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OUTLOOK

Low Interest Rates and Bank Credit Challenges Shape Smaller VRDO Market

Mid-Year Update & Outlook Finds Low Issuance, Municipal Issuers Employing Alternatives

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Contraction of the variable demand obligation (VRDO) market continued through the first half of 2012, extending a multi-year trend that began in 2009. Issuers across all sectors of the municipal market are reevaluating the role of VRDOs and associated derivatives in their capital structures with many opting for less complicated traditional fixed-rate debt to take advantage of historically low interest rates. At the same time, issuers and investors are evaluating changes in bank credit quality and navigating a VRDO support market increasingly concentrated among a few banks. For its part, the banking sector is adjusting to a period of prolonged economic weakness and new regulatory requirements that are limiting trading activities and increasing capital and liquidity requirements. While the broader municipal market saw a 42% rebound in debt issuance in the first seven months of this year, issuance of VRDOs decreased by 5% from the historically low issuance in the same period last year.

In this special report, we review activities in the sector so far this year and offer our outlook for little change through the start of 2013 in the absence of catalysts that would suggest a reversal. The report's findings include:

- VRDO new issuance slipped to historical lows and concentrated among larger issues;
- Issuers were proactive in rotating out of letters of credit (LOCs) and standby bond purchase agreements (SBPAs) supported by weaker banks including those whose short-term ratings have been lowered to P-2;
- European bank facility providers continued to see erosion in market share with issuers and investors seeking reduced exposure to the ongoing European debt crisis;
- Issuers seeking substitute LOCs & SBPAs for expiring facilities are competing with issuers trying to exit P-2 rated bank facilities; and
- Further changes in the VRDO market are expected as banks evaluate and adjust their lending practices in response to the 2015 implementation of the liquidity coverage requirement included in Basel III.

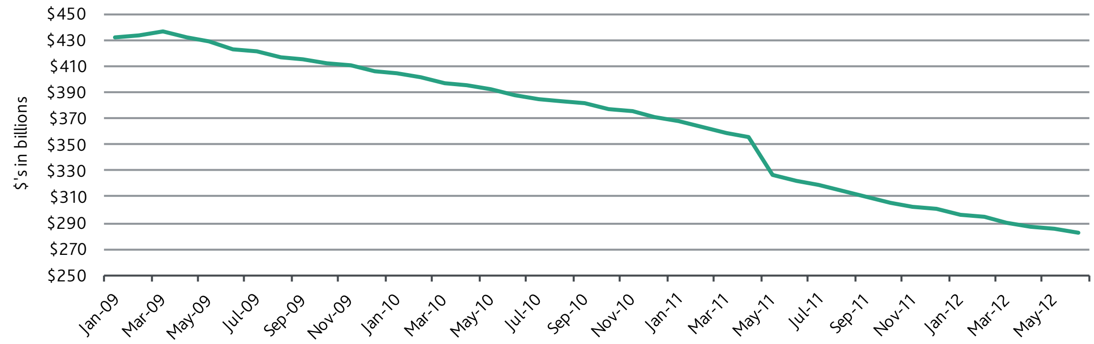
VRDO Market Continues to Contract

The VRDO market contracted by 6% to $282 billion in outstanding debt in the first half of 2012, a continuation of a 35% contraction that began in early 2009. For over 3 years, this market has seen a near continuous month-over-month reduction in the outstanding par amount of VRDOs[1]. This decline contrasts sharply with the broader municipal market which, despite the myriad of challenges facing municipalities, has hovered around $3.7 trillion for the last 3 years. See Figure 1.

