MARKET VECTORS® ETFs

Municipal Market Advisors' (MMA) recent white paper looks back at the five years since the inception of the first municipal bond Exchange Traded-Funds (ETFs).

To: Investment Professionals and their Clients

From: Market Vectors ETFs

Subject: **Municipal Exchange Traded Funds: Product Evolution and Innovation 2007-2012**

MMA has completed a research study entitled "Municipal Exchange Traded Funds: Product Evolution and Innovation 2007-2012." Its goal is to help investors have an historical context of the inception and growth of municipal bond mutual funds and ETFs, as well as their role in the municipal product mix with their distinct attributes. MMA's research study was commissioned by Van Eck Associates Corporation ("VEAC"), sponsor of Market Vectors ETFs. However, VEAC had no input into the findings of MMA's research study.

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For a full copy of the report contact Municipal Market Advisors.

PLEASE NOTE THE FOLLOWING AS YOU READ MMA's REPORT.

1. “MMA concluded: After five years, the municipal ETF investment vehicle has established itself as part of the municipal market product mix. The distinctive attribute of on-demand execution, on an exchange, provides investors with a degree of transaction flexibility that replicates the ownership of individual bonds, with the added benefit of the products’ incorporated diversified portfolios and strategies. The underlying ETF index NAVs correlate highly with comparable mutual fund products. Therefore, individual investors derive access to fund strategies, but with lower costs and inter-day market access for managing a personal investment plan.”

2. Market Vectors suggests that any investment in a municipal bond ETF should be part of an overall investment program, not a complete program. It involves various risks including the risk of losing money. The Market Vectors Municipal Bond ETFs, for example, are subject to risks associated with its investments in municipal bonds which are subject to risks related to litigation, legislation, political change, conditions in underlying sectors or in local business communities and economies, bankruptcy or other changes in the issuer’s financial condition, and/or the discontinuance of taxes supporting the project or assets or the inability to collect revenues for the project or from the assets. Bonds and bond funds will decrease in value as interest rates rise. Additional risks include credit, interest rate, call, reinvestment, tax, market and lease obligation risk. High-yield municipal bonds are subject to greater risk of loss of income and principal than higher-rated securities, and are likely to be more sensitive to adverse economic changes or individual municipal developments than those of higher-rated securities. Please see a fund prospectus for information on these and other risk considerations.

3. MMA’s study cites several ETFs and mutual funds not sponsored by Van Eck Associates Corporation, adviser to the Market Vectors Municipal Bond ETFs. Please see following page for standardized performance for the Market Vectors Municipal Bond ETFs.

4. MMA is an independent research firm based in Concord, Massachusetts, founded in 1995. MMA’s core business is to provide strategic analysis and commentary on historical and quantitative conditions of the US municipal market. MMA and Van Eck Securities Corporation are independent, unaffiliated organizations.

   - MMA determined the study methodology, conducted the research, analyzed and interpreted the results, and developed the final report.
   - Market Vectors/Van Eck commissioned and funded the study.

5. Before investing in any fund, the investor should read its prospectus carefully. For a free prospectus and summary prospectus for any Market Vectors ETFs, please call 888.MKT.VCTR | (888.658.8287) or visit marketvectorsetfs.com. **Investing involves substantial risk and high volatility, including possible loss of principal. Bond and bond funds will decrease in value as interest rates rise. An investor should consider the investment objective, risks, charges and expenses of the Fund carefully before investing**.

PERFORMANCE OF MARKET VECTORS MUNICIPAL BOND ETFs

Fund			Quarter-End 3/28/2013 1 YR	3 YR†	5 YR†	LIFE†	Expenses Gross %	Net %	Inception
Market Vectors High-Yield Municipal Index ETF*	HYD	PRICE	10.34	8.40	-	12.78	0.35	0.35	2/4/2009
		NAV	11.78	8.99	-	12.98			
Market Vectors Long Municipal Index ETF*	MLN	PRICE	5.85	7.27	5.64	4.34	0.24	0.24	1/2/2008
		NAV	6.71	7.60	5.81	4.46			
Market Vectors Intermediate Municipal Index ETF*	ITM	PRICE	4.53	6.39	5.97	5.63	0.24	0.24	12/4/2007
		NAV	5.35	6.61	6.21	5.72			
Market Vectors Short Municipal Index ETF*	SMB	PRICE	1.97	2.94	3.62	3.65	0.20	0.20	2/22/2008
		NAV	1.98	2.98	3.66	3.61			
Market Vectors Pre-Refunded Municipal Index ETF*	PRB	PRICE	1.35	1.77	-	1.81	0.24	0.24	2/2/2009
		NAV	1.59	2.02	-	1.90			
Market Vectors CEF Municipal Income ETF**	XMPT	PRICE	8.90	-	-	12.99	3.63	1.67	7/12/2011
		NAV	8.69	-	-	12.74			

*The Investment Management Agreement between Market Vectors ETF Trust and Van Eck Associates Corporation (the "Adviser") provides that the Adviser will pay all expenses of the Fund, except for the fee payment under the Investment Management Agreement, interest expense, offering costs, trading expenses, taxes and extraordinary expenses.

