June 30, 2014

Response to questions posed by the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation and the Board of Governors of the Federal Reserve (Docket ID OCC-2013-0016)

The proposed Liquidity Coverage Ratio ("LCR") published jointly by the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation and the Board of Governors of the Federal Reserve System (collectively, the "Agencies") (Docket ID OCC-2013-0016-0001) is intended to implement the Basel III LCR initiative in the U.S. Under the current proposal, municipal securities are not expected to be treated as High Quality Liquid Assets ("HQLA"). This exclusion would be contrary to the Basel Committee on Banking Supervision's suggested treatment of marketable debt issued by "public sector entities," including state and local governments. Investment grade U.S. municipal securities satisfy the criteria that the Agencies have established for HQLA eligibility. We therefore urge the Agencies to make investment grade municipal securities **eligible** for classification as Level 2A HQLA in the final LCR rule.

This document provides responses to the questions posed to us by the Agencies regarding municipal securities in the context of the LCR proposal.

1. What do the associations believe is the time to liquidation on a $30 - $50 billion muni portfolio with minimal market impact? Please provide data to illustrate.

Although the municipal market lacks an historic reference which could be used to substantiate the belief that a $30bn portfolio could be liquidated over a 21 business day horizon, we can offer reasonable expectations based upon the market's average daily trading volumes and experience during past periods of market stress.

In 2013 the average daily trading volume on all fixed-rate, investment grade municipal securities, the universe of securities that we have suggested should be HQLA-eligible, was $6.35bn a day.[1] Historically we also have seen that, in demonstration of right-way risk, when the prices of municipal bonds drop, the market becomes more liquid: trading volumes increase when yields rise and prices fall. During each of the 50 largest short-term (30 or fewer days) municipal market sell-offs of the last 11 years, yields have

[1] Transaction volume based on MSRB-reported trade data for all fixed rate, investment grade, non-derivative municipal securities, as estimated by Citi, for the period from January through December of 2013.

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increased by less than 150 bps.[2] We believe that this not only represents *minimal market impact* but is also consistent with what the Agencies have proposed for other Level 2A-eligible assets.[3] During each of these stressed periods, the average daily trading volume increased, on average, by 23 percent relative to the one and three months prior.[4] If we consider then the increase in trading realized during periods of stress, the appropriate average daily transaction volume that should be used when considering the hypothetical portfolio liquidation would be approximately $7.81 billion per day.

We should then make a series of reasonable assumptions about the amount of trading volume attributable to the liquidation. If we exclude all transactions that are sales of bonds, if we exclude three quarters of all dealer purchases, and if we exclude half of all customer purchases, considering historic trading compositions, we could conclude that it would take approximately 13 business days to liquidate the hypothetical $30 billion portfolio and 22 business days to liquidate a $50 billion portfolio (which is approximately $13 billion larger than the largest municipal securities investment portfolio currently held by a bank). [5, 6]

If we wanted to more accurately reflect the sale of a hypothetical *bank* portfolio, we could also assume that the portfolio was of similar composition and historic trading magnitude as that of one of the largest bank's municipal investment portfolios, Citi's for example, with an average issuer size outstanding of $4 billion and an average daily trading volume that is 23 percent higher than the overal market average.[7] We would then conclude that it would take a little over 2 weeks to liquidate a $30 billion portfolio and 18 business days to liquidate a $50 billion portfolio.

It is important to note that the above depicts solely the market's ability to generate liquidity through sales. As the Agencies have discussed in their proposal, requisite liquidity could also be raised through secured borrowing. The municipal market currently has close to $450 billion of secured funding capacity,[8] which we would expect could also be utilized during a period of stress and which would significantly expedite the time needed to generate liquidity from the hypothetical municipal securities portfolio.

Finally, it seems relevant to reoffer the anecdotal experience provided by William W. Fish, retired Chief Investment Officer at AIG who oversaw a $64 billion municipal securities portfolio. In a comment letter that he submitted to the Agencies, Mr. Fish discusses the liquidity of the municipal market during the 4th quarter of 2008 when AIG had unusually high liquidity needs. He notes, "Fortunately, the high-grade

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[2] Reference Table 2 in the letter from Citigroup Global Markets Inc., dated April 9, 2014 and posted at www.regulations.gov under docket ID: OCC-2013-0016-0123 for expanded footnote.

[3] In order to classify a foreign sovereign debt security as a Level 2A liquid asset, the Agencies have proposed to require that the market price on that bond (or equivalent bond of the same issuer) did not decline by more than 10 percent during a 30 calendar day period of significant stress (20 percent for Level 2B-eligible corporate debt).

[4] Reference Table 2 in the letter from Citigroup Global Markets Inc, dated April 9, 2014 and posted at www.regulations.gov under docket ID: OCC-2013-0016-0123 for expanded footnote.

[5] According to the March 31, 2014 FFIEC Call Reports available at https://cdr.ffiec.gov/public/, the largest municipal securities portfolio is approximately $37 billion.