FIGURE 1

Contraction of Municipal VRDO Market Continues

Par Amount of VRDOs Outstanding ($'s in billions)



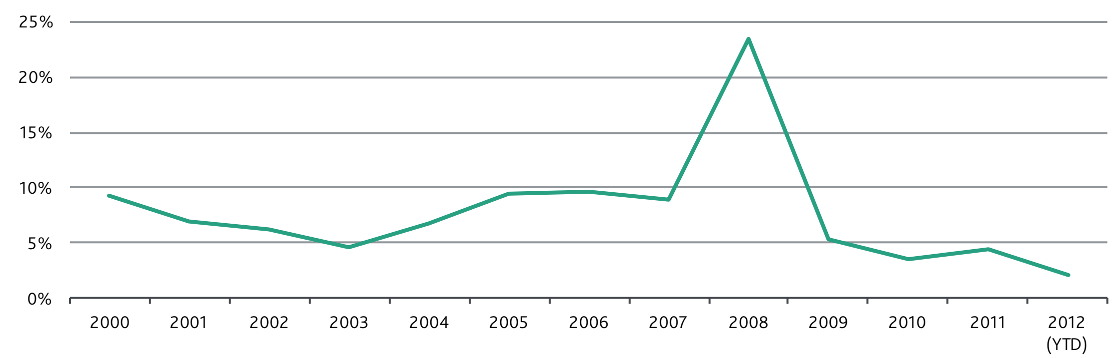
Source: SIFMA

The modest level of new VRDO issuance in 2012 has not been enough to offset heavy redemption and refunding activity. Through the first 7 months of the year, approximately $5 billion of bank-supported variable rate debt was issued[2], down slightly from the first 7 months of 2011 and on track to be one of the lowest yearly totals in the last two decades. Variable rate issuance is playing a smaller role in issuers' financing plans with variable rate issuance only comprising 2% of total municipal debt issuance for the 1st half of the year. This is the lowest share in the last 12 years and well below the 8% average observed since 2000. See Figure 2.

FIGURE 2

Bank-Supported VRDO Issuance as a % of Total Municipal Debt Issuance Continues To Drop

Issuance of bonds and notes supported by LOCs or SBPAs as a % of total municipal debt issuance



Source: Bond Buyer

1 Outstanding VRDO data compiled from various *US Municipal VRDO Update* reports published by Securities Industry and Financial Markets Association.

2 Bond Buyer

The market's shift away from variable rate debt reflects multiple headwinds facing the VRDO sector. The challenges, volatility and headline risk faced by the banking sector is clearly a deterrent for issuers. Issuers with debt supported by bank facilities are not only directly exposed to the credit of the financial institution providing the facility but also to general remarketing risk. Due to the turmoil in the EU and uncertainty in the macroeconomic environment, VRDO issuers are exposed to potential market disruptions which could impede successful remarketings. A failed remarketing and draw on a credit facility can result in accelerated amortization and elevated interest cost pursuant to the terms of the support facility. These risks make fixed rate debt a more attractive option for many issuers, particularly in light of today's historically low long-term interest rates. Issuers who would like a variable rate component in their capital structures have, in some cases, entered into direct purchase arrangements with banks where they are not exposed to the credit risk of the bank or subject to remarketing risk. While there is rollover risk at maturity, direct loans do not expose borrowers to the ongoing remarketing risk found in VRDO structures.

The low rate environment is also an incentive for issuers to issue fixed rate debt and lock in low long-term rates. For example, during the first half of the year a general obligation issuer with a Aa2 rating could lock in a fixed rate between 3.60% and 4.08% for a bond with a 20 year maturity[3]. While this rate is significantly more than the below 1% all- in rates currently paid by highly rated issuers on bank-supported VRDOs, it is still extremely low from an historical perspective. As evidenced by the large jump in fixed rate issuance in 2012, many issuers are taking advantage of these attractive rates.

With the relatively heavy pipeline of expiring bank facilities in the next year and a half, banks will have the opportunity to reevaluate their role as credit and liquidity providers. New capital requirements under Basel III may make support facility commitments less attractive. Banks' ongoing reassessment of all of their lines of business through the lens of their country's evolving regulatory regime will continue to shape how they allocate their capital.

Due to a confluence of factors, including the low rate environment, a smaller universe of P-1 rated bank facility providers, and increase in direct bank loans, we do not see any catalyst that would materially increase issuance of bank-supported VRDOs in the second half of this year or through the start of 2013.