**The Adviser has agreed to waive fees and/or expenses from exceeding 0.40% of average daily net assets per year until at least 9/1/13. The expense limitation is expected to continue until the Fund's Board of Trustees acts to discontinue all or a portion of such expense limitation. The cap excludes certain expenses, such as interest.

† Annualized. **The performance quoted represents past performance. Past performance is no guarantee of future results.** Performance information for the Market Vectors ETFs reflects temporary waivers of expenses and/or fees. Had the Market Vectors ETFs incurred all expenses, investment returns would have been reduced. The investment return and value of shares of Market Vectors ETFs will fluctuate so that an investor's shares, when sold, may be worth more or less than their original cost. Performance may be lower or higher than performance data quoted. Fund returns assume that dividends and capital gains distributions have been reinvested in the Fund at NAV.

The **"net asset value" (NAV)** of an ETF is determined at the close of each business day, and represents the dollar value of one share of the ETF; it is calculated by taking the total assets of an ETF subtracting total liabilities, and dividing by the total number of shares outstanding. The NAV is not necessarily the same as an ETF's intraday trading value. Investors should not expect to buy or sell shares at NAV. Total returns are based upon closing **"market price" (price)** of the ETF on the dates listed.

MMA The Power of Independence

MUNICIPAL MARKET ADVISORS, INC.

Municipal Exchange Traded Funds

Product Evolution and Innovation: 2007 to 2012

Tom Doe, Tim Holler & Matt Posner

April 2013

About Municipal Market Advisors, Inc. – www.mma-research.com

Municipal Market Advisors (**MMA**) is an independent research firm based in Concord, Massachusetts, founded in 1995. **MMA**'s core business is to provide strategic analysis and commentary on historical and quantitative conditions of the U.S. municipal market. In 2012, **MMA** introduced its newest service, the Portfolio Credit Benchmark (PCB), an enterprise risk solution for bank portfolios to meet their regulatory needs pertaining to the credit review of municipal bonds.

Over 300 organizations receive **MMA**'s research, which value the firm's honest and timely perspective on key industry issues. **MMA**'s clients include leading investment firms, banks, security dealers, financial advisors, issuers and regulators. **MMA** is proud to have the Securities Exchange Commission, Federal Reserve Banks of New York, Atlanta, Cleveland and Boston, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency and Pew Foundation as clients. **MMA** also maintains relationships with staff members at a number of influential organizations including: National Governors Association, Government Finance Officers Association, National Federation of Municipal Analysts, Council of Economic Advisers, Government Accounting Standards Board, and SIFMA.

EXECUTIVE SUMMARY

This paper represents Municipal Market Advisors' (**MMA**) first examination of the municipal ETF product. Introduced in 2007, municipal investors have embraced exchange traded funds (ETFs). Municipal ETFs' assets under management (AUM) have grown faster than mutual funds, during their first 5 years of existence, despite several unusual periods that have challenged municipal investors. Overall and during these periods of extreme stress the on-demand execution through an exchange listing has provided greater flexibility to investors. ETF products also correlate well with broad municipal market indices and comparable mutual funds. The daily transparency of an ETF's portfolio enables an investor the opportunity to "know what they own." The added flexibility of on-demand execution and transparency does, however, increase the educational burden on the investor, as the ETF has greater intraday price volatility than the NAV's of either an ETF portfolio or mutual fund. An investor or advisor must have greater product and market knowledge in order to understand price behavior context and adhere to their investment discipline amid challenges. Finally, the ETF product offerings from the major investment platforms (including those of large mutual fund complexes) facilitate the execution of a variety of strategies to ensure desired maturity and credit exposure to the municipal sector and while also garnering tax-exempt income at lower management and transaction fees than their mutual fund cohort.

EMERGENCE & GROWTH OF A NEW PRODUCT

Historically, the financial industry has worked to create products to service two key constituents of the municipal industry: issuers and individual investors. It is critically important that larger funding pools are available to facilitate issuers' access to the capital markets to finance U.S. infrastructure needs. Therefore, the evolution of mutual funds in 1976, and now the ETF product, enable investor platforms the ability to create larger sums of investor capital to assist the funding of key projects for U.S. growth. While these products create a more efficient demand component to the benefit of issuers, the end investor is provided a means to invest in the historically safe investment sector, relative to other fixed income investments.

