



April 9, 2014

Department of the Treasury  
Office of the Comptroller of the Currency  
400 7<sup>th</sup> Street SW, Suite 3E-218, Mail Stop 9W-11  
Washington, DC 20219  
Attn: Legislative and Regulatory Activities Division  
Docket ID OCC-2013-0016

Board of Governors of the Federal Reserve System  
20<sup>th</sup> Street and Constitution Avenue NW  
Washington, DC 20551  
Attn: Robert deV. Frierson, Secretary  
Docket No. R-1466

Federal Deposit Insurance Corporation  
550 17<sup>th</sup> Street, NW  
Washington, DC 20429  
Attn: Comments / Legal ESS  
Robert E. Feldman, Executive Secretary  
RIN No. 3064-AE04

**Re: Liquidity Coverage Ratio: Liquidity Risk Measurement, Standards, and Monitoring**

Citi<sup>1</sup> appreciates the opportunity to provide additional information and analysis on the municipal securities market to the Office of the Comptroller of the Currency, Department of the Treasury, the Board of Governors of the Federal Reserve System and the Federal Deposit Insurance Corporation (collectively, “the Agencies”) in support of comments previously submitted<sup>2</sup> on the proposed rule to implement a quantitative liquidity requirement (the “proposed rule”) consistent with the liquidity coverage ratio standard established by the Basel Committee on Banking Supervision for large internationally active banking organizations. It is Citi’s hope that the information attached hereto proves useful to the Agencies as they work to establish High Quality Liquid Asset (“HQLA”) criteria that, for purposes of calculating the Liquidity Coverage Ratio (“LCR”), will help to promote the short-term resilience of the liquidity risk profiles of internationally active banking organizations, thereby improving the ability of the banking sector to absorb shocks arising from financial and economic stress, without causing undue adverse economic strain on U.S. State and local governments.

As detailed in our previous letter and expanded upon in the attachments hereto, we believe that investment grade municipal securities, as an asset class, satisfy the Agencies’ stated criteria for High Quality Liquid Asset eligibility. The attached analyses, which for ease of navigation have been organized topically according to the liquidity attribute or concern being discussed, in combination with our previously-submitted comments, we believe, make evident that:

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<sup>1</sup> Citi is one of the largest municipal securities dealers in the U.S. and has been the leading underwriter of negotiated municipal bonds for 13 of the last 17 years. Citi’s municipal activities are primarily conducted on Citigroup Global Markets Inc., a registered broker-dealer, and Citibank, N.A., a national banking association, both of which are indirect wholly-owned subsidiaries of Citigroup, Inc., a bank holding company.

<sup>2</sup> Letter from Citigroup Global Markets Inc., dated December 27, 2013 and posted at [www.regulations.gov](http://www.regulations.gov) on January 2, 2014 under docket ID: OCC-2013-0016-0004.

### **Attachment I – Federal Treatment of Debt Securities**

- municipal assets are less concentrated in bank portfolios and the total financial sector than either U.S. Government Sponsored Enterprise (“GSE”) securities or corporate bonds;
- historical Federal legislative and regulatory treatment of municipal bonds has been commensurate with that of GSE securities;
- from an LCR perspective, investment grade municipal assets provide a greater diversification benefit than either GSE securities or investment grade, nonfinancial corporate bonds;

### **Attachment II – Credit Quality**

- municipal securities, and to an even greater degree, investment grade municipal securities, are generally of higher credit quality and have lower historic default rates than corporate bonds;
- municipal defaults are less correlated with recessions than corporate defaults;

### **Attachment III – Transaction Volumes**

- investment grade municipal securities generally exhibit higher trading volumes relative to the outstanding size of the market than investment grade, nonfinancial corporate bonds;
- unlike transaction volumes on variable rate municipal debt, the majority of which we would expect not to be eligible for HQLA classification under the proposed rule, trading volumes on fixed rate, investment grade municipal securities have been largely unchanged since before the crisis;
- trading activity in investment grade municipal securities demonstrates the existence of right-way risk in the market – both trading volumes and the diversity of participation increase when yields spike;

### **Attachment IV – Price Transparency**

- investment grade municipal securities are traded in a market that has both transparency and demonstrated consensus with respect to market pricing;

### **Attachment V – Secured Funding Markets**

- investment grade municipal securities have deep, diverse and stable secured funding availability away from the taxable repo market.

Including investment grade municipal securities among the assets eligible for inclusion as HQLA would, therefore, be entirely consistent with the stated intent of the proposed rule. Investment grade municipal securities are liquid assets with deep and diverse sale and repurchase markets, high transaction volumes and the ability to generate cash for banks during periods of stress. The inclusion would, moreover, serve to improve the liquidity and credit risk profiles of banks by further diversifying the stock of eligible HQLA to include an asset class that generally is of high credit quality, has low historic default rates and one to which the aggregate financial sector has limited exposure. As such, Citi recommends that the Agencies amend the objective HQLA criteria in order to make investment grade municipal securities eligible for Level 2A liquid asset designation, commensurate with the proposed treatment for GSE securities. In consideration of concern expressed by the Agencies regarding asset concentration, Citi further recommends that the inclusion of eligible municipal assets in a bank's total stock of HQLA be limited to a maximum of 25%.

Moreover, in order to address the Agencies' concerns regarding the use of an investment grade threshold in the objective criteria for municipal securities, Citi recommends that the Agencies, in a manner identical to that which has been proposed for both GSE securities and corporate bonds, specifically require that eligible municipal assets be "investment grade under 12 CFR Part 1 as of the calculation date."

Lastly, Citi recommends that Industrial Development Bonds ("IDB's) and securities with not-for-profit or other corporate obligors be specifically made eligible for Level 2B liquid asset classification. This would limit the universe of L2A-eligible municipal securities to only those classified as *State and local government* debt in the Federal Reserve's Z.1 Statistical Release.

Citi appreciates the Agencies' consideration with respect to this important issue and welcomes the continued discussion of the treatment of municipal assets under the proposed U.S. Liquidity Coverage Ratio. If you have any questions or wish to discuss any of the opinions or analyses attached hereto, please contact the undersigned at 212-723-5373.

Respectfully,

Citigroup Global Markets Inc.

By: /s/ Howard Marsh  
Howard Marsh  
Managing Director  
Head of the Municipal Securities Division