[6] In 2013, 25 percent of the fixed rate, investment grade, non-derivative municipal securities trading volume, as estimated by Citi based on MSRB-reported trade data, represented customer sales, 32 percent represented dealer to dealer trades and 43 percent represented customer buys.

[7] Citi calculation using Citi's core municipal investment portfolio and MSRB reported trade data for the past year.

[8] Reference Table 3 in the Letter from Citigroup Global Markets Inc, dated April 9, 2014 and posted at www.regulations.gov under docket ID: OCC-2013-0016-0123 for expanded footnote.

municipal market was continuing to provide liquidity without transactions at fire-sale prices, when other markets, including corporates, were not."[9]

2. Please discuss the relationship between muni credit quality and liquidity.

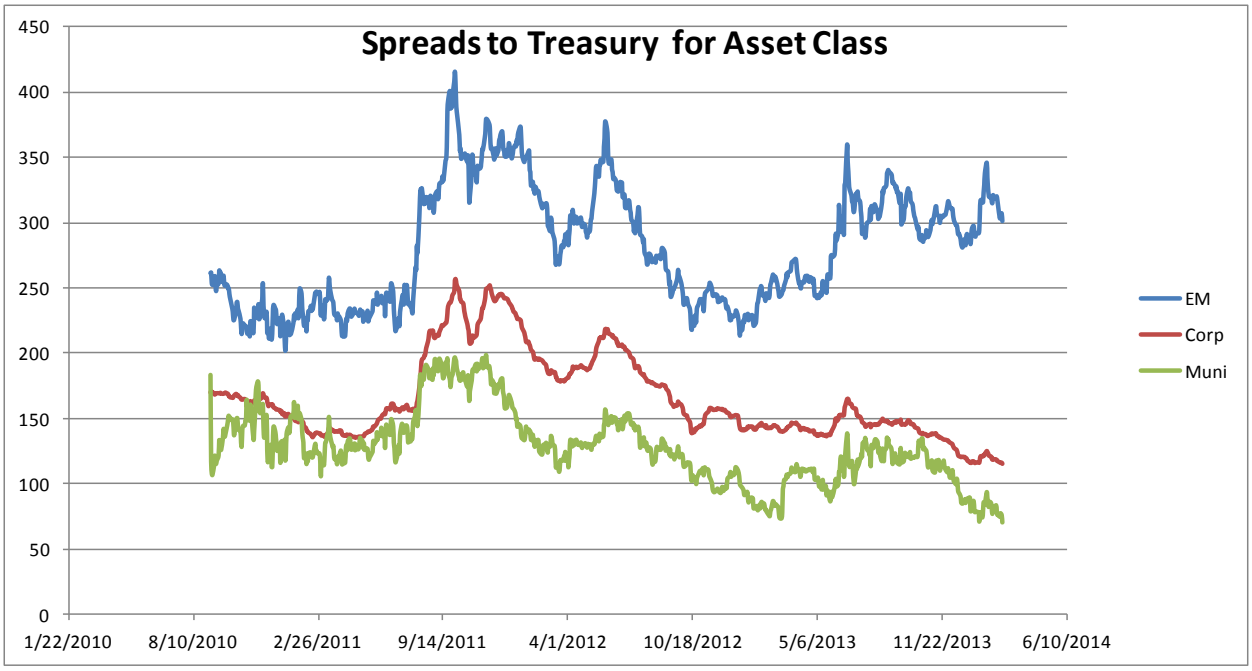
In the municipal securities market, credit quality and liquidity are generally positively correlated. As the Associations had discussed in our original comments on the proposed U.S. Liquidity Coverage Ratio, we believe that investment grade municipal securities generally satisfy the Agencies' proposed HQLA criteria and often provide greater liquidity than non-investment grade securities.

We believe that this is due, at least in part, to the existence of a large and stable core buyer base for high credit quality municipal securities. Some of the largest investors in the municipal market have restrictions on the credit composition of their portfolios. Many mutual funds, pursuant to their investment guidelines, have limits on how much they may invest in below-investment grade securities. Money market funds, pursuant to SEC Rule 2a-7, have similar credit quality restrictions. U.S. banks, in satisfaction of safety and soundness regulation, also generally exhibit greater demand for investment grade municipal securities.

In order to demonstrate the relative liquidity, or sale-ability, of investment grade municipal securities, we could examine pricing performance in the municipal market relative to credit in a stress scenario. If we compared a higher-rated municipal security to a lower-rated municipal security during the stressed period, four patterns would emerge that are directly related to the relationship between credit quality and liquidity. First, credit spreads would widen out, so that the drop in price for lower-rated credits would be greater than the drop for higher-rated credits by a substantial amount. Second, bid-offer spreads among lower-rated credits would widen out more than spreads on higher-rated credits, so the price drop noted above for lower-rated credits would be magnified. Third, the capacity of the market to absorb lower-rated securities at a given price would deteriorate relative to the capacity to absorb higher-rated bonds. This, of course, would affect liquidity as well by reducing the volume of lower-rated credits that could be absorbed without causing liquidity to deteriorate further—demand would become more price-elastic for lower-rated credits relative to that for higher-rated credits. Finally, in a stress scenario, higher credit quality fixed income securities tend to benefit from flight-to-quality demand, with yields declining along with Treasury yields, even as yields on lower credit quality paper tend to increase. This pattern, when it occurs, enhances the widening of credit spreads noted above.

