



About Municipal Variable Rate Securities

Variable rate securities have interest rates that fluctuate in response to market movements. These floating rate municipal securities are reset at specified intervals, but the final maturity is typically more than 10 years from the date of issuance.

This document provides an overview of three types of variable rate securities:

- Variable Rate Demand Obligations (VRDO) or “floaters;”
- Floating Rate Notes (FRNs); and
- Auction Rate Securities (ARS).

Each type of variable rate security can be issued as tax-exempt or taxable debt but has distinct features and associated risks.



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Generally, variable rate securities are regarded as attractive to issuers when long-term rates are considered high and when short-term interest rates are low relative to long-term rates. In a low interest rate environment, state and local government issuers may choose to issue variable rate securities in order to structure a long-term debt while taking advantage of low short-term interest rates. Because short-term rates are historically lower than long-term rates, an issuer issuing variable rate debt may realize lower interest costs over the long term than if they had issued fixed-rate debt at a higher rate.

Issuers may also choose to include variable rate securities as part of a debt portfolio management strategy in an effort to match debt costs to investment portfolio expected returns. This type of asset-liability matching is a portfolio management strategy that seeks to reduce exposure to any one type of interest rate, and may be utilized to comply with an issuer's debt, investment and cash management policies.

Transaction Participants

Remarketing Agent is a municipal securities dealer selected by issuers to set the interest rate for a variable rate issue and typically is responsible for reselling to investors securities that have been tendered for purchase by their owner. Remarketing agents are paid by the issuer to perform these services.

Tender Agent is an agent of the issuer to whom investors tender their bonds upon an optional or mandatory tender. In many cases, the tender agent may act as the remarketing agent for a variable rate issue.

Trustee is a financial institution with trust powers, designated by the issuer, that acts, pursuant to a securities contract, in a fiduciary capacity for the benefit of the investors in enforcing the terms of the securities contract. In many cases, the trustee also acts as custodian, paying agent, registrar and/or transfer agent for the securities.

Paying Agent is a designated bank or other institution selected by the issuer responsible for transmitting payments of interest and principal from an issuer of municipal securities to the investors.

Issuers also may find that the flexible current call provisions associated with variable rate securities are advantageous as an interim financing tool. Additional flexibility includes the option to create a multi-modal variable rate securities structure that permits the issuer to change interest rate modes such as converting a variable rate security to a fixed rate security.

In addition, variable rate securities may offer an issuer diversification by broadening the types of investors holding an issuer's securities. Investors attracted to variable rate securities, in part, may seek stability of principal, interest income and liquidity associated with floating rate municipal debt while taking advantage of the tax benefits associated with tax-exempt municipal securities. In addition, variable rate securities typically have less price sensitivity relative to changes in interest rate levels given that the coupon rate mirrors prevailing market conditions. The floating rate interest reset periods allow investors to quickly exit the investment in most circumstances. Variable rate securities investors typically include high-net-worth individuals, bank trust departments, bond funds and money market funds.¹