**ATTACHMENT I: FEDERAL TREATMENT OF DEBT SECURITIES**

	TREASURY	GSE	MUNICIPAL	CORPORATE		
<b>U.S. AGENCY NPR LIQUIDITY COVERAGE RATIO</b>						
A.	HQLA Classification	Level 1	Level 2A	Level 2B		
	Haircut	0%	15%	50%		
	Limitation on Contribution to HQLA Stock	None	40%	15%		
	Subject to IG Determination	No	Yes	Yes		
	Reference for IG Determination <sup>3</sup>	NA	12 CFR Part 1	12 CFR Part 1		
<b>U.S. DEPOSITORY INSTITUTION / FINANCIAL SECTOR EXPOSURE</b>						
B.	Outstanding Size of Asset Class (\$ bn) <sup>4</sup>	12,352.8	7,768.7	3,671.2	9,441.5	
	Assets Held by US Depository Institutions (\$bn) <sup>5</sup>	217.1	1,721.0	416.4	418.2	
	% of Total US Depository Inst Investments Allocated to Asset Class <sup>5</sup>	2.2%	17.1%	4.1%	4.1%	
	Assets Held by the Total Financial Sector (\$bn) <sup>6</sup>	2,679.3	4,489.6	1,929.6	7,522.3	
	% of Total Financial Sector Investments Allocated to Asset Class <sup>6</sup>	8.6%	14.5%	6.2%	24.2%	
<b>FEDERAL LAW (12 U.S. Code §24 and 12 CFR Part 1)</b>						
C.	National Banks Authorized to Deal In	Yes	Yes	Yes	No	
	National Banks Authorized to Underwrite	Yes	Yes	Yes	No	
	National Banks Authorized to Invest in Without Limit <sup>7</sup>	Yes	Yes	Yes	No	
	Security Classification <sup>7</sup>	Type I	Type I	Type I	Type III	
	Subject to the <i>Investment Security</i> Definition <sup>7</sup>	No	No	No	Yes	
<b>LIQUIDITY VALUE AT THE FEDERAL RESERVE DISCOUNT WINDOW</b>						
D.	0 to 5-year maturity	99%	98%	98%	AAA	AA to BBB
	5 to 10-year maturity	97%	96%	96%	97%	95%
	Greater than 10-year maturity	96%	95%	95%	95%	93%
					94%	92%
<b>STANDARD APPROACH CREDIT-RISK-WEIGHTS</b>						
E.	1988 Basel I Accord as Implemented in the U.S.	0%	20%	20%	50%	100%
	Basel III Accord via U.S. Final Rule July 2013	0%	20%	20%	50%	100%
<b>BCBS 238 LIQUIDITY COVERAGE RATIO</b>						
F.	HQLA Classification	Level 1	Level 2A	Level 2A	AA	A to BBB
	Haircut	0%	15%	15%	*	Level 2A
	Limitation on Contribution to HQLA Stock	None	40%	40%	*	Level 2B
					*	15%
					*	40%
					*	15%
<b>CITI'S RECOMMENDATION FOR U.S. LIQUIDITY COVERAGE RATIO</b>						
G.	HQLA Classification	Level 1	Level 2A	Level 2A	Level 2B	Level 2B
	Haircut	0%	15%	15%	15%	50%
	Limitation on Contribution to HQLA Stock	None	40%	25%	15%	15%
	Subject to IG Determination	No	Yes	Yes	Yes	Yes
	Reference for IG Determination <sup>3</sup>	NA	12 CFR Part 1			
<b>UNIVERSE OF TOTAL HQLA-ELIGIBLE ASSETS (CITI ESTIMATE)<sup>8</sup></b>						
H.	Max % of Total U.S. Depository Inst Investments in HQLA-Eligible Assets	122%	77%	31%	47%	47%

\* BCBS 238 does not address either the 50% R/W category or Revenue Bonds; in Europe Public Sector Entity debt is generally either 0% or 20% Risk-Weighted.

\*\* Estimate for L2A-eligible municipal assets is overstated as the 746.3bn of nonprofit & industrial revenue bonds listed in L.211 of the Z.1 Statistical Release were not excluded.

<sup>3</sup> Reference Appendix A: 12 CFR PART 1 - INVESTMENT SECURITIES.

<sup>4</sup> Federal Reserve Statistical Release, Z.1 Financial Accounts of the U.S., L.102, L.105, L.210, L.211, 4Q 2013, March 6, 2014.

<sup>5</sup> Federal Reserve Statistical Release, Z.1 Financial Accounts of the U.S., L.110, 4Q 2013, March 6, 2014. Total Credit Market Instruments held by U.S. Depository Institutions was \$10,087.1bn

<sup>6</sup> Federal Reserve Statistical Release, Z.1 Financial Accounts of the U.S., L.107 & L.108, 4Q 2013, March 6, 2014. Consistent with the Agencies' definition of *Regulated Financial Company*, L.108 & L.123 have been excluded. Consistent also with the proposed eligibility criteria, holdings of private residential and commercial CMOs and other structured MBS have been excluded from corporate bond data. Total Credit Market Instruments held by all Financial Business was \$31,045.6bn.

<sup>7</sup> National banks are authorized to invest, without limit, in ALL municipal bonds if the bank is well capitalized and in the general obligations of any State of the U.S. or any political subdivision thereof, *regardless* of whether the bank is well capitalized (as defined in section 1831 of Title 12 of the U.S. Code). This GO / Rev distinction reflects an historic belief that municipal general obligations were inherently of higher credit quality than municipal revenue obligations. As Appendix B demonstrates, however, investor preference does not support this belief; yields on municipal revenue bonds have historically been generally commensurate with, and at times lower than, yields on municipal general obligations.

## ATTACHMENT II: CREDIT QUALITY

Despite the recent increase in media attention on U.S. public sector credit issues, cumulative realized credit losses on all municipal debt over the past 100 years<sup>9</sup> has amounted to less than 1%.<sup>10</sup> Moreover, as discussed further below, the municipal defaults that have occurred have largely been concentrated among assets that are not backed by State and local revenues. In the Federal Reserve Statistical Release, Z.1 Financial Accounts of the United States, table L.211 shows that the \$3.67 trillion municipal market is comprised of securities & loans, \$2.92 trillion of which are backed by State and local governments, \$0.23 trillion of which are backed by nonprofit organizations and \$0.52 trillion of which are backed by nonfinancial corporate businesses (industrial revenue bonds),<sup>11</sup> which are also commonly referred to as industrial development bonds (IDB's). Historically, IDB's, while having lower demonstrated default rates than corporate bonds<sup>12</sup>, have defaulted at a much *higher* frequency than other municipal debt. The reason for this is intuitive: IDB's are backed by nonfinancial corporate obligors, not U.S. State and local government revenues.

In an article titled "The Untold Story of Municipal Bond Defaults," members of the Federal Reserve Bank of New York arrive at the same conclusion.<sup>13</sup> They start, however, by first noting that municipal bonds default more frequently than commonly quoted. As they discuss, default statistics typically cited by market participants are usually based upon data from nationally recognized statistical rating organizations ("NRSRO's"), which inherently only consider the universe of municipal bonds that have been rated by the respective rating agency. Below, for example, are the statistics quoted by Moody's and Standard & Poor's.

Table 1<sup>14</sup>

	NUMBER OF DEFAULTS		Number of Issuers	Size of the Market
	Moody's	S&P		
<b>Municipal</b>	71	47	54,486	\$3.7 trillion
<b>Corporate</b>	1,784	2,015	5,656	\$7.8 trillion

Considering other data sources as well, which capture municipal bonds that are not rated by the major NRSRO's, the authors of the article find that 2,521 municipal defaults actually occurred during the period from 1970 through 2011. This compares to the 71 defaults reported by Moody's during that same time period.<sup>15</sup> The article does not provide the corresponding default *rates* in its table (Table 1, above) due to incomplete historic information on the number of issues outstanding, nor does it offer information regarding historic defaults on unrated corporate bonds. If, however, we assumed that the number of

<sup>8</sup> Reference Table 3 in the Letter from Citigroup Global Markets Inc., dated December 27, 2013 and posted at [www.regulations.gov](http://www.regulations.gov) on January 2, 2014 under docket ID: OCC-2013-0016-0004 for derivation of the estimated universes of HQLA-eligible municipal assets and corporate bonds.

<sup>9</sup> A 100-year time horizon is relevant as it corresponds to the creation of the present United States monetary arrangement via H.R. 7837, which provided for the establishment of Federal Reserve Banks and furnished an Elastic Currency (effective 1914).

<sup>10</sup> Reference George H. Hempel's *The Postwar Quality of State and Local Debt* (NBER, 1971) for statistics corresponding to the period from 1913 to 1970. Reference Moody's Investor Service's Special Comment titled *US Municipal Bond Defaults and Recoveries, 1970-2012*, published on May 7, 2013, for data corresponding to the period from 1970 through 2012.

<sup>11</sup> Federal Reserve Statistical Release, Z.1 Financial Accounts of the United States, L.211, 4Q 2013, March 6, 2014.

<sup>12</sup> Moody's Investor Service, Special Comment titled *US Municipal Bond Defaults and Recoveries, 1970-2012*, May 7, 2013.

<sup>13</sup> Jason Appleson, Eric Parsons, and Andrew Haughwout, *The Untold Story of Municipal Bond Defaults*, August 2012.

<sup>14</sup> Ibid.