In the graph below we compare the spread performance of municipal securities to the spread performance of other proposed HQLA-eligible risk assets. Specifically, the graph compares the spread performance of combined investment-grade and sub-investment grade/unrated municipal securities to the spread performance of investment grade corporate bonds and emerging market sovereign debt over the last three years. As further demonstration of both the positive relationship between credit quality and liquidity and the higher concentration of high credit quality issuers in the municipal market, we see that municipal securities, even inclusive of some non-investment grade and non-rated bonds, not only demonstrate perceived overall lower credit risk than other assets, but also exhibit stronger performance during many stressed periods.

[9] Letter from William W. Fish, dated January 31, 2014 and posted at www.regulations.gov under docket ID: OCC-2013-0016-0066.



3. The muni market is dominated by buy-and-hold investors. Please discuss the security characteristics (credit quality, issuer type, duration, etc.) of the most liquid municipal CUSIPs in the associations' view.

There are several asset and market-based security characteristics that should be considered when evaluating the liquidity of any given security, including credit quality, source of repayment, position size, CUSIP size, issuer size, etc. As discussed above, we believe that issuer credit quality is positively correlated to liquidity. While there may also be perceived correlations between the source of repayment (general obligation versus revenue obligation) or the type of municipal debt (State versus local) and liquidity, we believe that it is actually the average credit quality of the issuers in each of these categories of debt that is primarily determinative of liquidity. Moreover, as we will discuss in greater detail below, we believe that the most indicative liquidity characteristic is size. The size of the issuer's total debt outstanding, the size of the given CUSIP and the size of the position being traded are all indicative. In our experience, however, the **issuer's total amount of debt outstanding is** the most determinative among these for municipal securities.

Considering historic trading volume as one measure of liquidity, in demonstration of the above, as reported by the Municipal Securities Rulemaking Board in their *2013 Fact Book*, of the top 50 most active fixed rate municipal CUSIPs traded in 2013 by number of trades, most issuers had aggregate issuer debt outstanding in excess of $1 billion. The minimum amount of issuer debt outstanding by any of these top 50 CUSIPS was approximately $300 million of aggregate debt.

By contrast, we do not generally believe that duration is an indicator of liquidity. Many municipal securities tend to be issued as serial maturities, or a series of sequential maturity bonds that provide issuers with level debt service and emulate an amortizing loan that also satisfies investor demand; there are very few bullet maturities in the municipal market. Therefore, there tend to be many relatively smaller individual maturities of municipal bonds than in other sectors of the debt markets. Large

municipal bond issuers may have many hundreds of bond maturities outstanding at various points on the yield curve.

In a generally well-matched juxtaposition, the municipal investor base includes a healthy mix of retail and institutional investors who exhibit appetites at various points on the yield curve. Money market funds, short-term bond funds, intermediate funds and property and casualty insurance companies typically invest in short to intermediate duration assets. Mutual funds (closed and open-ended), banks and life insurance companies typically invest in longer duration assets. As a result there is demand across the yield curve from investors seeking assets based on their own needs. Thus, with respect to duration, the supply-demand mix in the municipal market is generally balanced, leading to relatively equal liquidity for debt of varying maturities.

The table below depicts the daily average trading volume of all fixed rate municipal securities according to the remaining time to maturity. As shown, longer tenor bonds have exhibited higher daily average trading volumes relative to the amount of debt outstanding than shorter tenor bonds. Historic trading volume is, however, only one measure of liquidity, which, in isolation, may not be demonstrative, as we believe that it is not in this instance. As discussed above, it is our experience that the diversity of the buyer base in the municipal market works to create generally level liquidity along the yield curve. Thus we do not consider duration a broad indicator of liquidity.

Daily average trading volume relative to outstanding by remaining maturity for fixed rate securities, 2013[10]

Maturity	Par Outstanding	% of Market	Daily Avg Trdg Vol	% of Total Trading	Daily Avg Trading as % Par Outstanding
0 to 5	$687,991,058,000	25%	$783,000,000	11.29%	0.11%
5 to 10	$808,861,129,000	22%	$1,201,000,000	17.31%	0.20%
10 to 15	$483,215,503,000	17%	$1,262,000,000	18.19%	0.26%
more than 15	$995,504,454,000	36%	$3,691,000,000	53.21%	0.37%
	$2,775,372,144,000	**100%**	**$6,937,000,000**	**100.00%**	

4. Please offer thoughts on whether muni liquidity is a CUSIP-specific decision only or if certain types of munis are always deemed more liquid (for example, GOs, GOs from certain cities, or certain revenue bond projects).

We believe that the investment grade obligations of State and local governments and government agencies and authorities are generally liquid. In 2013 the average daily trading volume on all fixed-rate, investment grade municipal securities, the universe of securities that we have suggested should be HQLA-eligible, was $6.35 billion per day.[11] This equates to an average of 0.22 percent of the total par outstanding traded each day,[12] while the investment grade, nonfinancial corporate debt market trades

[10] Municipal Securities Rulemaking Board, "2013 Fact Book."