Ownership of Municipal Bonds by Investor Segment									
	$ Outstanding ($Bn)						Change		
Investor Segment	4q11		3q12		4q12		$ Qtr	% Qtr	% Ann
Households	1,812	48.7%	1,726	46.4%	1,679	45.2%	(47)	-3%	-7%
Money Funds	357	9.6%	320	8.6%	337	9.1%	17	5%	-6%
Mutual Funds	550	14.8%	622	16.7%	640	17.2%	19	3%	16%
Closed End Fds	83	2.2%	85	2.3%	86	2.3%	1	2%	4%
Non-Fin. Cos.	19	0.5%	25	0.7%	23	0.6%	(2)	-7%	21%
Banks	301	8.1%	353	9.5%	366	9.8%	13	4%	22%
Broker Dealers	31	0.8%	29	0.8%	27	0.7%	(2)	-8%	-14%
Prop/Cas. Ins.	331	8.9%	330	8.9%	329	8.9%	(1)	0%	-1%
Life Insurers	122	3.3%	122	3.3%	121	3.3%	(1)	-1%	0%
GSEs and Gov'ts	21	0.6%	18	0.5%	17	0.5%	(1)	-4%	-17%
Foreign Buyers	73	2.0%	69	1.9%	68	1.8%	(1)	-1%	-7%
Total	**3,719**	**100%**	**3,720**	**100%**	**3,715**	**100%**	**(5)**	**0%**	**0%**

Figure 1: Individual (i.e., households) ownership of municipal bonds remains the largest investor segment, but the total is declining as investors seek professional oversight amid greater sensitivity to credit and default risk. ETFs' $12B in AUM are a small segment, but growing at a fast pace.

Both mutual funds and ETFs enable individual investors important credit diversification to mitigate the risks associated with infrequent, yet present, default risks.

The evolution of the mutual fund products has been steady since inception and as of the 4th quarter 2012 represented the second largest investor segment of municipal ownership, trailing only direct individual ownership of tax-exempt bonds. Households represent the largest holders, $1.7 trillion, followed by mutual funds, $640 billion. The important trend has been the decline of individual ownership, -7% year-over-year as compared to the 16% increase in mutual funds, **Figure 1**. The greater investor sensitivity has precipitated greater individual interest in professional management and oversight.

In 1976, the municipal bond fund product was introduced to the financial marketplace. Investors had predominantly owned municipal bonds directly through a relationship with a professional advisor. Following the near default of New York City in the mid-1970s, there was investor awareness of the value of credit risk diversification and professional oversight of a portfolio. Mutual fund growth began somewhat tentatively. Through the first 23 quarters of existence, 1976-1981, AUM increased to a sum just greater than $5B, **Figure 2**. Of importance during this period was the stability of AUM when mutual fund performance was weak because of not only the adverse interest rate conditions, but also the poor secondary liquidity in the municipal market. There were few mutual fund platforms in the early years of the product and most bond purchases were conducted through the primary market. Discovered amid the turmoil of late 1970s and 1980s, was that the new product also created an amplified liquidity risk due to the ease an investor could redeem shares and thus stress the not yet matured system. Initially, amid a rate crisis, the secondary market liquidity for the larger-sized transactions from the funds was insufficient to meet redemptions. The activity generated adverse valuations for the investors left behind as dealer firms were not yet able to sufficiently accommodate investors' greater flexibility to enter and exit the product. The greater demands on secondary liquidity required a new market iteration of maturity to accommodate the new investor expectations of liquidity.

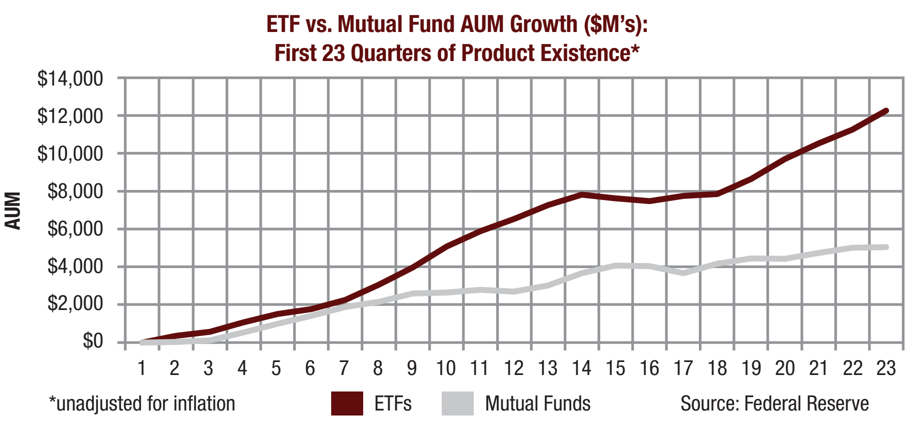

Figure 2: In the start-up periods for mutual funds, assets grew $5B, and for ETFs, $12B.