<sup>15</sup> The comparison is drawn against the statistics quoted by Moody's because of the congruent time horizons; S&P's statistics only correspond to the period from 1986 to 2011.

municipal issuers was constant at 54,486 over this entire 41-year period and that there was no practical way to eliminate the sectors causing the additional 2,450 municipal defaults from HQLA consideration, given that there are close to ten times the number of issuers in the municipal space as there are in the corporate space,<sup>16</sup> and conservatively considering only the defaults on Moody's-rated corporate bonds, the cumulative default rate on all municipal securities for the given period would still only have been approximately one-seventh the cumulative default rate experienced on Moody's-rated corporate bonds. Thus, municipal securities, as an asset class, irrespective of ratings and regardless of the obligor securing repayment, are of higher demonstrated credit quality as they have lower historic default rates than rated corporate debt. This data thus supports the Agencies' proposal to exclude non-investment grade and non-rated securities, whether municipal or corporate, from HQLA eligibility. The data also thus provides a strong argument for why investment grade municipal securities, for LCR purposes, should receive preferential treatment over corporate bonds.

Having concluded that defaults on unrated municipal securities have occurred at much higher frequency than on rated municipal debt, the article continues:

*“Our findings raise the question, what causes such markedly different default frequencies between rated and unrated municipal bonds? Our answer: Not all municipal bonds are created equal. Different types of municipal bonds are secured by very different revenue sources with varying levels of predictability and stability...The default risk of a revenue bond varies with the essentiality of the service provided by the enterprise. For example, water and sewer utilities provide essential services and thus have a strong ability to generate revenue. By contrast, the services offered by an alternative energy plant, pollution control facility, or other corporate-like entity may not be considered essential, because of the availability of other energy sources. Thus, these enterprises may have less potential to generate revenue. Alternative energy plants, pollution control facilities, and other corporate-like enterprises are all examples of industrial development bonds (IDBs).”*

We agree with the authors' observations regarding the types of municipal bonds that are more likely to default, namely, unrated and corporate-backed issues. Defaults on U.S. public sector entity (“PSE”) securities that would satisfy the 12 CFR Part 1 definition of *Investment Grade* and that would also be classified as *State and local government* debt in the Federal Reserve's Z.1 Statistical Release are very rare. It can be inferred from the Federal Reserve's article that the 41-year cumulative default rate on U.S. PSE obligor debt that would satisfy both of these definitions was, for the period from 1970 through 2011, less than one-quarter of one percent.

Citi, therefore, recommends that the Agencies, in a manner identical to that which has been proposed for *both* GSE securities and corporate bonds, specifically require that HQLA-eligible municipal assets be “investment grade under 12 CFR Part 1 as of the calculation date.” While well capitalized banks are not currently required to make such a determination before investing in *either* a GSE security or a municipal asset for investment securities regulation purposes, they are required to perform the same analysis on all municipal investments for safety and soundness regulation purposes.<sup>17</sup> As such, requiring that banks make 12 CFR Part I *Investment Grade* determinations on municipal bonds in order to establish HQLA-eligibility would simply be to require that they continue to comply with existing regulations and that they continue to engage in already well-established procedures.

Citi, therefore, further suggests that IDB's and securities with not-for-profit or other corporate obligors be specifically made eligible for Level 2B liquid asset classification. This would limit the

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<sup>16</sup> This is based on a parallel assumption that the number of corporate issuers was also constant, at 5,656, over the entire 41-year period.

<sup>17</sup> Reference Appendix A hereto: 12 CFR PART 1 - INVESTMENT SECURITIES.

universe of Level 2A-eligible municipal securities to only those revenue and general obligations<sup>18</sup> that are classified as *State and local government* debt in the Federal Reserve's Z.1 Statistical Release.

Citi lastly suggests that the Agencies not objectively exclude all private placement municipal securities from eligibility. While we understand that the Agencies may have some concern regarding direct purchase and other non-publically offered bonds, we believe that the liquidity of an asset is more specifically a function of transferability and availability of relevant issuer financial information. Citi, for example, may choose to purchase a security directly from a large, active municipal issuer into an investment portfolio in order to satisfy its Community Reinvestment Act ("CRA") obligations. Were Citi to need to liquidate the position at some time in the future, the secondary market would generally not care that the securities had not originally been publically offered. Rather, potential buyers would be concerned with credit and liquidity value at the *issuer* level and limitations on transferability at the *CUSIP or issue* level. Thus, so long as the issuer has outstanding a material amount of publicly-placed debt, indicating availability of financial information, we believe that LCR concern should be limited to transfer hurdles. Citi, therefore, suggests that the Agencies either rely on the *liquid and readily marketable* requirement or solely exclude from Level 2A HQLA any non-publicly-offered municipal security where the issuer has no publicly-placed debt outstanding.

The article highlights one other distinction between municipal and corporate debt that should be considered for LCR purposes: municipal bond defaults are less correlated with systematic stress than corporate bond defaults. As the authors note,<sup>19</sup>

*"In the case of corporate bonds, defaults occur at a higher frequency during recessionary periods. In contrast, the pattern of municipal bond defaults appears less tied to recessionary periods. The absence of a clear pattern leads us to believe that municipal bond defaults may be more a function of idiosyncratic factors associated with individual sectors or issues than the result of broad macroeconomic developments."*

Given that banks may need to draw down their stock of liquid assets during periods of stress, HQLA eligibility criteria should preference collateral that is less correlated with the drivers of systematic stress. Considering that municipal credit risk is less correlated with recessionary periods, that recessionary periods are more correlated with stress in the corporate bond market, municipal securities should receive more preferential LCR treatment than corporate debt.

Lastly, we consider the confluence of the above: municipal security credit quality and default rates in the context of systemic risk. Any HQLA-eligible asset class should not, in isolation, have the ability to cause banking system solvency concerns. As noted in Attachment I, municipal securities comprise approximately just 4% of total U.S. Depository Institution credit market instrument holdings.<sup>20</sup> Thus, even extreme municipal market stress or elevated municipal default rates could not materially impair the aggregate capitalization of the banking system. In amending the objective HQLA eligibility criteria in the manner proposed above, the Agencies would, therefore, be reducing the risk and potential severity of another banking crisis.

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<sup>18</sup> As demonstrated in Appendix B, investor preference does not support the legacy belief that municipal general obligations are inherently of higher credit quality than municipal revenue obligations; yields on municipal revenue bonds have historically been generally commensurate with, and at times lower than, yields on municipal general obligations.

<sup>19</sup> Jason Appleson, Eric Parsons, and Andrew Haughwout, *The Untold Story of Municipal Bond Defaults*, August 2012.

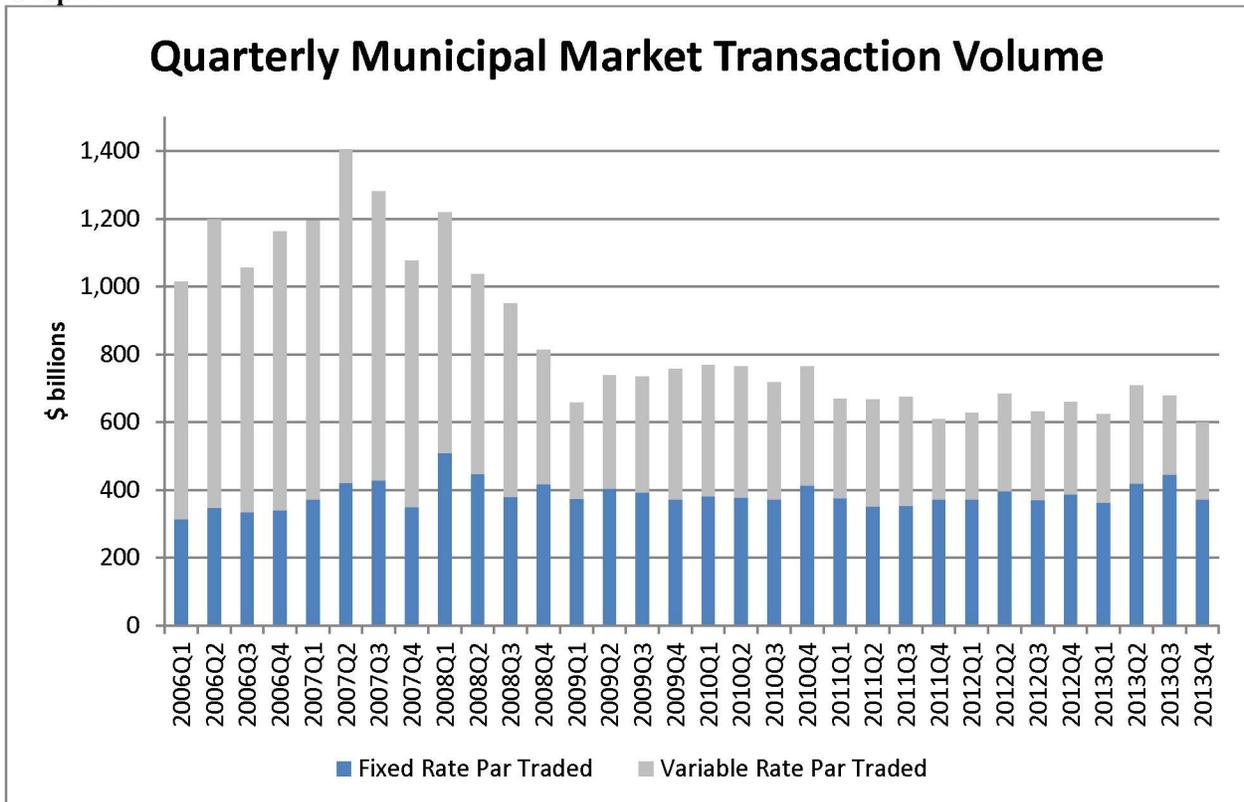
<sup>20</sup> Federal Reserve Statistical Release, Z.1 Financial Accounts of the U.S., L.211, 4Q 2013, March 6, 2014.