[11] Transaction volume based on MSRB-reported trade data for all fixed rate, investment grade, non-derivative municipal securities, as estimated by Citi, for the period from January through December of 2013.

[12] All fixed rate, investment grade municipal securities, as estimated by Citi, based on data from JJ Kenny and Bloomberg LP as of November 2013.

approximately 0.13 percent of its total outstanding par each day[13] and the GSE market trades roughly 0.30 percent of its total outstanding par each day.[14]

As the Agencies' use of the term *liquid and readily marketable* suggests, however, liquidity is most accurately **assessed on an issuer by issuer basis.** We have, therefore, recommended that the Agencies, in a manner identical to that which has been proposed for other HQLA-eligible assets, make municipal securities that are investment grade under 12 CFR part 1 **eligible** for inclusion as Level 2A High Quality Liquid Assets. As has been proposed for both GSE securities and corporate bonds, in order to classify any *eligible* municipal security as HQLA, we also suggest that a banking entity be additionally required to declare that the given security is ***liquid and readily-marketable.***

In order, then, to determine whether a *given* security is liquid and readily marketable, and hence, whether it should be included in its stock of HQLA, a bank should consider several asset and market-based characteristics of the given security, including, as discussed in response to questions 2 and 3 above, credit quality, position size, CUSIP size, issuer size, source of repayment, etc. Given the high concentration of high credit quality issuers in the municipal market, which creates a high degree of substitutability, it has been our experience that the most indicative among these for municipal securities is the **issuer's total amount of debt outstanding**.

Considering historic trading volume as **one** measure, in order then to evaluate the liquidity of a given security, the bank could, for example, consider the trading volume of an appropriate subset of the fixed rate, investment grade municipal securities market. The securities of municipal issuers that have more than $10 billion of fixed rate investment grade debt outstanding, for example, trade, on average, 0.30 percent of their outstanding par each day. The securities of municipal issuers that have between $1 billion and $10 billion of fixed rate, investment grade debt outstanding trade, on average, 0.22 percent of their outstanding par each day. The securities of municipal issuers that have less than $100 million of fixed rate, investment grade debt outstanding trade, on average, 0.18 percent of their outstanding par each day.

Alternatively, the bank could consider the trading volume of the appropriate subset of fixed rate, investment grade municipal securities, based on total issuer debt outstanding, in light of the amount of dispersion that exists. To do this, the bank would first select an appropriate threshold, such as an average daily trading volume of 0.15 percent of the outstanding par per day. The same analysis would then show that 12 percent of issuers that have more than $10 billion of fixed rate, investment grade municipal debt outstanding have average daily trading volumes that fall below this threshold; 34 percent of issuers that have between $1 billion and $10 billion of fixed rate, investment grade debt outstanding have trading volumes that fall below this threshold; 74 percent of issuers that have less than $100 million of fixed rate, investment grade debt outstanding have average daily trading volumes that fall below this threshold. Clearly this would demonstrate a significant dispersion in trading volume and, presumably, liquidity.

While we view historical trading volume as an important indicator of liquidity, however, we do not believe that it is, in isolation, necessarily predictive of future liquidity. Consider, for example, the largest single exposure that Citi holds in its core municipal investment portfolio, the State of Texas. Despite

[13] Reference Table 3 in the Letter from Citigroup Global Markets Inc,, dated December 27, 2013 and posted at www.regulations.gov under docket ID: OCC-2013-0016-0004 for expanded footnote.
[14] Ibid.

being a AAA-rated issuer that has more than $15 billion of fixed rate, investment grade debt outstanding, the securities issued by the State only trade, on average, 0.13 percent of their par outstanding each day. By comparison, the total fixed rate, investment grade municipal securities market trades, on average, 0.22 percent of its outstanding par each day and the fixed rate, investment grade municipal securities of the issuers that Citi holds in its municipal investment portfolio trade, on average, 0.27 percent of their outstanding par each day. The reason for this is that the debt of the State of Texas is so highly sought-after that many of the issuer's securities are purchased into the long-term buy-and-hold portfolios of individuals, banks and bond funds. Thus despite the "lower" trading volumes of the State's securities, no market practitioner would argue that the debt of the State is not liquid and readily marketable; rather, these securities would widely be considered among the most saleable in the market.

As we believe this so clearly demonstrates, many factors impact the liquidity, or perhaps more appropriately *sale-ability*, of any security. While transaction volume is often an indicative variable, it is not necessarily solely predictive of prospective liquidity. Rather than over-emphasize the importance of one quantitative metric, prior trading activity, in the regulatory determination of expected sale-ability of an asset, we instead suggest that the *liquid and readily-marketable* determination be required to be made in a manner substantially similar to the way that banks must make Investment Grade determinations pursuant to 12 CFPR part 1 or any credit determination for safety and soundness regulation purposes: with respect to any *eligible* security, the bank should consider all factors that they believe are determinative of future sale-ability in order to make an informed subjective and auditable determination. We believe that this approach will be the most effective in identifying the assets that are most likely to generate liquidity for the bank via sale or secured funding with little to no loss of value during a period of significant stress.