In contrast to the initial asset growth of mutual funds, the ETF introduction has benefitted from a more favorable interest rate period and the maturation of the municipal bond industry. In the first 23 quarters of ETFs' existence, AUM has grown to more than $12B, **Figure 2**, with all but $1B of the assets concentrated across four ETF providers, **Figure 7**.

Another comparison of ETFs' and mutual fund growth in their respective early stages is comparing the products' assets as a percent of household assets. **Figure 3** compares the percent increase that each new product experienced during its introductory period. Mutual funds initial offering reflected a fast growth as compared to households, jumping to 3% by the end of 1978. However, over the next 3 years the percentage remained stable. Once again this latter period was challenged by adverse interest rate conditions. The ETF growth as a percent of individual holdings while far smaller of a market, that is 30 years more mature than when funds were introducted, the pace of growth has been consistently steeper. The greater pace of the upward momentum confirms the 1) favorable market conditions and 2) the increased desire for a managed diversified portfolio. The latter is a characteristic exemplified in the asset growth of both ETF and mutual funds since 2010 as compared to the decline in household ownership, **Figure 4**. The explosive pace of growth of the ETF product is also illustrated in **Figure 5**, as ETFs' 434% increase in assets since 2008 is testimony to the attraction of the product to individuals and their financial advisors.

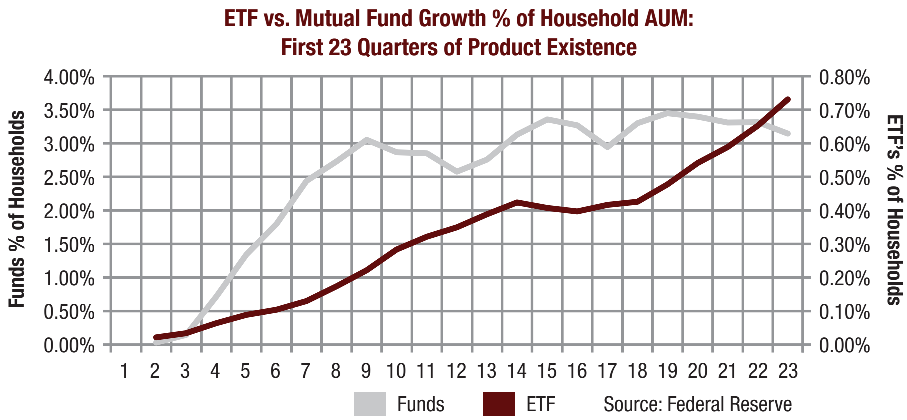

Figure 3: Mutual funds as a percent of household owner grew in the first 8 quarters and then tracked sideways, while ETF attraction of assets, while smaller as a percentage, has been steady at a fast pace in its initial introduction.

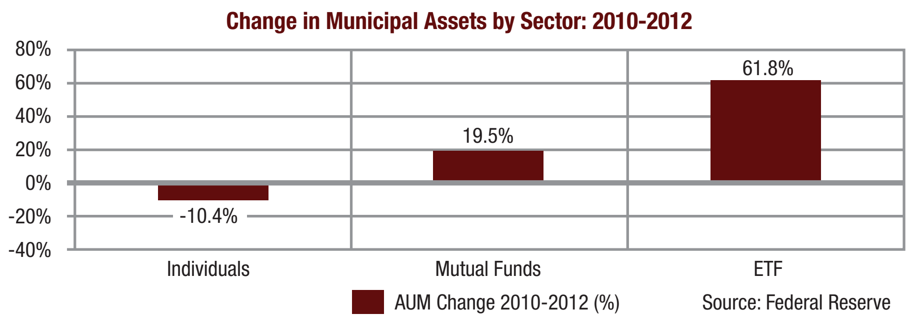

Figure 4: The demand for professional management of municipal investments is a growing trend since 2008, but especially after 2010 when: 1) municipal bonds were no longer predominantly insured and no longer carried an "AAA" rating, 2) Meredith Whitney's erroneously predicted $100 billion of municipal defaults, 3) Jamie Dimon incorrectly stated an increase in municipal bankruptcies and 4) individual investors lost confidence in managing their own municipal portfolios.