**ATTACHMENT III: TRANSACTION VOLUMES**

As discussed in our previously submitted comments,<sup>21</sup> and indicative of the relative liquidity of the municipal market, transaction volumes on investment grade municipal securities, when considered relative to the total size of the market outstanding, are higher than on other HQLA-eligible assets: the investment grade municipal market trades a larger percentage of its outstanding par each day than the investment grade non-financial corporate debt market<sup>22</sup>.

The Agencies, however, have expressed concern regarding the notable decline in municipal trading activity, as published by the Securities Industry and Financial Markets Association (“SIFMA”), since the 2006/2008 timeframe. In response to that concern, we direct the Agencies to Graph 1 (below), which depicts quarterly transaction volumes, based upon Municipal Securities Rulemaking Board (“MSRB”)-reported trade data, for all investment grade municipal securities for the period from January 1, 2006 through December 31, 2013. All activity has been categorized as either fixed rate or variable rate trading. As evidenced below, the observed decline was confined to activity in variable rate municipal debt such as Auction Rate Securities (“ARS”) and Variable Rate Demand Notes (“VRDN’s”), neither of which would likely be classified by banks as HQLA. Rather than a precipitous drop-off in fixed-rate activity, we see that volumes have ebbed and flowed only marginally, with the highest trading volumes having occurred in 2008 and 2013.

Graph 1<sup>23</sup>



<sup>21</sup> Letter from Citigroup Global Markets Inc., dated December 27, 2013 and posted at [www.regulations.gov](http://www.regulations.gov) on January 2, 2014 under docket ID: OCC-2013-0016-0004.

<sup>22</sup> Reference Table 3 in the Letter from Citigroup Global Markets Inc., dated December 27, 2013 and posted at [www.regulations.gov](http://www.regulations.gov) on January 2, 2014 under docket ID: OCC-2013-0016-0004.

<sup>23</sup> Quarterly transaction volume based on MSRB-reported trade data for all investment grade, non-derivative municipal securities, as estimated by Citi, for the period from January 1, 2006 through December 31, 2013.

In so far as transaction volumes are indicative of market liquidity, we must also consider the correlation between trading activity and yields. Using trade data from the MSRB, we had previously evaluated the four largest sell-offs in the municipal market since January 2000.<sup>24</sup> When we compared the average daily trading volume for the entire duration of each sell-off to the average daily trading volume for the 3 months immediately preceding, in each instance we saw that transaction volumes increased by 10% to 25% during the sell-off. Beyond demonstrating the liquidity of the municipal market, this depicted the right-way risk that, as the Agencies have discussed, makes an asset appropriate for HQLA classification.

In order to more accurately address some of the Agencies' questions and concerns, we have expanded and modified our original analysis. Consistent with the proposed rule's stated intent of ensuring short-term liquidity through the implementation of a quantitative liquidity requirement, we have limited the duration of each sell-off to no more than 30 days. In doing so, the analysis focuses exclusively, more relevantly, on short-term yield spikes. We have also excluded all BBB-rated securities from consideration, not only to address the Agencies' concerns regarding the influence of "stressed credit" trading on observed increases in activity, but also to more accurately reflect the universe of assets that banks would typically hold as HQLA. Lastly, so as to avoid inaccurately reflecting shifts in the composition of tenors traded as general changes in market yields, we have measured market sell-offs via changes in the 20 year AAA MMD index rather than in the average of actual traded yields.

Considering every 30-day rolling window from January 2002 through December 2013, Table 2 (below) lists the fifty largest short-term municipal market sell-offs of the last 12 years. Consistent with the stated need to ensure the ability of banks to monetize assets at any time, the analysis measures yield spikes as the difference between the highest and lowest yields *during* the 30-day period and, similarly, the duration of each sell-off as the number of days between the low yield date and the high yield date. Given that the Liquidity Coverage Ratio is required to be calculated daily, each day looking forward along a new 30-day horizon, each new start date was considered separately. Duplicative results were removed but overlapping periods, therefore, were not.

As displayed in Table 2, the results of this revised analysis demonstrate that trading activity in investment grade, specifically single A and higher-rated, fixed rate municipal securities, exhibits right-way risk. As shown, the average daily trading volume for the duration of each sell-off was, on average, 23% higher than the preceding one and three months. Demonstrative of the market's continued liquidity during periods of stress, in only one instance was the average daily trading volume during the sell-off lower than the prior month and in no instance was it lower than both the one and three months immediately preceding.

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<sup>24</sup> Reference page 6 of the Letter from Citigroup Global Markets Inc., dated December 27, 2013 and posted at [www.regulations.gov](http://www.regulations.gov) on January 2, 2014 under docket ID: OCC-2013-0016-0004.