5. The agencies would appreciate data from the associations on the liquidity of the muni market, especially relative to other markets. If it is the associations' position that the muni market is as liquid as the equity markets, then please provide evidence of such. Because the liquidity of different muni issuances presumably varies depending on the issuer, it would be helpful if the associations could discuss the liquidity of specific issuances and not simply give a broad overview of the market.

Please reference the attached analysis for a comparison of the average daily trading volumes on the 50 largest investment-grade municipal issuers (based on par outstanding) versus the average daily trading volumes of the 50 largest non-financial investment-grade corporate issuers (based on par outstanding). As shown, the average daily transaction volumes of the largest municipal issuers are generally commensurate with the average daily transaction volumes of the largest corporate issuers.

Conclusion

We believe that Investment Grade municipal securities meet the Agencies' own criteria for HQLA-eligibility. If the final LCR rule objectively precludes all municipal securities from consideration in any category of HQLA, however, we would expect that, in normal markets, demand from U.S. banks for the asset class would be in some way diminished. More importantly, and more directly relevant to the periods of stress that the Agencies are concerned with, if a U.S. bank is LCR-constrained, a scenario which is most likely to occur during a period of financial market stress, that bank will not be able to provide any support, any marginal demand to the municipal securities market. Thus, the proposed exclusion will have an exacerbating effect on the market and on State and local government finance: periods of stress will be exaggerated by impaired demand stemming from regulatory constraint which will, in turn, induce additional market stress.

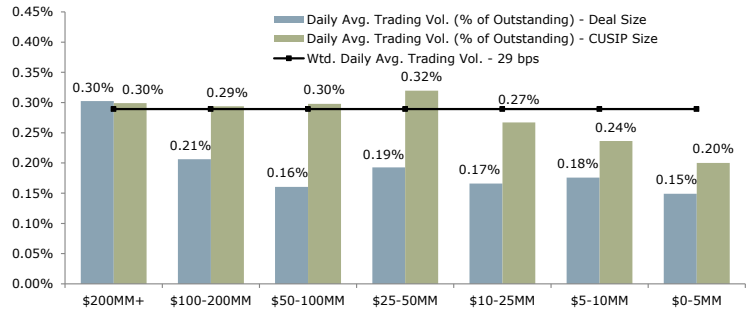
We therefore urge the Agencies to make Investment Grade municipal securities eligible for inclusion as Level 2A liquid assets. We further suggest that, with respect to any *eligible* security, the *liquid and readily-marketable* classification be made a subjective and auditable bank determination.

We appreciate the opportunity to provide these additional responses and we would be pleased to offer any additional information that would be helpful. If you have any questions or if we can provide any additional information, please contact Michael Decker at SIFMA at 202 962 7430 or mdecker@sifma.org or David Wagner at The Clearing House at 212 613 9883 or david.wagner@theclearinghouse.org.

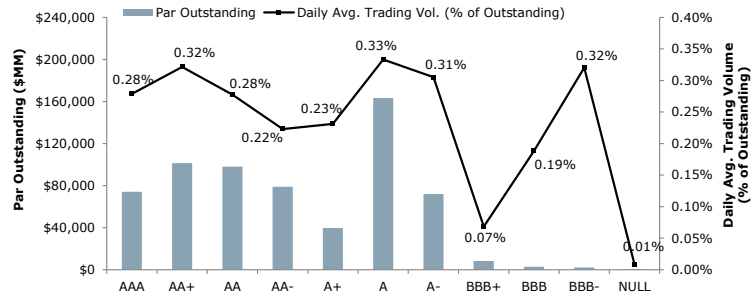
Trading Volume for Top 50 Municipal Bond Issuers

