \\ &\quad \text{repayments up to and including day } t \\ PAR_{t-1} &= \text{Par amount as of the last monthly rebalancing adjusted for principal} \\ &\quad \text{repayments up to and including day } t-1 \\ Int_t &= \text{Interest payment on day } t \\ MV_{Beg} &= \text{Market value at the beginning of day } t. \end{aligned}$$

### Price Return

The formula for the price return for a security at time  $t$  is as follows:

$$PR_t = \frac{PAR_t * \left( \frac{P_t - P_{t-1}}{100} \right) + Prin_t}{MV_{Beg}} \quad (5)$$

where:

- $PR_t$  = Price return on day  $t$
- $PAR_t$  = Par amount as of the last monthly rebalancing adjusted for principal repayments up to and including day  $t$
- $P_t$  = Price of the bond on day  $t$
- $P_{t-1}$  = Price of the bond on day  $t-1$
- $Prin_t$  = Principal prepayments occurring after the prior rebalancing, up to and including day  $t$
- $MV_{Beg}$  = Market value at the beginning of day  $t$ .

\*\*Note that since VRDO securities are generally priced at par the price return for each security will usually be zero.

### Daily Index Returns

Individual security returns are aggregated to calculate returns for the index. Specifically, the total return for the index on a given day is equal to a weighted average of the returns of the securities that constitute the index. The weight of each security return is equal to the relative weight of that security in the index, as of the previous calendar day (adjusted for principal repayments). The index return is as follows:

$$IndexTR_t = \frac{\sum_i MV_{i, Beg} * TR_{i, t}}{\sum_i MV_{i, Beg}} \quad (6)$$

where:

- $TR_t^i$  = Total return of security  $i$  on day  $t$
- $MV_{Beg}^i$  = Market value of security  $i$  at the beginning of day  $t$ .

### Daily Index Values

Index values are calculated each day by applying the current day's month-to-date index return to the index value on the previous monthly rebalancing date, as follows:

$$TRIV_t = TRIV_{t-1} * (1 + IndexTR_t) \quad (7)$$

where:

$TRIV_t$  = Total Return Index Value on day  $t$

$TRIV_{t-1}$  = Total Return Index Value on day  $t-1$

$IndexTR_t$  = Daily index return on day  $t$ , as described above.

# S&P Contact Information

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