Morgan Stanley

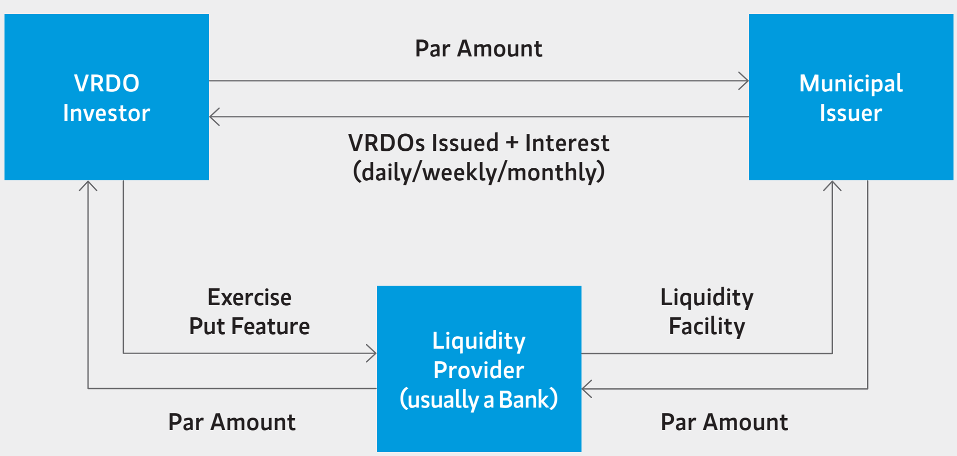
INVESTMENT MANAGEMENT

Variable Rate Demand Obligations (VRDOs)

LIQUIDITY | GLOBAL LIQUIDITY TEAM | 2018

VRDOs (also known as VRDNs) are debt instruments that generally allow issuers to receive financing at short-term rates when borrowing long-term. Making up approximately three-quarters of the total U.S. municipal money market, VRDOs can be a vital tool for municipal bond issuers seeking to diversify their debt structure and take advantage of the natural demand from tax-exempt money market funds. Their appeal to investors lies in their maturity-shortening features and variable interest rates that can offer potential stability of principal.

Basic VRDO Structure[1]



Without the investor exercising the put feature, the transaction operates just as any other simple bond transaction. However, if the put is exercised, the liquidity provider notifies a remarketing agent, who attempts to find a new investor to take the place of the old one. This tends to be a fluid transition. If the remarketing agent cannot find a new investor, the old one (who exercised the put) is reimbursed by the liquidity provider and the municipal issuer taps its liquidity facility.

Key Features of VRDOs

VARIABLE RATE

Floating rate instruments with a long maturity, typically 30 years.

Coupon usually reset daily or weekly by remarketing agent.

Reset/float in correlation with market supply and demand as well as the Securities Industry and Financial Markets Association (SIFMA) Index, which resets every Wednesday at 4:15pm ET.

DEMAND / PUT OPTION

Daily or weekly put option allows investors to tender the security, making them eligible for purchase by money market funds under Rule 2a-7 of the Investment Company Act of 1940.

LIQUIDITY SUPPORT

Many VRDOs have third-party support, typically through a letter of credit or standby purchase agreement.

[1] For illustrative purposes only, assumes normal market conditions, and is not a recommendation to buy or sell any particular security or to adopt any investment strategy.

Liquidity and Credit Enhancements

VRDOs are typically supported by either an irrevocable direct-pay letter of credit (LOC) issued by a financial institution or a conditional standby purchase agreement (SPA) from a financial institution (a "Standby Purchaser"). The mechanics of the LOC and SPA differ, but each is intended to provide a mechanism for holders to be able to sell their bonds after a requisite notice period. In some instances, issuers of high credit quality with substantial liquid resources provide liquidity themselves.

	LETTER OF CREDIT (LOC)	STANDBY PURCHASE AGREEMENT (SPA)	SELF LIQUIDITY
Third party liquidity support?	Yes	Yes	No
Conditionality of liquidity support	Unconditional	Conditional	N/A
With whom the credit risk resides	Bank	Both bank and underlying municipal issuer	Municipal issuer
Other Comments	Because of unconditional support, costs/fees are the highest and, therefore, issuers typically enter into LOCs as a means of credit enhancement.	Offers issuers with an option to obtain liquidity support without full credit enhancement. SPA agreements can be terminated if certain events are triggered, which include default/ bankruptcy, ratings downgrades, and events of taxability.	Issuers tend to be highly rated with substantial liquid resources to support the potential tender. These issuers must provide ongoing evidence of their ability to cover their puttable debt outstanding.

Potential Benefits to Issuers

- Can allow issuers to take advantage of steepness of yield curve because short-term rates are generally much lower than long-term rates
- Diversifies issuer's debt structure by duration[2]
- Meets natural short-term demand of money market funds

Potential Benefits to Money Market Funds

- Shortens average maturity of portfolio because put date is generally seven days or less
- Short maturity and ease of redemption can provide liquidity
- Trades at par which can help mitigate market price risk
- Reset feature can potentially enhance returns in a rising interest rate environment

[2] Diversification does not assure a profit or protect against loss in a declining market.

Evaluating Credit

Determining the credit quality of a VRDO depends on its structure. For diversification tests, an investment is deemed to be exposure to the LOC/liquidity provider (usually a bank) and/or the issuer.

- **LOC** – Creditworthiness of the LOC provider is the primary driver in evaluating the credit quality of the bond; attention is also paid to the viability of the underlying borrower. For diversification tests, this structure counts as exposure to the LOC provider.
- **SPA** – Assessment of creditworthiness of both the liquidity provider and the issuer is essential to analysis of the bond. Both are included in diversification test calculations.
- **SELF-LIQUIDITY** – Analysis focuses not only on long-term credit quality of the issuer but also on unrestricted liquid resources available to the issuer to meet a potential tender. Exposure is to the issuer.

Further Reading[3]

- For a glossary of terms relating to VRDOs, see this Municipal Securities Rulemaking Board page: http://emma.msrb.org/EmmaHelp/UnderstandingVRDOs.aspx
- For historical market information on municipal bonds, including VRDOs, see this SIFMA page: http://www.sifma.org/research/reports.aspx

[3] The websites are provided for informational purposes only . Morgan Stanley has not reviewed any of the content supplied, and does not guarantee any claims or assume any responsibility for the content provided by the sites.

There is no assurance that a money market portfolio will achieve its investment objective.

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Floating NAV Funds: You could lose money by investing in the Fund. Because the share price of the Fund will fluctuate, when you sell your shares they may be worth more or less than what you originally paid for them. The Fund may impose a fee upon the sale of your shares or may temporarily suspend your ability to sell shares if the Fund's liquidity falls below required minimums because of market conditions or other factors. An investment in the Fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The Funds' sponsor has no legal obligation to provide financial support to the Fund, and you should not expect that the sponsor will provide financial support to the Fund at any time.

Accordingly, you can lose money investing in a money market portfolio. Please be aware that a money market portfolio may be subject to certain additional risks.

Please consider the investment objectives, risks, charges and expenses of the portfolios carefully before investing. The prospectus contains this and other information about the portfolios. To obtain a prospectus, download one at morganstanley.com/im or call 1.800.236.0992. Please read the prospectus carefully before investing.

Charts and graphs are provided for illustrative purposes only.

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