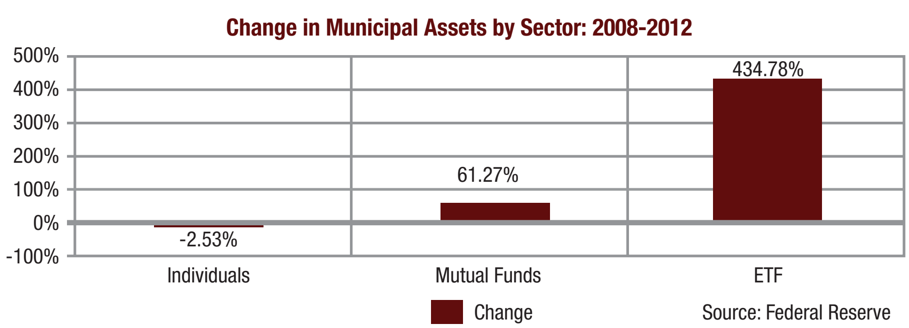

Figure 5: Smaller assets can result in greater percentage growth of a new product, however; the ETF growth has been substantial.

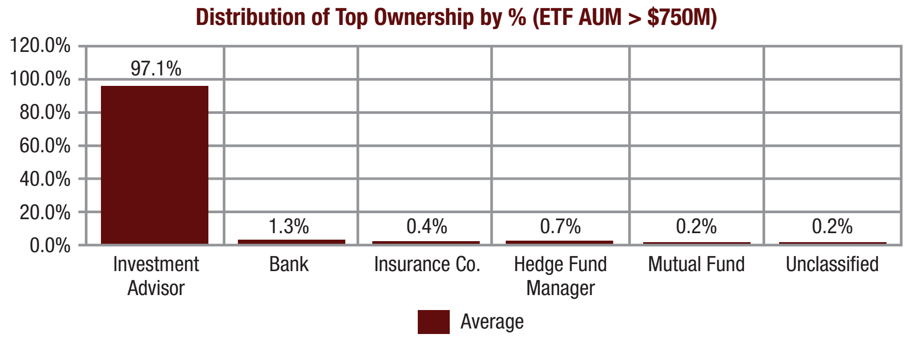

Figure 6: ETFs' "on-demand" execution during the trading session places greater importance on market knowledge.

ETF HOLDERS

Individuals are largely the ultimate holders of municipal ETFs, however, the data associated with the access to the product is informative to the investment behavior and the price volatility associated with the share prices. **MMA** averaged the ETF holders data for the 6 largest municipal ETFs (each ETF was essentially the same), and the result was that 97% of the ETF assets were recorded as the "holder" being a financial advisor, 1.3% owned by banks and 0.7% in the possession of a hedge fund, **Figure 6**. The growth of the independent fee-based advisor has coincided with the uncertainty in the municipal market. The divergent trends of the ratings agencies' upgrades and downgrades, the loss of AAA ratings on most bonds because of the demise of bond insurance, and the persistent headlines concerning public pensions have encouraged and justified individuals to pursue an advisor for their municipal bond investment.

ETF PLATFORMS & FEES COMPARED TO MUTUAL FUNDS

MMA sought to identify the value proposition associated with the ETF as compared to mutual funds. To focus the comparison for illustrative purposes, **MMA** examined 18 ETFs with particular longevity offered on four different investor platforms, **Figure 7** (the ETFs highlighted in orange have the largest AUM, greater than $600 million). The discovery was as expected in that the expense ratios ranged from as low as 0.20% to as high as 0.35%, and were below the fees associated with the mutual fund universe. The average expense ratio for the 18 ETFs was 0.25%. In contrast, the municipal bond mutual fund expense ratio averages 0.97%. The small difference among the ETF expenses does not appear to correlate with asset size in the ETF. (At the time of this report there were 29 municipal ETFs in existence, 25 had AUM in excess of $30 million. Four of the newer municipal ETFs have notable characteristics – 3 are "actively managed " and the 4th is a new high-yield product with an expense ratio of 0.45%.) **MMA** compares the 18 mature ETFs' costs with the fees associated with four large and popular municipal bond funds as a means of illustrating the range of expenses associated with a mutual fund. Vanguard offers the lowest management fees and expense ratios of 0.12% for its two large investment-grade funds, while Nuveen's high-yield expense ratio is 0.65%. The expense ratio is a key comparative measure for an investor, but funds can also have sales fees that can influence an investor's decision-making process when reallocating assets. For example, even though the top-performing, though highly volatile, Oppenheimer high-yield fund has a relatively reasonable/low management fee of 0.37%, the fund includes a 4.75% front-loaded fee to enter the fund and an additional 0.15% in 12b-1 fees. Finally, the expense ratio for the Oppenheimer fund is 1.07% as compared to the 0.35% for the Market Vectors' high-yield ETF.