Bank Support Provider Landscape Changing as Bank Sector Challenges Persist

In light of persistent challenges to the banking sector, last February we placed a large number of banks that provide letters of credit and liquidity facilities in support of municipal market VRDOs under review for downgrade. Following these reviews we downgraded many VRDO credit and liquidity support providers in late June. With these rating actions, the universe of Moody's rated VRDOs supported by banks rated P-2 or lower quadrupled. As of July, banks rated P-2 or lower supported one-fifth of VRDOs that we rate. We anticipate this share will decrease throughout 2012 as some issuers look to substitute with higher rated banks or refinance their VRDOs with debt structures that do not require credit or liquidity support.

The table on the following page lists our current ratings of LOC and SBPA providers and the rating at the start of the year. Banks whose long-term and short-term rating changed are shaded in dark gray. Those that only experienced changes to their long-term ratings are shaded in light gray. We downgraded almost half of the banks listed in Figure 3 between January and August of 2012. See Figure 3.

3 Range of rates derived from the Bond Buyer Index (20 Year/General Obligation).

FIGURE 3

Bank Facility Provider Ratings in January and in August of 2012

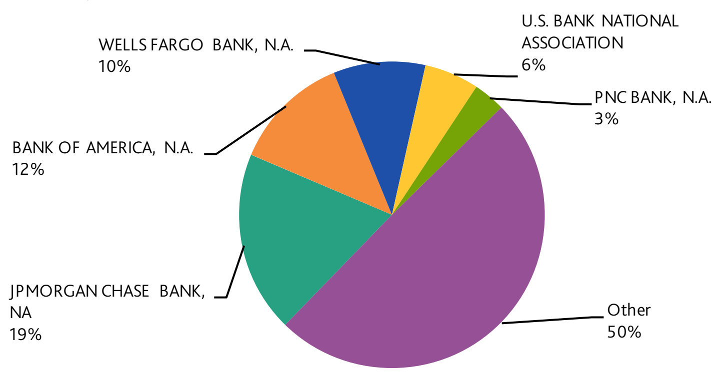
	January		Current*	
Bank Facility Support Provider	Long-Term Rating	Short-Term Rating	Long-Term Rating	Short-Term Rating
Allied Irish Banks	Ba3	NP	Ba3	NP
Associated Bank, N.A.	A3	P-2	A3	P-2
Banco Bilbao Vizcaya Argentaria, S.A.	Aa3	P-1	Baa3 (R-Downgrade)	P-3 (R-Downgrade)
Banco Santander	Aa3	P-1	Baa2 (R- Downgrade)	P-2 (R-Downgrade)
Bank of America, N.A.	A2	P-1	A3	P-2
Bank of Montreal	Aa2	P-1	Aa2	P-1
Bank of New York	Aaa (R-Downgrade)	P-1	Aa1	P-1
Bank of Nova Scotia	Aa1	P-1	Aa1	P-1
Bank of Tokyo Mitsubishi UFJ	Aa3	P-1	Aa3	P-1
Bank of the West	A2	P-1	A2	P-1
Barclays Bank	Aa3	P-1	A2	P-1
Bayerische Landesbank	Baa1	P-2	Baa1	P-2
Bayerische Landesbank (guaranteed)	Aaa	P-1	Aaa	P-1
BMO Harris Bank, N.A.	A1	P-1	A1	P-1
BNP Paribas	Aa3	P-1	A2	P-1
Branch Banking and Trust Company	A1	P-1	A1	P-1
Citibank, N.A.	A1	P-1	A3	P-2
Citizens Bank of Pennsylania	A2	P-1	A3	P-2
Comerica Bank	A1 (R-Downgrade)	P-1	A2	P-1
Compass Bank	A3	P-2	Baa2 (R-Downgrade)	P-2 (R-Downgrade)
Credit Suisse AG	Aa1 (R-Downgrade)	P-1	A1	P-1
Depfa Bank plc	Baa3	P-3	Baa3	P-3
Deutsche Bank	Aa3	P-1	A2	P-1
Dexia Credit Local	Baa1 (R-Downgrade)	P-2 (R-Downgrade)	Baa2	P-2
Federal Home Loan Banks	Aaa	P-1	Aaa	P-1
Fifth Third Bank	A3	P-2	A3	P-2
Fortis Bank, S.A./N.V.	A1	P-1	A2	P-1
Fulton Bank	A3	P-2	A3	P-2
HSBC Bank USA, N.A.	Aa3	P-1	A1	P-1
JPMorgan Chase Bank, N.A.	Aa1	P-1	Aa3	P-1
KBC Bank N.V.	A1	P-1	A3	P-2
Keybank, N.A.	A3	P-2	A3	P-2
Landesbank Baden-Wuerttemberg	A2	P-1	A3	P-2
Landesbank Baden-Wuerttemberg (guaranteed)	Aaa	P-1	Aaa	P-1
Landesbank Hessen-Thueringen	A1	P-1	A2	P-1
Landesbank Hessen-Thueringen (guaranteed)	Aa1	P-1	Aa1	P-1
Lloyds TSB Bank plc	A1 (R-Downgrade)	P-1	A2	P-1
Manufacturers and Traders Trust Company	A2	P-1	A2	P-1
Mizuho Corporate Bank	A1	P-1	A1	P-1
Morgan Stanley Bank, N.A.	A1	P-1	A3	P-2
Northern Trust Company	Aa3	P-1	Aa3	P-1
PNC Bank, N.A.	A2	P-1	A2	P-1
Rabobank Nederland	Aaa	P-1	Aa2	P-1
RBS Citizens, N.A.	A2	P-1	A3	P-2
Regions Bank	Ba2	NP	Ba2	NP
Royal Bank of Canada	Aa1	P-1	Aa3	P-1
Royal Bank of Scotland	A2	P-1	A3	P-2
Societe Generale	A1	P-1	A2	P-1
Sovereign Bank	A2	P-1	Baa1 (R-Downgrade)	P-2 (R-Downgrade)
State Street Bank and Trust Company	Aa2	P-1	Aa2	P-1
Sumitomo Mitsui Banking Corporation	Aa3	P-1	Aa3	P-1
Suntrust Bank	A3	P-2	A3	P-2
TD Bank, N.A.	Aa2	P-1	Aa2	P-1
Toronto Dominion Bank	Aaa	P-1	Aaa	P-1
Union Bank, N.A.	A2	P-1	A2	P-1
US Bank National Association	Aa2	P-1	Aa2	P-1
Wells Fargo Bank, N.A.	Aa3	P-1	Aa3	P-1
WestLB AG	A3 (R-Uncertain)	P-2 (Uncertain)	A3 (R-Downgrade)	P-2 (R-Downgrade)
WestLB AG (guaranteed)	Aa1	P-1	Aa1	P-1