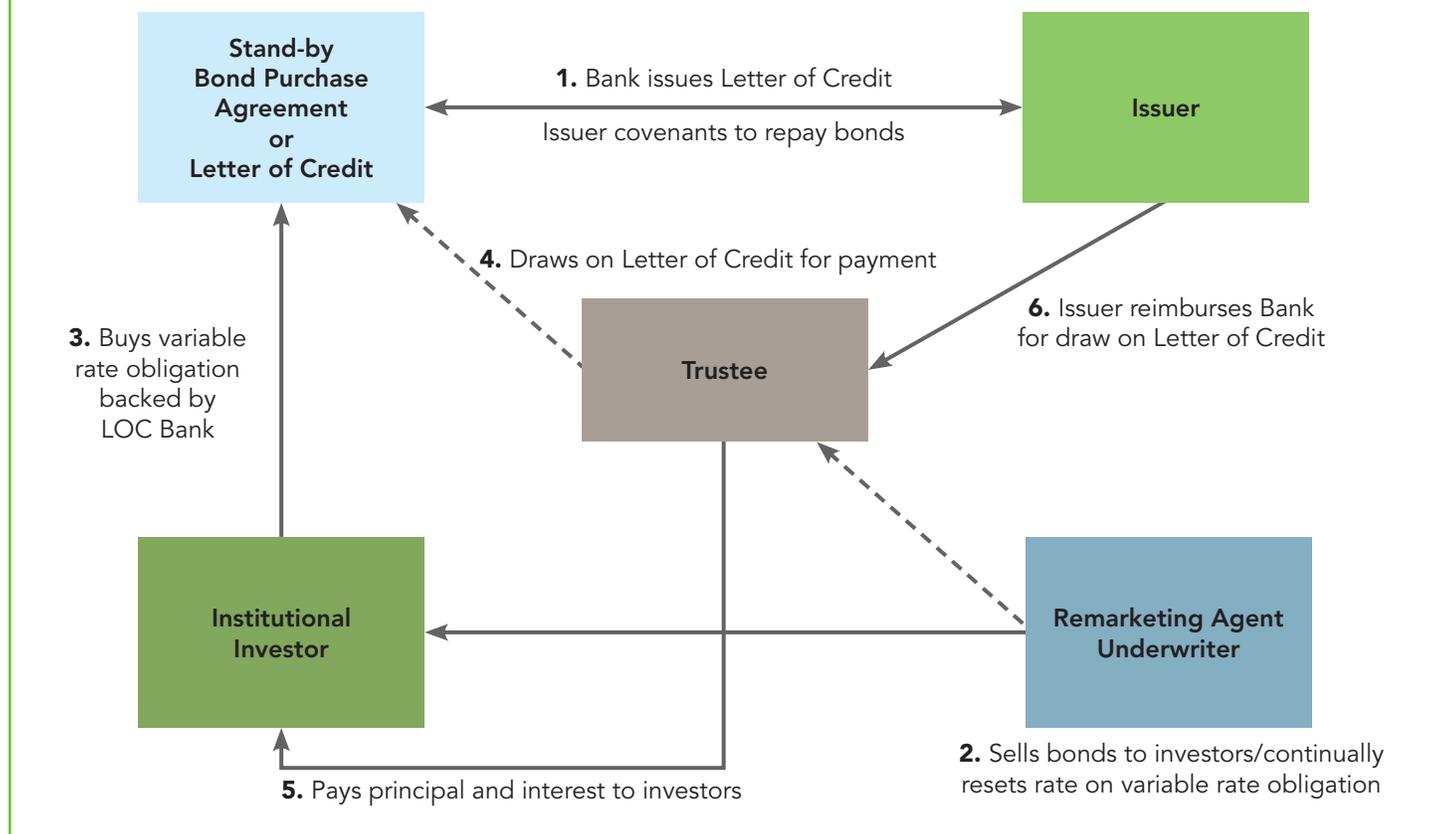
Variable Rate Demand Obligations (VRDOs)

VRDOs are floating rate obligations that typically have a nominal long-term maturity of 20 to 30 years but have an interest rate that is reset periodically. The interest rate reset can be daily, weekly, monthly, semi-annual or flexible. VRDOs are typically benchmarked to the SIFMA Municipal Market Swap Index² for

¹ The Securities and Exchange Commission (SEC) Rule 2a-7 of the Investment Company Act of 1940 (Rule 2a-7) governs money market funds and seeks primarily to protect investors from loss of principal through diversification of money market portfolios. Money market funds can generally only invest in eligible securities that have a maturity of 397 calendar days or less and are highly liquid to meet redemption requests. In addition, an eligible, rated security must maintain one of the two highest short-term rating categories as assigned by a designated nationally recognized statistical rating organization. Money market funds held by institutional investors (institutional prime and municipal money market funds) must transact at a floating net asset value (NAV), while money market funds sold to individual investors can maintain a stable NAV of approximately one dollar per share price.

² The SIFMA Index is the Municipal Swap Index compiled from weekly interest rate resets of tax-exempt variable rate issues reported to the Municipal Securities Rulemaking Board's (MSRB) Short-term Obligation Rate Transparency (SHORT) system. The SIFMA Index is generally determined on Wednesday of each week and published and effective for the one-week period beginning on Thursday. Dealers that act as ARS Program Dealers or VRDO Remarketing Agents are required to report interest rates, and descriptive information as well as submit related liquidity documents for VRDOs and for municipal ARS to the MSRB's SHORT system as required by MSRB Rule G-34(c).