Also notable are the distinctive choices that the four investor platforms made in the ETF strategies offered through their products. The Blackrock and Nuveen ETF products reflected the biases of a large mutual fund complex in the tax-exempt space. Both offer national long- and short-term products as well as state-specific New York and California funds. New York and California historically have represented the largest population of municipal investors, as well as states that issue considerable tax-exempt debt. The PowerShares platform opted to create ETFs defined as "insured." Prior to 2008, such a strategy for product creation made considerable marketing sense given the plethora of municipal bonds holding a AAA rating as a result of the insurance. But since 2008, and the deterioration of insurance companies ratings

Symbol	Type	TRR YTD %	Sponsor	$AUM (12/12)	(01/13)	AUM (3/20) $MM	Front-Load Fee	Back-Load Fee	Management Fee	12b1 Fee	Performance Fee	Expense Ratio
MUB	National		Blackrock	$3,480.0	$3,580.0	**$3,600.0**						0.25%
NYF	New York			$128.0	$134.3	**$138.4**						0.25%
CMF	CA			$282.1	$290.0	**$310.4**						0.25%
SUB	ST National			$620.9	$627.6	**$632.9**						0.25%
PWZ	Ins. CA		Powershares	$72.1	$76.2	**$76.1**						0.28%
PZA	Ins. Muni			$1,010.0	$982.2	**$1,050.0**						0.28%
PZT	Ins. NY			$74.5	$68.8	**$71.6**						0.28%
PVI	VRD			$295.0	$275.0	**$253.7**						0.25%
TFI	Nuveen Muni		Nuveen	$1,210.0	$1,280.0	**$1,310.0**						0.30%
INY	Nuveen NY			$31.2	$31.3	**$31.3**						0.20%
SHM	Nuveen ST			$1,610.0	$1,590.0	**$1,620.0**						0.20%
CXA	Nuveen CA			$99.6	$104.7	**$107.1**						0.20%
VRD	SPDR VRD			$12.0	$12.0	**$12.0**						0.20%
SMB	Market Vectors Short		Market Vectors	$177.4	$174.3	**$183.9**						0.20%
ITM	Market Vectors Int			$690.0	$735.8	**$775.5**						0.24%
MLN	Market Vectors Long			$119.6	$120.0	**$121.2**						0.24%
HYD	Market Vectors H-Y			$1,040.0	$1,030.0	**$1,100.0**						0.35%
PRB	Market Vectors Pre-Re			$36.0	$35.6	**$35.6**						0.24%
TOTAL				**$10,988.5**		**$11,429.6**						
MUTUAL FUNDS												
ORNAX	High-Yield		Oppenheimer			**7,030.00**	4.75%	0	0.37%	0.15%	0	1.07%
NHMRX	High-Yield		Nuveen			**9,130**	0	0	0.52%	0	0	0.65%
VWUIX	Int-IG		Vanguard			**39,200**	0	0	0.10%	0	0	0.12%
VWULX	Long-IG		Vanguard			**8,170**	0	0	0.09%	0	0	0.12%

Figure 7: ETFs' absence of front-load and 12b-1 fees, as well as low expense ratios, reduce the barriers to investors so that their portfolio decisions are performance and market related and not inhibited by fee decisions. The largest funds are highlighted.

and the elimination of all AAA bond insurance companies, there is no longer a marketing or investor advantage associated with the strategy. Market Vectors also chose a distinctive path by structuring its ETF products based on maturity – short, intermediate and long structure – and credit – pre-refunded and high-yield. Market Vectors' products allowed its holders to manage interest rate risk as well as take advantage of the interest income from lower-rated credits (that also still have a very low default rate). Market Vectors' investors have been able to derive the benefits of the general advantageous trend of the past two years in which individual investors have pursued higher income by extending maturities out the yield curve and down the rating scale to lower-rated securities whose higher risk offered higher income. The success of Market Vector's high-yield product has prompted recent competition in the space, as Nuveen has introduced a comparable product but with a 28% higher annual fee structure (0.45% vs. 0.35%). More importantly, should interest rates rise in future years, the Market Vectors' fund offerings provide yield curve diversity so that individuals and their advisors can manage their interest rate risk while deriving the benefits of tax-exempt income. **Figures 8** and **9** reflect the TRR at the end of 2011 and 2012 for the leading ETF funds.