*As of August 8, 2012

The largest providers of municipal VRDO support facilities whose short-term ratings were downgraded during the first half of the year are Bank of America, N.A. and Citibank, N.A. Many issuers substituted out of these banks in the months following the initiation of the review in February of this year. Moody's rated VRDOs supported by Bank of America LOCs and SBPAs dropped by 14% from the beginning of the year to July. As of the end of June, approximately 500 Moody's rated issuers had variable rate debt supported by P-2 rated banks.[4] We expect to see further support facility substitutions away from banks no longer rated in the top short-term category.

Despite significant refinancing and support facility substitution activity, the top 5 providers have remained unchanged since the beginning of the year. Market share continues to be heavily concentrated among the top three providers: JPMorgan Chase Bank, N.A. (Aa3/P-1), Bank of America, N.A. (A3/P-2), and Wells Fargo Bank, N.A. (Aa3/P-1). See Figure 4.

FIGURE 4
Top 5 Bank Facility Providers Comprise Half the Market
Moody's rated transactions only



With many issuers opting to replace P-2 rated providers with higher rated banks, a reshuffling of the top bank facility providers is possible over the next year.

In response to the European sovereign debt crisis and challenges faced by some EU based banks, issuers also trimmed exposure to European bank facility support providers. We reported in February that approximately $44 billion VRDOs that we rate were supported by credit and or liquidity facilities provided by European banks.[5] Halfway through this year, issuers have reduced this exposure by 18% or $8 billion. The overwhelming majority of European bank VRDO support facilities are provided by banks based in France, Germany and the UK, three of the strongest European economies.