Mechanics of a Variable Rate Demand Obligation



tax-exempt VRDOs or the LIBOR Index³ for taxable VRDOs. Investors purchase VRDOs at par in \$100,000 increments.

Distinguishing characteristics of VRDOs include a demand feature that allows investors to “put” or “tender” the VRDOs back to the issuer on the interest reset date and requires a form of liquidity in the event of a failed remarketing. The “put” feature of VRDOs offers the investor the right to require the issuer to repurchase the bonds from the investor at the full face value of the VRDO plus accrued interest.

Investors in VRDOs must provide notice to the tender agent for the VRDOs by a specified number of days prior to the date that the VRDOs will be tendered for the purchase at a price of par plus accrued interest. The put can generally be exercised in conjunction

with the reset of the interest rate to be paid on the securities for the next interest rate reset period. The put feature provides investors with assurance that the principal will be preserved.

The process for issuing VRDOs generally follows a process similar to a negotiated fixed rate bond offering, with a few notable exceptions. Typically, the remarketing agent is selected by the issuer. Most VRDOs are sold through a negotiated offering in which the remarketing agent will resell all securities at the interest rate reset date. VRDOs typically have a contractual source of liquidity in the form of a bank direct letter of credit (LOC) or stand-by purchase agreement (SBPA). In the event investors may not be immediately found or investors exercise the put, the liquidity is available to pay the investors at a price of par plus accrued interest.

An LOC typically provides an unconditional commitment by a bank to pay investors the principal and interest on the VRDOs, even in the case of default, bankruptcy or downgrade of the issuer. The long- and short-term credit ratings of the VRDOs with an LOC are based on the bank’s ratings. The LOC bank charges an annual fee to the issuer for its commitment to lend.

³ The LIBOR or London-Interbank Offered Rate, is an interest rate for a specified period for US Dollar investments that is managed by the British Bankers’ Association. LIBOR is determined each day at 11:00 a.m. (London time) and is the average rate (with some adjustments) derived from the quotations provided by certain reference banks that are determined by the British Bankers’ Association at which a leading bank can obtain unsecured funding in the London interbank market. LIBOR serves as a benchmark for various interest rates. Obligations of parties to such transactions are typically expressed as a spread to LIBOR.

Another form of liquidity for VRDOs is an SBPA in which the bank agrees to purchase VRDOs tendered by investors. However, the bank does not guarantee that principal and interest will be paid, but provides only that tendered securities will be purchased so long as the SBPA remains in effect. Unlike an LOC, an SBPA contains termination events provisions,⁴ and is not an unconditional obligation to purchase VRDOs, and does not guarantee the payment of principal and interest. Generally, VRDOs with an SBPA receive a long-term rating of the issuer and the short-term rating of the bank unless the VRDOs are insured. In that case, long-term ratings will be based on the insurer.

VRDO Risks

Issuers and investors should be aware that VRDOs bear associated risks such as the following:

- **Interest Rate Risk** — The risk of an increase in short-term interest rates. In the case of a rise in interest rates, issuers may experience a higher cost of borrowing than if fixed rate bonds were issued originally.
- **Remarketing Risk/Put Risk** — The risk that the remarketing agent is unable to find purchasers for tendered securities. The remarketing agent does not have an obligation to purchase the VRDOs. If the remarketing agent is unable to find investors for the tendered securities, the tender agent or trustee would draw on the LOC or SBPA in an amount equal to the principal amount plus accrued interest of the securities.
- **Rollover Risk/Renewal Risk** — The risk of the inability to obtain a suitable liquidity bank facility at an acceptable price to replace a facility upon termination or expiration of the contract period.
- **Liquidity Risk** — The risk that in the event of a failed remarketing, the bank that has agreed to provide the LOC or SBPA fails to honor its obligation to support the VRDOs.
- **Default Risk** — VRDOs usually are not secured by the assets of the issuer or the bank but are subject to the LOC or SBPA provider honoring its obligations. However, repayment of principal and payment of interest ultimately is dependent upon the issuer.

- **Credit Risk** — The long-term credit rating of the bank that provides the LOC or SBPA is the rating of the VRDOs. However, the bank's credit quality can affect the pricing levels of VRDOs.