Issuer	# of CUSIPs	Par Outstanding	Annual Trading Volume	Daily Average Trading Volume	Daily Avg. Trading Volume as a % of Outstanding
CALIFORNIA ST	1,285	$73,397,825,000	$50,564,618,365	$200,653,247	0.27%
PUERTO RICO SALES TAX FING CORP SALES TAX REV	177	36,204,125,059	51,185,545,206	203,117,243	0.56%
NEW YORK N Y	2,146	35,732,383,125	30,259,561,100	120,077,623	0.34%
ILLINOIS ST	619	28,415,977,500	16,361,260,000	64,925,635	0.23%
NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	1,034	21,594,340,000	20,293,802,000	80,530,960	0.37%
NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS	390	20,503,437,500	18,660,086,001	74,047,960	0.36%
WASHINGTON ST	1,188	19,793,859,683	13,038,317,000	51,739,353	0.26%
NEW JERSEY ST TRANSN TR FD AUTH	271	19,695,205,000	13,536,990,500	53,718,216	0.27%
PORT AUTH N Y & N J	544	18,170,794,812	12,365,611,337	49,069,886	0.27%
METROPOLITAN TRANSN AUTH N Y REV	731	17,322,845,000	17,825,183,000	70,734,853	0.41%
NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	755	16,729,500,000	15,231,114,501	60,440,931	0.36%
MASSACHUSETTS ST	523	15,680,265,000	8,859,468,500	35,156,621	0.22%
TEXAS ST	1,191	15,030,394,000	4,948,448,667	19,636,701	0.13%
NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	2,389	13,226,040,000	7,610,038,000	30,198,563	0.23%
CONNECTICUT ST	704	12,976,685,000	7,467,017,000	29,631,020	0.23%
NEW JERSEY ECONOMIC DEV AUTH REV	477	12,017,588,000	10,624,570,000	42,160,992	0.35%
PENNSYLVANIA ST	345	11,471,835,000	9,149,812,000	36,308,778	0.32%
CALIFORNIA ST PUB WKS BRD LEASE REV	1,344	11,337,975,000	10,750,830,000	42,662,024	0.38%
UNIVERSITY CALIF REVS	370	10,553,670,000	9,937,382,000	39,434,056	0.37%
LOS ANGELES CALIF UNI SCH DIST	397	10,512,360,000	3,712,459,666	14,731,983	0.14%
ILLINOIS FIN AUTH REV	957	10,278,165,000	3,950,249,500	15,675,593	0.15%
NEW YORK ST URBAN DEV CORP REV	462	9,882,140,000	9,193,777,000	36,483,242	0.37%
NORTH TEX TWY AUTH REV	134	9,814,680,000	3,715,583,000	14,744,377	0.15%
CALIFORNIA HEALTH FACS FING AUTH REV	693	9,159,670,000	7,648,810,000	30,352,421	0.33%
GEORGIA ST	507	9,046,880,000	5,542,479,000	21,993,964	0.24%
FLORIDA ST BRD ED PUB ED	720	8,997,900,000	4,476,479,000	17,763,806	0.20%
NEW JERSEY ST TPK AUTH TPK REV	107	8,809,310,000	7,582,149,500	30,087,895	0.34%
CHICAGO ILL	489	8,366,223,000	6,870,783,000	27,265,012	0.33%
MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	758	8,078,060,000	2,659,031,000	10,551,710	0.13%
MARYLAND ST	393	7,992,295,000	8,653,195,000	34,338,075	0.43%
TRIBOROUGH BRDG & TUNL AUTH N Y REVS	344	7,418,820,000	5,917,986,000	23,484,071	0.32%
CHICAGO ILL O HARE INTL ARPT REV	371	7,194,925,000	3,653,523,668	14,498,110	0.20%
SAINT CLAIR CNTY ILL	35	7,123,862,000	24,185,000	95,972	0.00%
BAY AREA TOLL AUTH CALIF TOLL BRDG REV	98	7,100,645,000	5,028,216,000	19,953,238	0.28%
METROPOLITAN PIER & EXPOSITION AUTH ILL DEDICATE	104	7,049,325,000	2,306,810,000	9,154,008	0.13%
LOS ANGELES CALIF DEPT WTR & PWR REV	218	6,759,550,000	5,078,412,000	20,152,429	0.30%
CHICAGO ILL BRD ED	261	6,712,315,900	3,737,398,000	14,830,944	0.22%
PENNSYLVANIA ST TPK COMMN TPK REV	409	6,695,855,000	3,622,671,996	14,375,683	0.21%
WISCONSIN ST	409	6,659,475,000	3,757,222,000	14,909,611	0.22%
MINNESOTA ST	486	6,628,550,000	4,750,853,700	18,852,594	0.28%
CALIFORNIA STATEWIDE CMNTYS DEV AUTH REV	470	6,431,970,297	2,819,012,000	11,186,556	0.17%
MASSACHUSETTS ST DEV FIN AGY REV	1,011	6,374,475,000	4,210,055,000	16,706,567	0.26%
NEW YORK ST DORM AUTH REVS ST SUPPORTED DEBT	750	6,187,065,000	2,423,975,000	9,618,948	0.16%
OHIO STATE	783	6,166,435,000	4,425,925,000	17,563,194	0.28%
MIAMI-DADE CNTY FLA AVIATION REV	243	6,066,925,000	2,627,161,500	10,425,244	0.17%
NEW YORK N Y CITY TRANSITIONAL FIN AUTH BLDG AID	284	6,051,420,000	2,089,450,000	8,291,468	0.14%
CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	72	5,942,795,000	2,654,690,000	10,534,484	0.18%
ENERGY NORTHWEST WASH ELEC REV	231	5,772,375,000	3,139,661,000	12,458,972	0.22%
NEW YORK ST ENVIRONMENTAL FACS CORP ST CLEAN WTR	580	5,698,422,000	4,455,046,000	17,678,754	0.31%
MASSACHUSETTS ST SCH BLDG AUTH DEDICATED SALES T	104	5,652,555,000	7,277,047,000	28,877,171	0.51%
Sub-Total	**29,363**	**$640,480,187,876**	**$466,673,951,707**	**$1,851,880,761**	**0.29%**