Table 2 <sup>25</sup>

LARGEST SHORT-TERM YIELD SPIKES (Trading Volumes in \$mm)											
Count	Low Yield Date	High Yield Date	Sell-Off (Days)	Low Yield	High Yield	Yield Change	Avg Daily Trdg During Sell-Off	Avg Daily Trdg 1 Mo Preceding	Avg Daily Trdg 3 Mo Preceding	Change in Trdg Versus 1mo	Change in Trdg Versus 3mo
1	9/15/2008	10/15/2008	30	4.41%	5.74%	1.33%	6,465	5,199	5,426	24%	19%
2	9/16/2008	10/15/2008	29	4.52%	5.74%	1.22%	6,649	5,052	5,382	32%	24%
3	9/11/2008	10/10/2008	29	4.28%	5.43%	1.15%	6,254	5,185	5,486	21%	14%
4	9/17/2008	10/15/2008	28	4.60%	5.74%	1.14%	6,636	5,140	5,433	29%	22%
5	9/12/2008	10/10/2008	28	4.31%	5.43%	1.12%	6,207	5,368	5,499	16%	13%
6	5/28/2013	6/25/2013	28	2.82%	3.87%	1.05%	6,429	5,317	5,797	21%	11%
7	5/29/2013	6/25/2013	27	2.87%	3.87%	1.00%	6,581	5,226	5,739	26%	15%
8	5/30/2013	6/25/2013	26	2.88%	3.87%	0.99%	6,648	5,294	5,732	26%	16%
9	5/22/2013	6/21/2013	30	2.71%	3.69%	0.98%	5,927	5,453	5,837	9%	2%
10	6/3/2013	6/25/2013	22	2.90%	3.87%	0.97%	6,787	5,057	5,705	34%	19%
11	5/31/2013	6/25/2013	25	2.90%	3.87%	0.97%	6,697	5,261	5,733	27%	17%
12	5/24/2013	6/21/2013	28	2.74%	3.69%	0.95%	5,910	5,581	5,850	6%	1%
13	5/23/2013	6/21/2013	29	2.74%	3.69%	0.95%	5,902	5,574	5,851	6%	1%
14	2/5/2008	2/29/2008	24	4.12%	5.05%	0.93%	6,995	5,450	5,086	28%	38%
15	9/19/2008	10/15/2008	26	4.81%	5.74%	0.93%	6,595	5,398	5,437	22%	21%
16	2/6/2008	2/29/2008	23	4.12%	5.05%	0.93%	7,037	5,489	5,117	28%	38%
17	2/11/2008	2/29/2008	18	4.13%	5.05%	0.92%	6,880	5,695	5,188	21%	33%
18	6/4/2013	6/25/2013	21	2.95%	3.87%	0.92%	6,968	5,044	5,676	38%	23%
19	6/6/2013	6/25/2013	19	2.96%	3.87%	0.91%	7,012	5,191	5,750	35%	22%
20	6/5/2013	6/25/2013	20	2.96%	3.87%	0.91%	7,063	5,068	5,704	39%	24%
21	9/22/2008	10/15/2008	23	4.83%	5.74%	0.91%	6,445	5,432	5,427	19%	19%
22	2/12/2008	2/29/2008	17	4.16%	5.05%	0.89%	7,120	5,617	5,164	27%	38%
23	6/7/2013	6/25/2013	18	3.01%	3.87%	0.86%	7,133	5,289	5,738	35%	24%
24	2/13/2008	2/29/2008	16	4.20%	5.05%	0.85%	7,328	5,570	5,155	32%	42%
25	9/23/2008	10/15/2008	22	4.91%	5.74%	0.83%	6,543	5,474	5,418	20%	21%
26	5/21/2013	6/20/2013	30	2.69%	3.51%	0.82%	5,773	5,481	5,882	5%	-2%
27	10/18/2010	11/17/2010	30	3.36%	4.15%	0.79%	6,197	6,151	5,637	1%	10%
28	10/19/2010	11/18/2010	30	3.36%	4.15%	0.79%	6,550	6,011	5,601	9%	17%
29	6/10/2013	6/25/2013	15	3.08%	3.87%	0.79%	7,413	5,082	5,699	46%	30%
30	10/20/2010	11/18/2010	29	3.36%	4.15%	0.79%	6,610	5,977	5,638	11%	17%
31	10/25/2010	11/18/2010	24	3.37%	4.15%	0.78%	6,568	6,027	5,659	9%	16%
32	10/22/2010	11/18/2010	27	3.37%	4.15%	0.78%	6,530	6,257	5,661	4%	15%
33	10/21/2010	11/18/2010	28	3.37%	4.15%	0.78%	6,568	6,159	5,665	7%	16%
34	2/14/2008	2/29/2008	15	4.30%	5.05%	0.75%	7,292	5,668	5,193	29%	40%
35	10/26/2010	11/18/2010	23	3.43%	4.15%	0.72%	6,752	5,898	5,624	14%	20%
36	6/11/2013	6/25/2013	14	3.15%	3.87%	0.72%	7,782	5,017	5,662	55%	37%
37	2/15/2008	2/29/2008	14	4.35%	5.05%	0.70%	7,504	5,753	5,184	30%	45%
38	11/8/2010	12/8/2010	30	3.55%	4.23%	0.68%	6,995	5,911	5,685	18%	23%
39	6/13/2013	6/25/2013	12	3.22%	3.87%	0.65%	7,914	5,214	5,753	52%	38%
40	11/2/2010	11/18/2010	16	3.50%	4.15%	0.65%	7,037	6,090	5,662	16%	24%
41	5/20/2013	6/19/2013	30	2.67%	3.31%	0.64%	5,602	5,594	5,916	0%	-5%
42	11/15/2010	12/15/2010	30	3.88%	4.52%	0.64%	7,318	5,979	5,697	22%	28%
43	2/19/2008	2/29/2008	10	4.41%	5.05%	0.64%	7,947	5,713	5,096	39%	56%
44	11/4/2010	11/18/2010	14	3.52%	4.15%	0.63%	7,330	6,043	5,693	21%	29%
45	11/3/2010	11/18/2010	15	3.52%	4.15%	0.63%	7,196	6,051	5,689	19%	26%
46	11/5/2010	11/18/2010	13	3.53%	4.15%	0.62%	7,392	6,201	5,698	19%	30%
47	7/2/2003	8/1/2003	30	4.31%	4.92%	0.61%	4,228	4,597	4,113	-8%	3%
48	2/20/2008	2/29/2008	9	4.44%	5.05%	0.61%	8,421	5,635	5,084	49%	66%
49	6/18/2013	6/25/2013	7	3.26%	3.87%	0.61%	8,091	5,484	5,767	48%	40%
50	7/14/2003	8/13/2003	30	4.36%	4.96%	0.60%	4,684	3,697	4,089	27%	15%
										<b>AVERAGE</b>	<b>AVERAGE</b>
										<b>23%</b>	<b>23%</b>

<sup>25</sup> The fifty largest short-term yield spikes experienced in the municipal securities market from January 2002 through December 2013. Consistent with the proposed Liquidity Coverage Ratio, *short-term*, for these purposes, means 30 or fewer calendar days. Using the 20 year AAA MMD index as the measure of market yields (which we believe is a more appropriate measure than an average of actual traded yields given, we expect, that the latter would inaccurately reflect shifts in the composition of tenors traded as changes in market yields), and considering every 30-day rolling window during the stated 12-year period, the analysis measures yield spikes as the difference between the highest and lowest yields *during* the 30-day period. The analysis similarly measures the duration of each sell-off as the number of days between the low yield date and the high yield date. Transaction volumes are based on MSRB-reported trade data for all investment grade (exclusive of BBB-rated securities, as Citi would generally not expect to include these in its stock of HQLA and, as further, Citi believes this exclusion more accurately addresses

In further demonstration of the right-way risk that exists in the market, the diversity of *institutional* participation also increases when yields jump. Considering the activity of the accounts that Citi defines as institutional, non-broker-dealer entities during period from January 2006 through March 2014, Citi observes that the diversity of participation increased during the largest short-term municipal market sell-offs of the last eight years.<sup>26</sup> In 2008, for example, when many of the monoline insurance companies that enhanced a significant portion of the municipal market were being downgraded, rather than a dramatic decline in participation, at its peak, the number of institutional counterparties executing with Citi was 50% higher than the 6-month moving average on that date. In January of 2011, after Meredith Whitney's December appearance on *60 Minutes*, the number of institutional clients that transacted with Citi was 51% higher than the corresponding 6-month moving average. Most recently, in 2013, in the two months following the very publicized bankruptcy filing by the City of Detroit, institutional participation increased by 10% and 13% over the respective 6-month moving averages. Beyond demonstrating the continued liquidity of the municipal market, these increases depict a positive correlation between institutional investor demand and yields, or right-way risk, which, as the Agencies have discussed, should make an asset appropriate for HQLA eligibility.

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the Agencies' concerns regarding the influence of "stressed credit" trading on observed increases in activity), fixed rate, non-derivative municipal securities, as estimated by Citi based upon a compilation of JJK and Bloomberg LP data. The comparison excludes from consideration all holidays, defined as any weekday on which the MMD curve was not closed. Changes in transaction volumes compare the average daily trading volume for the entire duration of each sell-off to the average daily trading volume for the 1 and 3 months immediately preceding. Duplicative results have been excluded.

<sup>26</sup> The analysis evaluates the number of institutional, non-broker-dealer counterparties, as defined by Citi and based upon Citi trade data, that executed at least one trade with Citi in an amount equal to \$5,000,000 notional or more in each given month for the period from January 2006 through March 2014. The analysis considers all transactions on a fixed-rate, investment grade (exclusive of BBB-rated securities as Citi would generally not expect to include these in its stock of HQLA), non-derivative municipal security, as estimated by Citi based upon compilation of J.J. Kenny and Bloomberg LP data.