Floating Rate Notes (FRNs)

FRNs are variable rate securities that do not require credit enhancement or liquidity support such as an LOC. FRNs may be structured as short-term maturities (one to seven years) or structured with nominal long-term maturities that include a mandatory tender or put following the stated floating rate note period.

The remarketing agent, selected by the issuer, generally resets the interest rate weekly based on an index base rate (SIFMA or percentage of LIBOR) plus a spread. Interest on FRNs typically is paid monthly or semiannually. FRNs are generally offered to investors in \$5,000 increments.

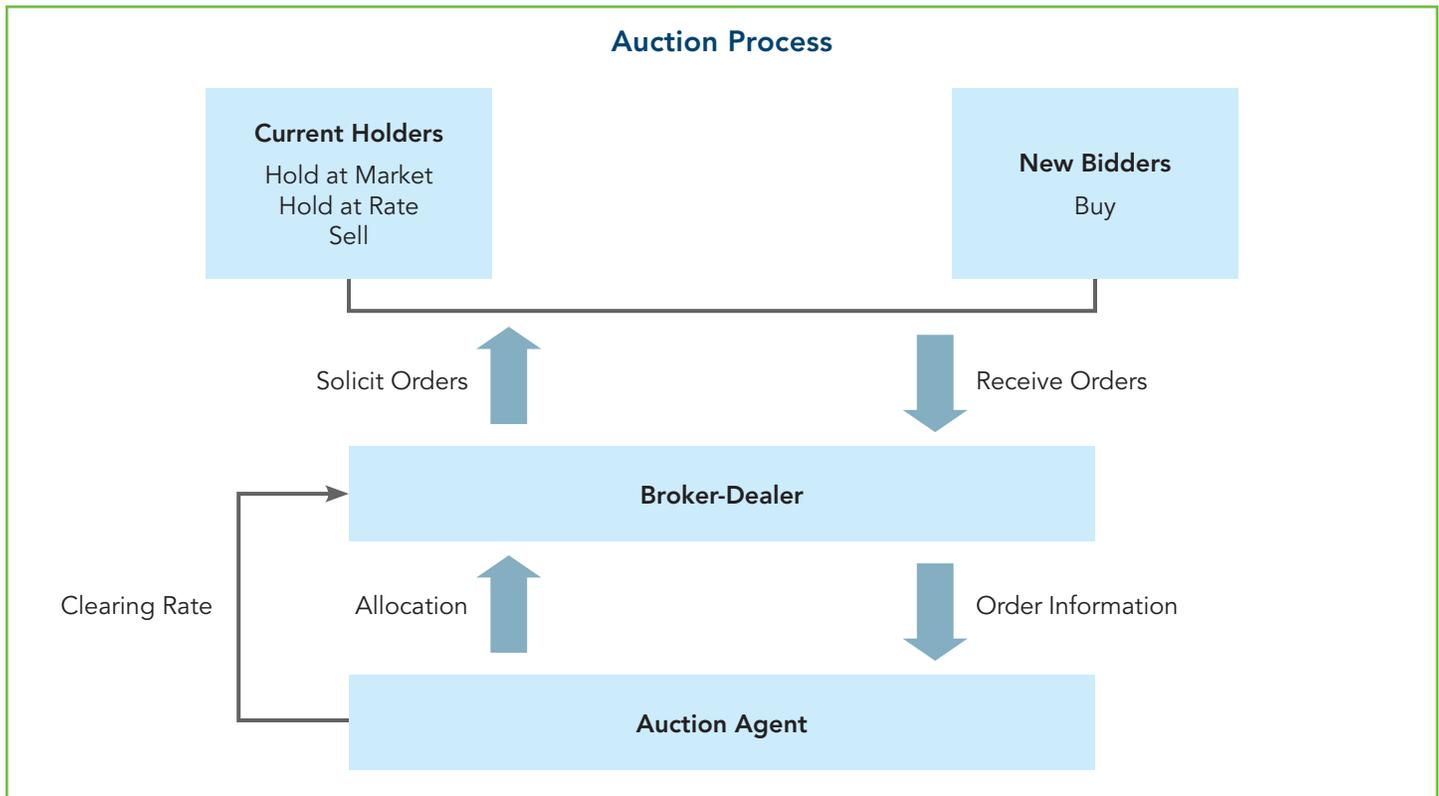
FRNs, unlike VRDOs, are not subject to optional or mandatory tender during the floating rate note period. Generally, FRNs are not subject to optional redemption until the end of the floating rate period or six months prior to the maturity date at a purchase price of par plus accrued interest if optional redemption is permitted.