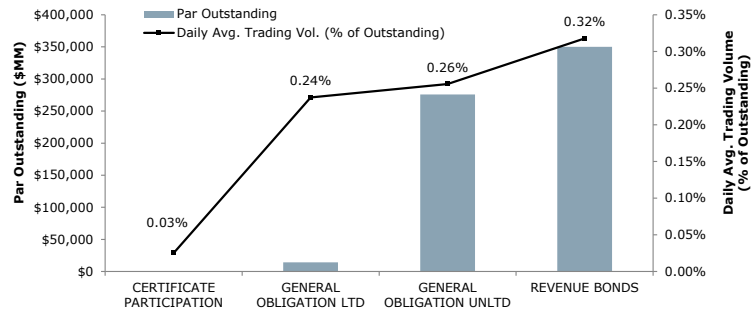
Daily Average Trading Volume by Size



Daily Average Trading Volume by Average Rating



Daily Average Trading Volume by Bond Type



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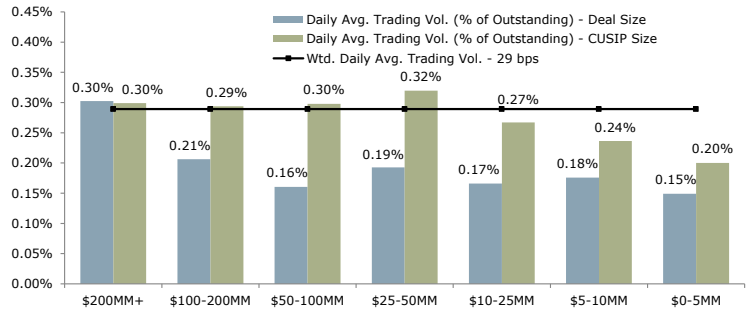
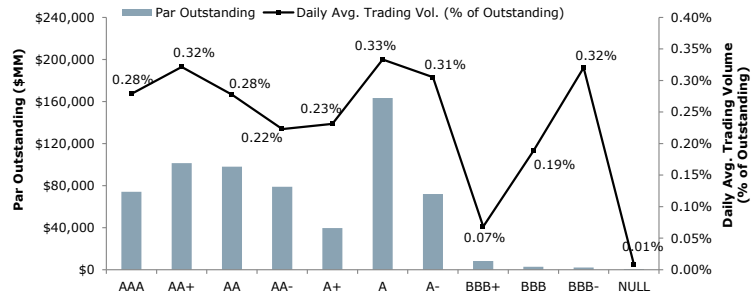
Trading Volume for Top 50 Municipal Bond Issuers