Aside from the fee issue, there is the importance of timely information and transparency associated with the holdings of the portfolio that drives the investment returns.

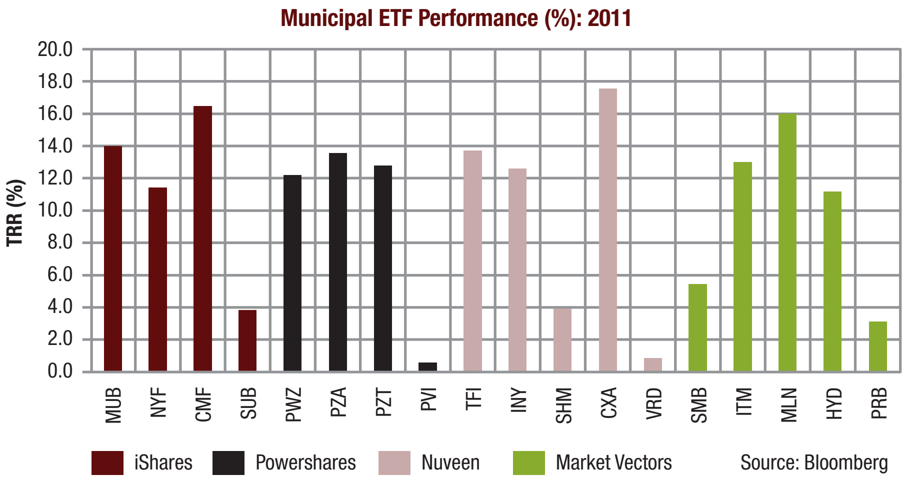

Figure 8: Market Vectors' intermediate, long and high-yield funds generated returns in excess of 10% in 2011, while California investors derived the benefits of a troubled state's high yields and improved efforts to resolve its fiscal stress.

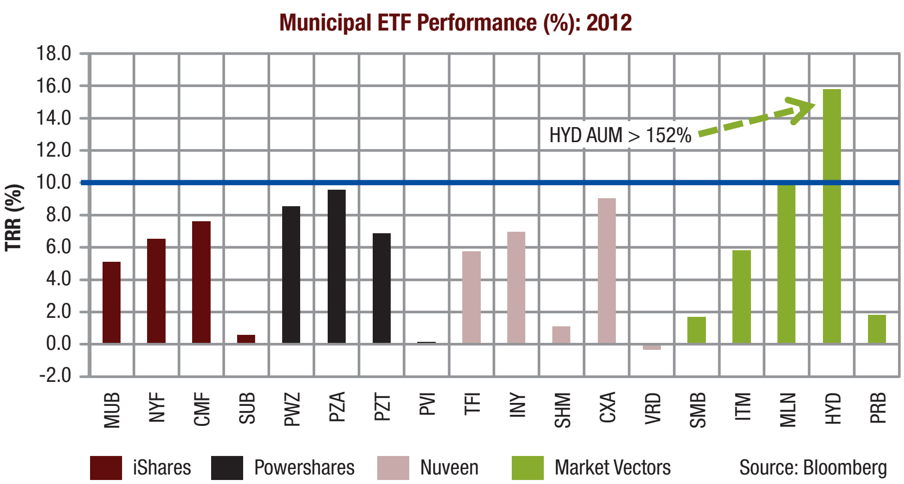

Figure 9: Market Vectors' high-yield fund (HYD) led all ETF returns in 2012, 16%, and the second leading ETF was Market Vectors' long fund, MLN. The investor demand for yield was a dominant theme in 2012 as Market Vectors' HYD led AUM growth, up 152%.

Mutual funds report their holding on a quarterly basis, whereas ETFs disclose their investments on a daily basis. The timeliness of the disclosure of investments is consistent with the basic tenants of the ETF product, which is to provide investors a consistent investment portfolio and intraday "on-demand" execution. The mutual fund investment continues to maintain its end-of-day investment and redemption.

Before examining the relationship between the ETF price, underlying NAV of the ETF portfolio and the mutual fund's NAV, it is important to discuss the expectations associated with the ETF regarding the term "liquidity." In 2009, following the subprime meltdown, Wellington Management developed tools to evaluate market liquidity and in doing so addressed investors' expectations when presented with a liquid security. The Wellington paper (*Introducing LiEF: The Liquidity Evaluation Framework, Wellington Management, May, 2009*) stated that investors believe that a "liquid" investment: 1) trades on demand, 2) has transparent pricing, 3) has an ability to trade large quantities, 4) has low transaction costs, and, 5) expects settlement and clearance to occur with low cost and risk. In addition, when investors initially enter a liquid investment, they 1) want to know speed of execution when funding, and, 2) upon withdrawal, they want to know that selling will not adversely affect their performance.