If at the end of a floating rate note period the remarketing agent is unable to remarket the FRNs or the issuer is unable to refinance the FRNs, the interest rate may increase, and after a specified period, to a maximum interest rate until the FRNs are paid in full (soft put). The FRNs' maximum interest rate has generally ranged from nine percent per annum to 15 percent per annum. Alternatively, if at the end of floating rate note period the remarketing agent is unable to remarket the FRNs or the issuer is unable to refinance the FRNs, the issuer may be obligated to fund the full amount of the purchase price of the tendered FRNs (hard put).

FRN Risks

Given that FRNs do not require credit enhancement such as an LOC, they are not subject to renewal risk or liquidity risk. However, FRNs are subject to risks similar to those associated with VRDOs including interest rate risk, credit risk and default risk. Also, FRNs are subject to refinancing risk — the inability to remarket or refinance FRNs at the end of the floating rate note

⁴ These termination events may include bankruptcy or insolvency of the issuer, a downgrade below investment grade and event of taxability or payment default.



period. As a result, the issuer may have to pay an interest rate that could be as high as the maximum interest rate until the FRNs are paid in full, or may be obligated to fund the full amount of the purchase price of the tendered FRNs.

Auction Rate Securities (ARS)⁵

ARS are variable rate securities that do not have a tender or put feature, or require liquidity support such as an LOC.⁶

Selected by an issuer, broker-dealer(s) structure ARS for a stated period of typically seven, 14, 28 or 35 days or a flexible mode.⁷ ARS are generally structured as bonds with long-term maturities of 20 to 30 years. ARS

interest rates are reset periodically under an auction process that is conducted by an auction agent. The auction agent receives bids from the broker-dealer(s), determines the clearing bid and resets the interest rate. Typically ARS are benchmarked to the SIFMA Municipal Market Swap Index for tax-exempt ARS and the LIBOR Index for taxable ARS.

Investors purchase ARS at par in \$25,000 increments for tax-exempt and in \$50,000 increments for taxable ARS. Tax-exempt ARS investors are generally high-net-worth individuals, bond funds or bank trust departments. Corporations are typical investors in taxable ARS. ARS trade at par and are callable at par on any interest payment date at the option of the issuer. Within a multi-modal ARS structure, on any interest payment date ARS can be converted to VRDOs or fixed rate bonds at the end of any holding period.

Existing and potential investors competitively bid through a broker-dealer to the auction agent at the submission deadline indicating the lowest interest rate they will accept and the par amount of ARS to purchase or sell. Each bid to purchase securities is ranked from lowest to highest yield by the auction agent. Generally, the securities will be sold at the clearing rate established by the auction process to all investors placing bids at or below the clearing rate (lowest yield). Investors whose bid yields are at

⁵ Since 2007 there has not been new issuance of ARS reflecting the monoline bond insurers' credit rating downgrades. In addition, in May 2006, 15 broker-dealer firms that participated in the ARS market settled with the SEC for failure to adequately disclose intervention in auctions to prevent failed auctions and that did not conform auction procedures disclosed in offering documents, leaving investors unaware of the liquidity and credit risks associated with ARS. In addition, in January 2007, three firms settled with the SEC for allowing broker-dealers in auctions to submit bids or revise bids after submission deadlines and allowing broker-dealers to intervene in auctions in ways that affected the interest rates paid on the auction rate securities. See www.sec.gov/investor/ars.htm

⁶ ARS are not eligible securities under SEC Rule 2a-7 for money market fund purchases.

⁷ Flexible mode is generally defined as a period longer than 35 days but within a final maturity based on the short end of the yield curve.

or below the “clearing” bid rate receive ARS at the clearing bid rate. The clearing bid rate is paid on the entire issue for the upcoming period. Existing ARS investors have three options in an auction:

- **Hold at Market:** Irrespective of the new interest rate, hold existing position. These ARS are not included in the auction.
- **Hold at Rate:** At a specified minimum rate, bid to hold at existing position.
- **Sell:** Regardless of the interest rate set, sell existing position at the auction.