#### ATTACHEMTN IV: PRICE TRANSPARENCY

In the proposed rule the Agencies have recognized that the ability to easily and readily value a security contributes to the liquidity of the asset. They have further acknowledged that the liquidity of a market is enhanced to the extent that participants agree on the value of the securities being traded. Timely and observable market prices, they assert, increase the likelihood that a buyer can be found, that the market value of the security can be determined quickly and, thus, that a covered company could convert the security into cash. The Agencies have, therefore, defined their subjective eligibility criteria, in part, in consideration of the price transparency that exists in a market: in order to satisfy the *liquid and readily marketable* requirement, a security must be traded in an active market with timely and observable market prices.

In the municipal securities market there exist both transparency and demonstrated consensus with respect to market pricing. Three primary non-bank service providers, individually and collectively, offer pricing clarity to the market: Standard & Poor's Securities Evaluations ("SPSE," also commonly referred to as "J.J. Kenny" pursuant to the original branding), Interactive Data Corporation ("IDC") and Bloomberg Asset Valuation ("BVAL"). Beyond transparency, the evaluations provided by these entities also offer one way to measure market consensus. In their comment letter to the Agencies, Nuveen Asset Management<sup>27</sup> discusses a weekly analysis that they perform in which they compare the prices received from two of these service providers, Standard & Poor's and IDC. As of November 29, 2013, they assert, the market-value weighted average difference, in absolute terms, between the prices provided by the two providers on close to 14,000 CUSIPS with a total market value in excess of \$56 billion was only 1.22%. Moreover, when the universe of assets considered was narrowed to investment grade securities only, the weighted average difference declined to just 0.92%<sup>28</sup>.

There is also transparency with respect to traded prices and yields via the MSRB's EMMA website, which displays the transaction information that banks and broker dealers are required to submit. Again, beyond providing just transparency, readily available traded prices and yields offer the market another means of measuring consensus. In Graph 2 (below) Citi compares J.J. Kenny evaluations to MSRB-reported traded yields on the same CUSIPS for the period from January 1, 2006 through December 31, 2013. The graph displays the daily weighted-average (based on notional traded) difference in yields between the pricing service provider and the market participants that transact in this space. The comparison considers all MSRB-reported trades on fixed-rate, investment grade securities, exclusive of BBB-rated bonds as Citi would generally not expect to hold or include these in its stock of HQLA. As demonstrated, even in the outlier scenarios the weighted average difference is, on an absolute basis, less than 30 bps. Moreover, as the thin black trend line shows, the 30-day moving average of these differences is significantly lower. The simple average of the weighted average differences over the entire period, on an absolute value basis, is just 3 bps.

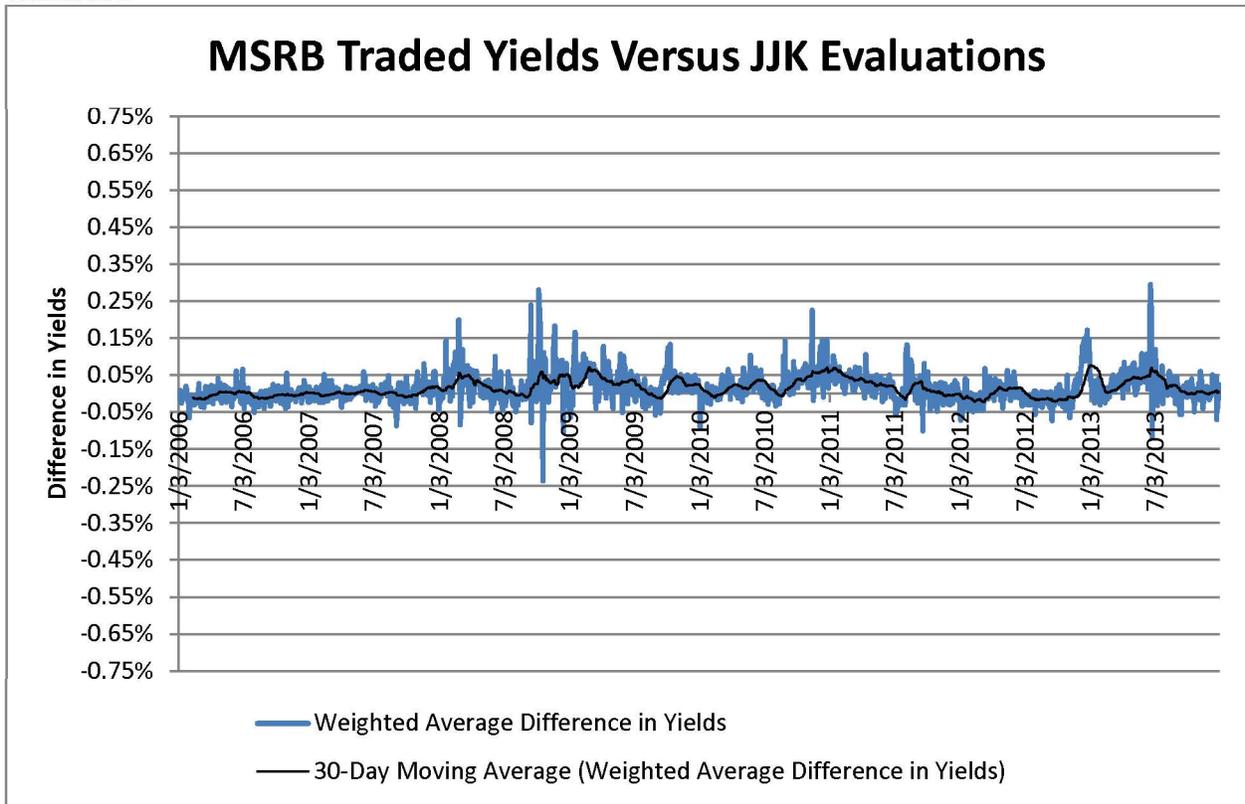
Thus, in consideration of the timely and readily-observable market pricing, in conjunction with demonstrated market consensus, Citi believes that investment grade municipal securities clearly satisfy both the Agencies' objective liquidity criteria and the subjective *liquid and readily marketable* requirement, making these assets appropriate for HQLA eligibility.

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<sup>27</sup> Letter from Nuveen Asset Management, LLC, dated January 30, 2014 and posted at [www.regulations.gov](http://www.regulations.gov) on January 30, 2014 under docket ID: OCC-2013-0016-0029.

<sup>28</sup> Reference the section "Easily and readily valued" in the letter from Nuveen Asset Management, LLC, dated January 30, 2014 and posted at [www.regulations.gov](http://www.regulations.gov) on January 30, 2014 under docket ID: OCC-2013-0016-0029.

GRAPH 2 <sup>29</sup>



<sup>29</sup> The weighted-average (based on notional traded) difference in yields between MSRB-reported transactions and J.J. Kenny evaluations on the same CUSIPs for the period from January 1, 2006 through December 31, 2013. The comparison considers all MSRB-reported trades on fixed-rate, investment grade (exclusive of BBB-rated securities as Citi would generally not expect to include these in its stock of HQLA), non-derivative municipal securities, as estimated by Citi based upon a compilation of J.J. Kenny and Bloomberg LP data. The comparison considers all instances in which both the MSRB and JJK yields are greater than 0.00% and less than 20.00%. The comparison excludes all instances in which the absolute value of the difference in yields is greater than 2.00%; such exclusions represent 2.09% of the total number of transactions executed and 0.56% of the cumulative notional traded during the stated time period. Citi expects, pursuant to observation, that a material number of these excluded instances represent short-term lags in indicative information or incomplete data issues which are relatively fleeting in nature. An example would be secondary market transactions in recently-issued securities where indicative data may not be up-to-date in all market participants' systems, particularly transactions that take place between the first sale and first settlement dates.