Issuer	# of CUSIPs	Par Outstanding	Annual Trading Volume	Daily Average Trading Volume	Daily Avg. Trading Volume as a % of Outstanding
CALIFORNIA ST	1,285	$73,397,825,000	$50,564,618,365	$200,653,247	0.27%
PUERTO RICO SALES TAX FING CORP SALES TAX REV	177	36,204,125,059	51,185,545,206	203,117,243	0.56%
NEW YORK N Y	2,146	35,732,383,125	30,259,561,100	120,077,623	0.34%
ILLINOIS ST	619	28,415,977,500	16,361,260,000	64,925,635	0.23%
NEW YORK N Y CITY TRANSITIONAL FIN AUTH REV	1,034	21,594,340,000	20,293,802,000	80,530,960	0.37%
NEW YORK N Y CITY MUN WTR FIN AUTH WTR & SWR SYS	390	20,503,437,500	18,660,086,001	74,047,960	0.36%
WASHINGTON ST	1,188	19,793,859,683	13,038,317,000	51,739,353	0.26%
NEW JERSEY ST TRANSN TR FD AUTH	271	19,695,205,000	13,536,990,500	53,718,216	0.27%
PORT AUTH N Y & N J	544	18,170,794,812	12,365,611,337	49,069,886	0.27%
METROPOLITAN TRANSN AUTH N Y REV	731	17,322,845,000	17,825,183,000	70,734,853	0.41%
NEW YORK ST DORM AUTH ST PERS INCOME TAX REV	755	16,729,500,000	15,231,114,501	60,440,931	0.36%
MASSACHUSETTS ST	523	15,680,265,000	8,859,468,500	35,156,621	0.22%
TEXAS ST	1,191	15,030,394,000	4,948,448,667	19,636,701	0.13%
NEW YORK ST DORM AUTH REVS NON ST SUPPORTED DEBT	2,389	13,226,040,000	7,610,038,000	30,198,563	0.23%
CONNECTICUT ST	704	12,976,685,000	7,467,017,000	29,631,020	0.23%
NEW JERSEY ECONOMIC DEV AUTH REV	477	12,017,588,000	10,624,570,000	42,160,992	0.35%
PENNSYLVANIA ST	345	11,471,835,000	9,149,812,000	36,308,778	0.32%
CALIFORNIA ST PUB WKS BRD LEASE REV	1,344	11,337,975,000	10,750,830,000	42,662,024	0.38%
UNIVERSITY CALIF REVS	370	10,553,670,000	9,937,382,000	39,434,056	0.37%
LOS ANGELES CALIF UNI SCH DIST	397	10,512,360,000	3,712,459,666	14,731,983	0.14%
ILLINOIS FIN AUTH REV	957	10,278,165,000	3,950,249,500	15,675,593	0.15%
NEW YORK ST URBAN DEV CORP REV	462	9,882,140,000	9,193,777,000	36,483,242	0.37%
NORTH TEX TWY AUTH REV	134	9,814,680,000	3,715,583,000	14,744,377	0.15%
CALIFORNIA HEALTH FACS FING AUTH REV	693	9,159,670,000	7,648,810,000	30,352,421	0.33%
GEORGIA ST	507	9,046,880,000	5,542,479,000	21,993,964	0.24%
FLORIDA ST BRD ED PUB ED	720	8,997,900,000	4,476,479,000	17,763,806	0.20%
NEW JERSEY ST TPK AUTH TPK REV	107	8,809,310,000	7,582,149,500	30,087,895	0.34%
CHICAGO ILL	489	8,366,223,000	6,870,783,000	27,265,012	0.33%
MASSACHUSETTS ST HEALTH & EDL FACS AUTH REV	758	8,078,060,000	2,659,031,000	10,551,710	0.13%
MARYLAND ST	393	7,992,295,000	8,653,195,000	34,338,075	0.43%
TRIBOROUGH BRDG & TUNL AUTH N Y REVS	344	7,418,820,000	5,917,986,000	23,484,071	0.32%
CHICAGO ILL O HARE INTL ARPT REV	371	7,194,925,000	3,653,523,668	14,498,110	0.20%
SAINT CLAIR CNTY ILL	35	7,123,862,000	24,185,000	95,972	0.00%
BAY AREA TOLL AUTH CALIF TOLL BRDG REV	98	7,100,645,000	5,028,216,000	19,953,238	0.28%
METROPOLITAN PIER & EXPOSITION AUTH ILL DEDICATE	104	7,049,325,000	2,306,810,000	9,154,008	0.13%
LOS ANGELES CALIF DEPT WTR & PWR REV	218	6,759,550,000	5,078,412,000	20,152,429	0.30%
CHICAGO ILL BRD ED	261	6,712,315,900	3,737,398,000	14,830,944	0.22%
PENNSYLVANIA ST TPK COMMN TPK REV	409	6,695,855,000	3,622,671,996	14,375,683	0.21%
WISCONSIN ST	409	6,659,475,000	3,757,222,000	14,909,611	0.22%
MINNESOTA ST	486	6,628,550,000	4,750,853,700	18,852,594	0.28%
CALIFORNIA STATEWIDE CMNTYS DEV AUTH REV	470	6,431,970,297	2,819,012,000	11,186,556	0.17%
MASSACHUSETTS ST DEV FIN AGY REV	1,011	6,374,475,000	4,210,055,000	16,706,567	0.26%
NEW YORK ST DORM AUTH REVS ST SUPPORTED DEBT	750	6,187,065,000	2,423,975,000	9,618,948	0.16%
OHIO STATE	783	6,166,435,000	4,425,925,000	17,563,194	0.28%
MIAMI-DADE CNTY FLA AVIATION REV	243	6,066,925,000	2,627,161,500	10,425,244	0.17%
NEW YORK N Y CITY TRANSITIONAL FIN AUTH BLDG AID	284	6,051,420,000	2,089,450,000	8,291,468	0.14%
CALIFORNIA ST DEPT WTR RES PWR SUPPLY REV	72	5,942,795,000	2,654,690,000	10,534,484	0.18%
ENERGY NORTHWEST WASH ELEC REV	231	5,772,375,000	3,139,661,000	12,458,972	0.22%
NEW YORK ST ENVIRONMENTAL FACS CORP ST CLEAN WTR	580	5,698,422,000	4,455,046,000	17,678,754	0.31%
MASSACHUSETTS ST SCH BLDG AUTH DEDICATED SALES T	104	5,652,555,000	7,277,047,000	28,877,171	0.51%
Sub-Total	**29,363**	**$640,480,187,876**	**$466,673,951,707**	**$1,851,880,761**	**0.29%**

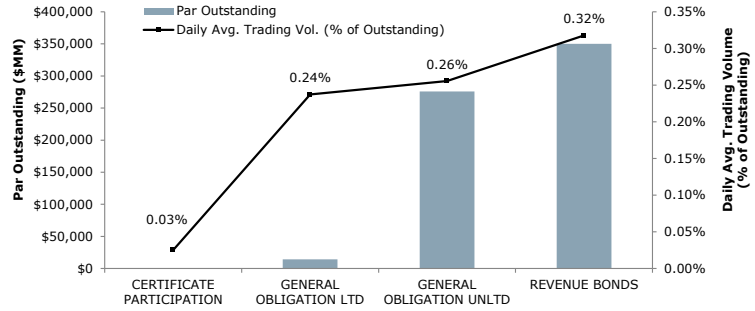
Daily Average Trading Volume by Size



Daily Average Trading Volume by Average Rating



Daily Average Trading Volume by Bond Type



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