Amid the contracting VRDO market, one country whose banks have exhibited growth in the LOC and liquidity facility space is Japan. While Bank of Tokyo-Mitsubishi UFJ, Ltd. (Aa3/P-1, stable), Sumitomo Mitsui Banking Corporation (Aa3/P-1, stable) and Mizuho Corporate Bank, Ltd. (A1/P-1, stable) support only 3% of the portfolio of Moody's rated VRDOs, in the first 6 months of 2012 these banks in the aggregate saw an 18% increase in the amount of VRDOs they support. The reduced universe of P-1 rated banks, continued difficulties for European banks, and diversification requirements of SEC rule 2A-7, which limit money market funds' concentrations of exposure to any

4 See Announcement, *Moody's: Few rating changes expected for US muni issuers with variable rate debt due to bank downgrades*, published June 22, 2012.

5 See Special Comment, *US Public Finance Sector Has Limited Exposure to European Debt Crisis*, published February 6, 2012.

support facility provider, provide an opportunity for Japanese banks to support a larger portion of the VRDO market.

Basel III Liquidity Coverage Requirement Affecting Support Facility Market

As the 2015 implementation of the 100% liquidity coverage requirement included in Basel III approaches, we expect banks to alter their lending practices and to see innovations in VRDO structures. Some VRDO support providers have indicated that they expect regulators to allow them to consider issuers' obligations to repay drawn support facilities ("Bank Bonds") to be "highly liquid" for purposes of calculating their liquidity coverage ratio, making support facilities neutral with respect to this ratio. Others have indicated that they expect to be required to have unrelated highly liquid assets available to offset any VRDO support facilities that can be drawn within 30 days. Interpretations of this rule, reserve requirements, and the availability and pricing of support facilities may vary from one regulatory jurisdiction to another.

In anticipation of implementation of the 100% liquidity coverage requirement we are seeing provisions in LOCs and SBPAs allowing banks to adjust fees to make up for the cost of meeting future capital and liquidity requirements. There have also been innovations in structuring VRDOs. These include incorporating a rate mode in which the issuer can trigger a tender payable only from remarketing proceeds 30 or more days prior to the tender thereby keeping any draw on the bank's liquidity more than 30-days out. In this structure, as long as the remarketing does not fail the bank's liquidity commitment stays outside of the bank's calculation of required liquidity coverage. As implementation of the liquidity coverage requirement approaches over the next 2 years, we expect interpretation of the rule and associated structural innovations to be increasingly important considerations in the pricing and availability of credit and liquidity support for VRDOs.

VRDO New Issuance Concentrated Among Larger Deals

New issuance of rated bank-supported VRDOs in the 1st half of 2012 was concentrated in large transactions with underlying obligors rated in the A and Aa categories. Average transaction size increased 20% over last year to $60 million. This trend reflects selection of less complex debt structures by smaller and lower rated issuers as well as preference by bank support providers for larger transactions with higher rated obligors .

Of the $3.2 billion of newly issued bank-supported Moody's rated VRDBs in the 1st half, about 80% of the proceeds were used for new projects rather than to refund previous issuance. This contrasts to the overall municipal market where slightly less than half of the issuance represented new money. One of the largest issuances of bank-supported variable rate debt was from New York City (Aa2/Stable) with a $685 million April issuance of general obligation bonds supported by letters of credit provided by PNC Bank National Association, Citibank, N.A., Mizuho Corporate Bank, Ltd. and Bank of Tokyo – Mitsubishi UFJ, Ltd.

Market Continues to Work Its Way Through Moderate Volume of Expiring Bank Facilities

Letters of credit and liquidity facilities supporting nearly $47 billion of VRDOs will expire in the 2nd half of 2012, with another $68 billion to follow in 2013.[6] The expirations in the balance of 2012 represent almost 17% of the VRDO market. Although the volume of expiring facilities in 2012 is dramatically less than the unprecedented wave of facilities that came up for renewal in late 2010 and 2011, the pool of banks providing bank facilities is smaller and concerns about the macro environment, especially in Europe, are increasingly acute. Additionally, with the growth in the universe of debt supported by P-2 rated banks, issuers with expiring facilities may be competing with issuers who are looking for replacements from higher rated banks unrelated to expiration of existing support. As such, the market may be seeking new support facilities for up to $85 billion over the next six months. However, some issuers will choose to continue with a downgraded-2 rated support provider if their VRDO rates remain relatively attractive and have no material impact on their cash flows.