Existing ARS holders receive priority over prospective investors with equal bid yields. Potential ARS investors bid to purchase a position at a specified minimum rate. In the event existing ARS holders do not offer to sell their securities the auction is declared an “all-hold auction.” The rate for the next period is set to an “all-hold rate” as defined in the offering documents and typically below the marketing clearing rate.

Liquidity for ARS is provided by a successful auction. A failed auction can occur when there is a lack of demand or no clearing bid is received from investors. In the event of a failed auction, the existing investors continue to hold the ARS at a specified maximum interest rate (all hold) until adequate bids are provided at the next auction to set a clearing yield.

ARS Risks

The risk of a failed auction and illiquidity for ARS may result in significantly higher interest cost for the issuer. The liquidity risk is transferred to the investor given that a failed auction can result in the ARS being illiquid for a period. ARS are not subject to put risk or renewal risk like VRDOs. However, ARS are subject to interest rate risk, credit risk and default risk.

The following table compares the three types of variable rate securities previously discussed.

	VRDOs	FRNs	ARS
Term	Up to 3 years	Up to 7 years	Up to 30 years
Denominations	\$100,000	\$5,000	\$25,000 (tax-exempt) \$50,000 (taxable)
Interest Rate Period	Daily, weekly, monthly	Daily, weekly, monthly, quarterly or annually	7, 14, 28 or 35 days
Interest Payment	Monthly or semiannually	Monthly or semiannually	Business day following the auction
Credit Enhancement	Must have a liquidity facility	None	Typically insured
Remarketing	Remarketing Agent	Broker-dealer	Broker-dealer
Tender or Put	Yes	Yes, but only at the end of floating rate note period	No. Subject to mandatory purchase on conversion date to another mode
Redemption Provisions	Callable at any interest payment date at par	Generally 3 to 6 months prior to maturity	Callable at any interest date at par
Failed Remarketing	Put to bank Subject to bank rate	Hard put at maturity – default Soft Put – maximum rate	Subject to maximum rate
Typical Investors	Money market funds, corporate investors, high-net-worth investors	Money market funds, bond funds, insurance companies, high-net-worth investors	Corporate investors, high-net-worth investors, bond funds and bank trust departments

Variable Rate Securities Information on EMMA®

The MSRB's [Electronic Municipal Market Access \(EMMA®\) website](#) is the official repository for information on virtually all municipal securities, providing free public access to official disclosures, trade data and other information about the municipal securities market. The Short-term Obligation Rate Transparency (SHORT) System is a facility of the MSRB for the collection and dissemination of information and documents about municipal variable rate securities. Dealers that act as ARS program dealers or VRDO remarketing agents are required to report interest rates and descriptive information as well as to submit documents associated with municipal ARS and VRDOs to the SHORT System under [MSRB Rule G-34\(c\)](#).

Information submitted through the SHORT System can be accessed on EMMA through the Market Activity Tab on [emma.msrb.org](#). Available information on variable rate securities includes:

- Security CUSIP;
- Date and time of interest rate reset;
- Information related to the remarketing agent;
- Length of interest rate reset period;
- Interest rate;
- Effective date of interest rate;
- Rate type;
- Length of notification period;
- Maximum rate;
- Liquidity facility; and
- Identity of tender agent.

Additionally, EMMA provides offering documents and continuing disclosures⁸ related to variable rate securities.

Issuers may learn more about the variable rate securities considerations in the [Government Finance Officer's Association Best Practices Related to Debt Issuance](#).

Additional resources for investors seeking to learn more about municipal securities include:

- [MSRB Education Center](#)
- [SEC Investor Alerts](#) (July 2011)
- FINRA Investor Alert, [Auction Rate Securities: What Happens When Auctions Fail](#) (November 2008)
- FINRA Investor Alert, [Municipal Bonds—Important Considerations for Individual Investors](#) (April 2013)

⁸ See SEC Rule 15c2-12 specifies disclosure requirements for primary offering of municipal securities including variable rate securities subject to exemptions.