## ATTACHMENT V: SECURED FUNDING MARKETS

Historical legislative and regulatory treatment of select asset classes has created favorable outlets for financing Treasuries, Agencies, GSE securities and municipal bonds. The corresponding laws and regulations impose fewer restrictions on, and allow for more advantageous terms when, lending cash against these collateral types, making the favorable funding arguably more stable than other forms of financing that are available for corporate bonds and equities. Pursuant to rule 2a-7, issued under the Investment Company Act of 1940, for example, money market funds are able to lend cash via repurchase agreements, where secured with Treasury, Agency or GSE collateral, to banks without any restrictions on counterparty concentration limits and without explicit regard to the public ratings of the counterparty borrowing the funds. Similarly, the Internal Revenue Service (“IRS”), in permitting the pass-through of tax-exempt interest income earned on municipal securities that are funded through partnership structures like Tender Option Bond (“TOB”) trusts, has allowed for the tax-efficient financing of municipal assets by 2a-7 money market funds. U.S. State finance laws also create a well of advantageous funding for securities deemed to be of sufficiently high credit and liquidity value, such as Treasuries, Agencies, GSE securities and municipal bonds: State and local governments are often required to have all monies on deposit with banks secured with assets that have been predefined as eligible collateral (“Preferred Deposits”).<sup>30</sup> In Citi’s experience, Preferred Deposits generally allow public sector entities to lend money to banks without restrictions on counterparty concentration limits, the public ratings of the bank or the public ratings of the collateral pledged if it is the their own debt. Together tax-exempt 2a-7 funding and Preferred Deposits thus provide the municipal market with a large and stable source of financing away from the taxable repo market.

**Table 3**<sup>31</sup>

ASSET GROUP	TRI-PARTY REPO STATISTICS AS OF 1/10/2014		TRI-PARTY REPO STATISTICS AS OF 1/10/2014 + FINANCING AVAILABLE FOR MUNICIPAL SECURITIES	
	COLLATERAL VALUE (\$ bns)	SHARE OF TOTAL	COLLATERAL VALUE (\$ bns)	SHARE OF TOTAL
Agency MBS, CMOs, Debentures & Strips	637.7	41%	637.7	32%
US Treasuries	570.9	37%	570.9	29%
<b>Municipal Securities</b>	<b>NA</b>	<b>NA</b>	<b>446.0</b>	<b>22%</b>
Equities	149.0	10%	149.0	7%
Corporates Investment Grade	48.5	3%	48.5	2%
CMO Private Label	40.6	3%	40.6	2%
Other (CDO, International, Municipal & Whole Loans)	23.5	2%	23.5	1%
ABS Non Investment Grade	22.3	1%	22.3	1%
Corporates Non Investment Grade	20.7	1%	20.7	1%
ABS Investment Grade	19.9	1%	19.9	1%
Money Market	16.0	1%	16.0	1%
<b>TOTAL</b>	<b>1,549.3</b>		<b>1,995.3</b>	

<sup>30</sup> In Citi’s experience, public sector clients accept municipal securities as eligible collateral against their Preferred Deposits.

<sup>31</sup> Tri-Party Repo statistics are as of 1/10/2014, as reported by the Federal Reserve Bank of New York at [http://www.newyorkfed.org/banking/tpr\\_infr\\_reform\\_data.html](http://www.newyorkfed.org/banking/tpr_infr_reform_data.html). Available Municipal Financing includes \$376bn of Preferred Deposits, as reported in the 12/31/13 FDIC Call Report, IC field RCON5590 via website <https://cdr.ffiec.gov/public/PWS/DownloadBulkData.aspx>, and \$70bn of tax-efficient secured TOB funding, as estimated by Citi based upon participating bank 10K's.

Table 3 (above) provides statistics on the tri-party repo market, as aggregated and published by the Federal Reserve Bank of New York. Looking solely at this market, it appears that Treasuries, Agencies and GSE securities have more than 30 times the amount of secured funding as that which is available for municipal bonds. Banks, however, consciously choose not to finance a material amount of municipal assets via repo because other tax-efficient, diversified and stable sources of funding exist. Citi, for example, remarkets an \$11bn Tender Option Bond program and estimates that, in aggregate, the banking system is borrowing roughly \$70bn of cash via such secured 2a-7 financing from tax-exempt money market funds. According to the December 31, 2013 FDIC Call Report, U.S. banks also had \$376bn in Preferred Deposit balances. As of the same date, Citi alone held close to \$8bn in collateralized PSE deposits, approximately \$6bn of which, or close to 75%, were secured with municipal assets. In the two columns in Table 3 that are furthest to the right, Citi has, therefore, also inserted a \$446bn estimate for the secured funding available for municipal assets via tax-exempt 2a-7 and Preferred Deposit financing.

Together these funding outlets provide the municipal market not only a material amount of secured financing from numerous counterparties, but also diversification away from the taxable lending base. Considering these options as well, therefore, provides a far more complete picture of the secured funding markets: the amount of tax-efficient financing available for municipal securities is roughly comparable to that which is available for Treasuries, Agencies and GSE securities via the repo markets.<sup>32</sup> It is for this reason that Citi, in direct response to question 54 of the proposed rule,<sup>33</sup> believes that the outflow rate assumptions assigned to Preferred Deposits should be based upon *both* the funding provider and the assets posted as collateral. It is also why Citi believes that investment grade municipal securities should be eligible for classification as Level 2A liquid assets.

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<sup>32</sup> In direct response to concern expressed by the Agencies, in order to demonstrate that banks could, if necessary, utilize all of the Preferred Deposit funding for municipal assets, we did not add the Preferred Deposit amount to the Treasury or Agency lines in Table 3.

<sup>33</sup> Pursuant to question 54 of the proposed rule, *“the agencies solicit commenters’ views on the proposed treatment of secured funding activities. Do commenters agree with the proposed outflow rates as they relate to the collateral? Why or why not? Should municipal and other public sector entity deposits be treated as secured funding transactions? What, if any, additional secured-funding risk factors should be reflected in the rule?”*

**12 CFR PART 1 – INVESTMENT SECURITIES**

In order to comply with Section 939A of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”), which required that U.S. Federal Agencies remove any references to, or requirements of reliance on, credit ratings in their regulations and, in place of such language, insert new standards of creditworthiness, the OCC amended 12 CFR Parts 1 and 160 in order to include the following revised definition of the term *investment grade*<sup>34</sup>:

*(d) **Investment grade** means the issuer of a security has an adequate capacity to meet financial commitments under the security for the projected life of the asset or exposure. An issuer has an adequate capacity to meet financial commitments if the risk of default by the obligor is low and the full and timely repayment of principal and interest is expected.*

**External Credit Ratings**

*“The OCC’s elimination of references to credit ratings in its regulations, in accordance with the Dodd-Frank Act, does not substantively change the standards institutions should use when deciding whether securities are eligible for purchase under Part 1.”<sup>35</sup>*

*“To comply with the new standard, banks may not rely exclusively on external credit ratings, but they may continue to use such ratings as part of their determinations. Consistent with existing rules and guidance, an institution should supplement any consideration of external ratings with due diligence processes and additional analyses that are appropriate for the institution’s risk profile and for the size and complexity of the instrument.”<sup>36</sup>*

**Formal OCC Guidance**

Together with the final rule, the OCC also issued guidance in order to clarify regulatory expectations with respect to investment decisions and ongoing portfolio due diligence:

*“Guidance describes factors institutions should consider with respect to certain types of investment securities to assess creditworthiness and to continue conducting their activities in a safe and sound manner.”<sup>37</sup>*

*“In addition to regulatory provisions that generally limit national banks and Federal savings associations to purchasing securities that are of ‘investment grade,’ OCC regulations require that*

<sup>34</sup> Final Rule issued by the Office of the Comptroller of the Currency, Department of the Treasury, titled *Alternatives to the Use of External Credit Ratings in the Regulations of the OCC, 12 CFR Parts 1, 5, 16, 28, and 160*, [Docket ID OCC-2012-0005], RIN 1557-AD36, which is contained in Federal Register / Vol. 77, No. 114 / Wednesday, June 13, 2012 / Rules and Regulations.

<sup>35</sup> Final Guidance issued by the Office of the Comptroller of the Currency, Department of the Treasury, titled *Guidance on Due Diligence Requirements in Determining Whether Securities Are Eligible for Investment, 12 CFR Parts 1 and 160*, [Docket ID OCC-2012-0006], RIN 1557-AD36, which is contained in Federal Register / Vol. 77, No. 114 / Wednesday, June 13, 2012 / Rules and Regulations.