Despite these challenges, halfway through this year, issuers have continued to find solutions to expiring letters of credit and liquidity facilities. We rated almost 750 support facility extensions and 200 substitutions in the first half of the year. A portion of these substitutions involved terminations of existing facilities well in advance of their expiration dates in response to downgrades (or reviews for downgrade) of the support provider being replaced. Approximately 15% of the extensions were of facilities provided by banks whose short-term rating was on review for downgrade.

The average term of extended or substitute facilities was 1.9 years, down 5 months from the average term of 2 1/3 years we observed in the 3rd quarter of 2011. This reduction reflects some banks' reluctance to provide facilities that extend beyond the 2015 implementation date of the 100% liquidity coverage requirement, the key provision of Basel III affecting the VRDO market.

As we have seen in previous quarters, a portion of the extensions were for very short terms. Extensions for 6 months or less accounted for 12% of extensions. One-third of these shorter than normal extensions involved banks that were downgraded to P-2 or were under review for downgrade at the time of the extension. In many instances these short extensions represent an accommodation by the existing support facility provider while the issuer arranges a substitute facility or alternative financing. In most cases banks prefer providing a short extension while the issuer explores alternatives to funding a draw on the support facility at expiration.

Interest Rates Adjust to Changing Banking Landscape

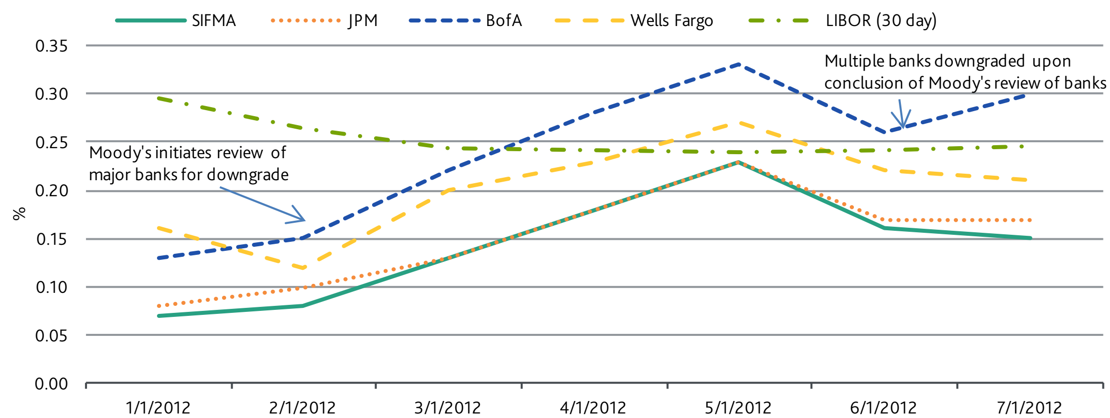
In February of 2012, we placed most of the large bank facility providers active in the municipal VRDO market under review for downgrade. At the end of June, we concluded the review with widespread downgrades of long-term ratings as well as the short-term ratings of some significant support providers. As evidenced by upward pressure on the SIFMA index and the weekly reset rates on issues supported by some of the largest banks on an absolute basis and relative to 1-month LIBOR over the last several months, municipal investors adjusted their exposure to many of these support providers as they were reviewed and downgraded. As expected, resets on issues supported by stronger banks such as Wells Fargo and JPMorgan tracked the SIFMA index more closely than major banks whose short-term ratings were downgraded. See Figure 5.

6 *US Municipal VRDO Update, June 2012* published by the Securities Industry and Financial Markets Association.

FIGURE 5

VRDB Reset Rates Rise In 2012 But Far Below Historical Norms

Median Weekly VRDB Reset Rates by Bank Vs. SIFMA & LIBOR (30 -day)



Direct Purchases by Banks Increasing

Banks have recently shown increasing interest in making direct loans to municipal borrowers. Over the last five years, the municipal market has grown 8% to $3.73 trillion while banks' holdings of municipal securities and loans have grown 47% to $300.7 billion. This increase in municipal holdings includes direct loans to municipalities by banks. See Figure 6.