<sup>36</sup> OCC Bulletin 2012-18, *Alternatives to the Use of External Credit Ratings in the Regulations of the OCC*, June 26, 2012 at <http://www.occ.gov/news-issuances/bulletins/2012/bulletin-2012-18.html>.

<sup>37</sup> Final Rule issued by the Office of the Comptroller of the Currency, Department of the Treasury, titled *Alternatives to the Use of External Credit Ratings in the Regulations of the OCC, 12 CFR Parts 1, 5, 16, 28, and 160*, [Docket ID OCC-2012-0005], RIN 1557-AD36, which is contained in Federal Register / Vol. 77, No. 114 / Wednesday, June 13, 2012 / Rules and Regulations.

*national banks and Federal savings associations conduct their investment activities in a manner that is consistent with safe and sound practices. Specifically, national banks and Federal savings associations must consider the interest rate, credit, liquidity, price and other risks presented by investments, and the investments must be appropriate for the particular institution.*<sup>38</sup>

*“While Type I obligations do not have to meet the investment grade criteria to be eligible for purchase, all investment activities should comply with safe and sound banking practices as stated in 12 CFR 1.5... Municipal bonds,” therefore, “should be subject to an initial credit assessment and then ongoing review consistent with the risk characteristics of the bonds and the overall risk of the portfolio.*<sup>39</sup>

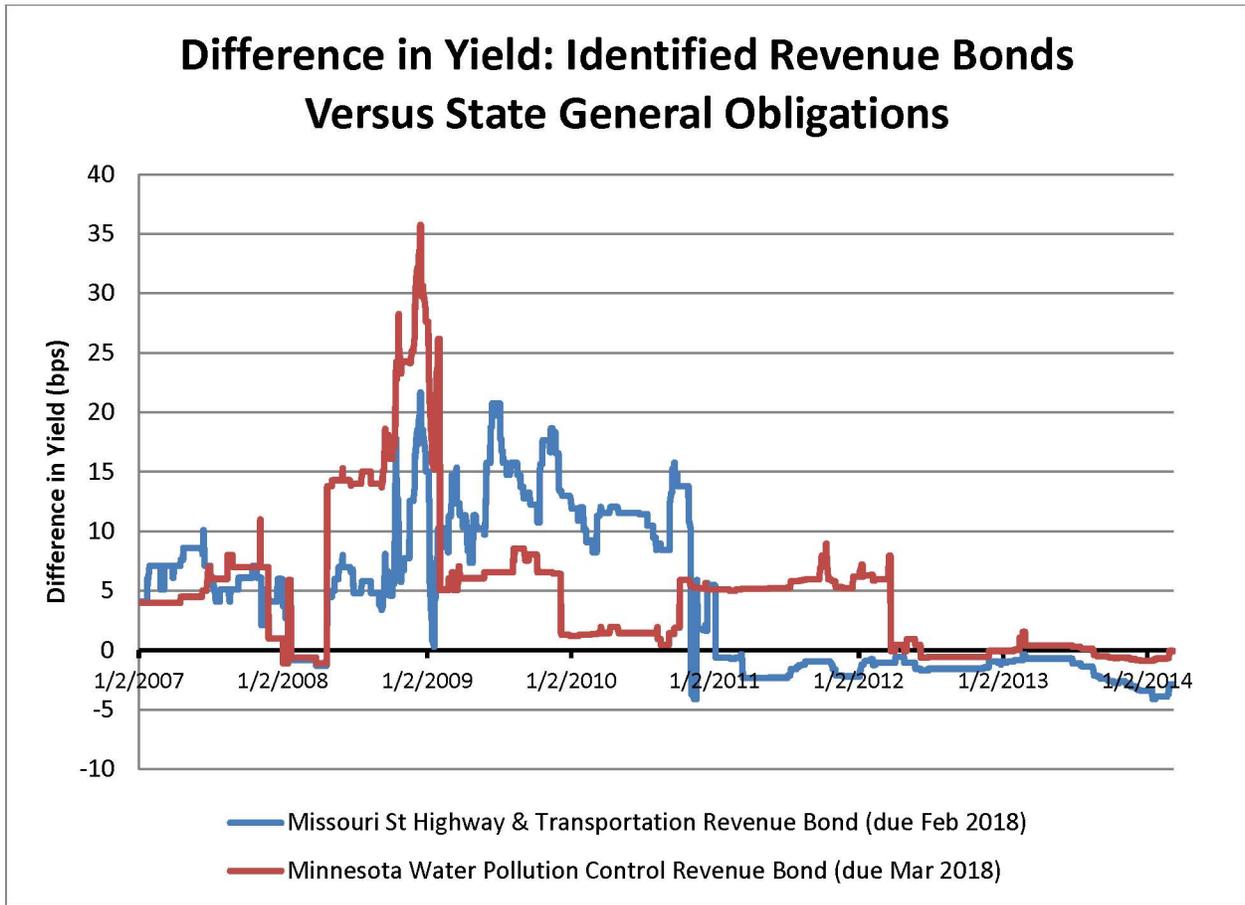
*“The following matrix provides examples of factors for national banks and Federal savings associations to consider as part of a robust credit risk assessment framework for designated types of instruments. The types of securities included in the matrix require a credit-focused pre-purchase analysis to meet the investment grade standard or safety and soundness standards.”<sup>40</sup>*

KEY FACTORS	Corporate Bonds	Municipal Government General Obligations	Revenue Bonds
Confirm spread to U.S. Treasuries is consistent with bonds of similar credit quality	X	X	X
Confirm risk of default is low and consistent with bonds of similar credit quality	X	X	X
Confirm capacity to pay and assess operating and financial performance levels and trends through internal credit analysis and/or other third party analytics, as appropriate for the particular security	X	X	X
Evaluate the soundness of a municipal's budgetary position and stability of its tax revenues. Consider debt profile and level of unfunded liabilities, diversity of revenue sources, taxing authority, and management experience		X	
Understand local demographics/economics. Consider unemployment data, local employers, income indices, and home values		X	X
Assess the source and strength of revenue structure for municipal authorities. Consider obligor's financial condition and reserve levels, annual debt service and debt coverage ratio, credit enhancement, legal covenants, and nature of project			X

<sup>38</sup> Final Rule issued by the Office of the Comptroller of the Currency, Department of the Treasury, titled *Alternatives to the Use of External Credit Ratings in the Regulations of the OCC, 12 CFR Parts 1, 5, 16, 28, and 160*, [Docket ID OCC-2012-0005], RIN 1557-AD36, which is contained in Federal Register / Vol. 77, No. 114 / Wednesday, June 13, 2012 / Rules and Regulations.

<sup>39</sup> Final Guidance issued by the Office of the Comptroller of the Currency, Department of the Treasury, titled *Guidance on Due Diligence Requirements in Determining Whether Securities Are Eligible for Investment, 12 CFR Parts 1 and 160*, [Docket ID OCC-2012-0006], RIN 1557-AD36, which is contained in Federal Register / Vol. 77, No. 114 / Wednesday, June 13, 2012 / Rules and Regulations.

<sup>40</sup> Ibid.



<sup>41</sup> Daily difference between the J.J. Kenny yield on Missouri St Highway & Transportation Revenue Bond, due Feb 2018, CUSIP 60636WJG1, and the average of the J.J. Kenny yields on two State General Obligations (State of Delaware General Obligation, due Mar 2018, CUSIP 246380B65, and State of North Carolina General Obligation, due Apr 2018, CUSIP 658256VG4) for the period from January 2, 2007 through March 10, 2014. Daily difference between the J.J. Kenny yield on Minnesota Water Pollution Control Revenue Bond, due Mar 2018, CUSIP 604114QQ4, and the average J.J. Kenny yields on two State General Obligations (State of Delaware General Obligation, due Mar 2018, CUSIP 246380B65, and State of North Carolina General Obligation, due Apr 2018, CUSIP 658256VG4) for the period from January 2, 2007 through March 10, 2014.