FIGURE 6

Amount of Municipal Debt by Investor Type

$'s in billions

	Total Municipal Market	Individuals	Mutual Funds	Banking Institutions*	Insurance Companies	Other
2007	$3,448	$1,725	$935	$200	$413	$121
2012 (1st Qtr)	$3,732	$1,847	$942	$301	$455	$143
5 yr Growth in Holdings	8%	7%	1%	47%	10%	18%

*Excludes brokers and dealers

Source: SIFMA & Federal Reserve (Flow of Funds Accounts of the US, 1st Qtr 2012)

Direct purchases of municipal debt have benefits both to issuers and the banks. As banks are investing directly and not acting in the capacity of support facility providers, issuers are not subject to the credit risk of the bank. Issuers not only lower their cost of funds but are also insulated from remarketing risk associated with market disruptions. Banks often find this arrangement attractive because it eliminates contingent funding risk while replacing taxable fee income with tax-exempt interest income. The table above illustrates how US banks have ramped up their ownership of municipal debt over the last five years relative to not only other types of investors but compared to the growth of the municipal market.

Looking Ahead

Through the balance of 2012 and into 2013 we expect the evolving regulatory landscape, historically low long-term fixed rates, challenges faced by the banking sector and reassessment by issuers and investors of the risks and rewards associated with variable rate demand debt to continue to re-shape the VRDO market. We expect ongoing downward pressure on outstanding balances of bank-supported VRDOs as issuers take advantage of low long-term fixed rates and banks' current appetite for direct loans. At the same time, we expect variable rate demand debt to remain an important financing vehicle for municipal obligors, particularly those with credit profiles that will hold up against credit pressure on support providers, facility renewals and other risks associated with VRDOs. We will continue to monitor the evolution of the market for VRDOs and other bank-supported short-term and variable rate debt structures.

Moody's Related Research

Methodologies and Rating Implementation Guidance Publications:

» Moody's Methodology for Rating U.S. Public Finance Transactions Based on the Credit Substitution Approach, August 2009 (117841)

» Variable Rate Instruments Supported by Third-Party Liquidity Providers Immediate Termination or Suspension Events Section, January 2010 (122436)

» Variable Rate Instruments Supported by Third-Party Liquidity Providers, November 2006 (100230)

Outlooks:

» Bank Credit Pressures and Regulatory Changes Challenge the Market for Variable Rate Demand Bonds, April 2012 (140813)

» Outlook for U.S. State Governments Remains Negative in 2012, February 2012 (139230)

» Outlook for U.S. Local Governments Remains Negative in 2012, February 2012 (139418)

Special Comments:

» Potential Risks of Variable Rate Debt and Interest Rate Swaps for U.S. State and Local Governments are Heightened by Economic and Financial Crisis, October 2009 (120182)

» U.S. Public Finance Borrowers Face Increasing Renewal Risk of Bank Facilities, September 2010 (127809)

» US Municipal Variable Rate Market: Review of 2010 Market Trends and Expected Developments in 2011, March 2011 (131315)

» Money Market Funds Continue to Shrink Exposure to European Banks, December 2011 (137105)

» US Public Finance Sector Has Limited Direct Exposure to European Debt Crisis, February 2012 (139552)

» Debt Drivers 2012: Credit Factors Affecting US Public Finance Bond Issuance, March 2012 (140274)

Sector Comment:

» Plan To Implement Basel III Is Credit Positive for Banks, January 2012 (139192)

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» US Muni Sector Keeping Pace With Bank Facility Expirations, November 2011 (137095)

» US Muni Sector Skillfully Navigating Deluge of Bank Facility Expirations, August 2011 (134705)

» So Far So Good: Market Absorbing High Volume of U.S. Public Finance Sector Bank facility Expirations, May 2011 (133001)

» U.S. Municipal Bond Defaults and Recoveries, 1970-2011, March 2012 (140114)

» The Great Credit Shift: US Public Finance Post Crisis, September 2011 (136136)

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