The municipal ETF meets most of the investors' expectations outlined by Wellington. Nonetheless, the municipal cash market's historically inconsistent liquidity is the Achilles' heel in a weak market environment for not only the ETF but also for any transaction of an individual municipal bond and any other associated product, be it a fund product, swap or derivative rate lock. Municipal cash market liquidity is extremely narrow. For the last five years, the MSRB transaction data has revealed that 50% of customer transactions are conducted with five securities firms. In addition, a mere 1% of the outstanding par amount of the municipal market is transacted each day. Therefore, the municipal investor is vulnerable to a limited number of firms available to provide not only a market for a security but also to the market being reasonable relative to the evaluation, which defines market price. Given the small amount of outstanding securities transacted and the numerous issuers (>55,000) and the number of individual securities (>1 million) that make up the $3.7 trillion market, a dormant or stressed market environment can compromise both important price discovery for executable evaluations as well as liquidity. Historically, the greatest risk to the value of a municipal bond has been when investors choose to redeem their mutual fund investments unexpectedly or in a size that exceeds the willingness of security firms to provide an orderly transaction context. Particularly in these environments of adverse stress any urgent seller of a municipal security can become victims of those who are providing a bid and "liquidity." These fast-moving markets can result in a significant disparity between executed trades (for an ETF conducted intraday on an exchange) and evaluations provided for an index or fund at the end of a trading session. It is this disparity where the final expectation of liquidity can be challenged.

ATTRIBUTES AND RISKS ASSOCIATED WITH ACCESS TO ON-DEMAND EXECUTION

During the time in which municipal ETFs have been introduced to investors there have been periods of extreme market stress that have compromised liquidity and challenged the ability of evaluation services to provide a value that represents a reasonable expectation of an executable price.

The first adverse period was Fall 2008, **Figure 10**, and the second was in 4Q2010, **Figure 11**. In between and after there were also periods of relative sharp yield movements that produced disparities between executable prices and evaluations. Both figures compare the weekly outflows from municipal bond funds to the cumulative decline of fund assets. It is these periods of extreme stress and volatility that can be unnerving to investors because of the price volatility, but also highlight the value to the educated investor who recognizes the causes for disparities and can use intraday transactions to their advantage. In addition, an informed investor can act promptly on information that allows for principal savings ahead of adversity or timely reallocation to more defensive municipal products.

As these periods are compared and illustrated, it is important to recognize that one of the greatest attributes of the municipal ETF, on-demand execution through an exchange, can 1) be subject to adverse illiquid periods comparable to the underlying cash market, and, 2) reflect a significant disparity between the executable price and ETF-evaluated NAV. The result is that to derive the benefits of the timely execution attribute, the municipal ETF investor must become more aware of the market context either through their own education or through a financial advisor's guidance. Simply stated, just because there is an exchange aspect to an investment product does not assure that all the criteria and expectations associated with a liquid investment will be realized.

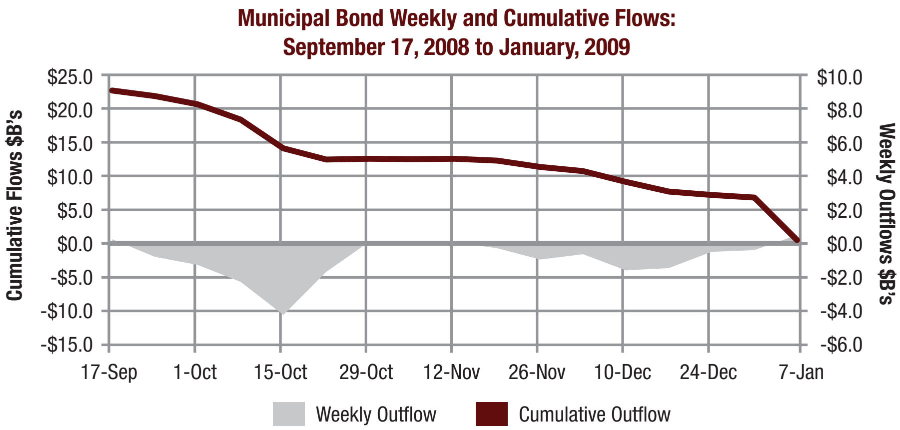

Figure 10: Mutual fund redemptions occurred as the municipal market underperformed other fixed-income investments because of the de-leveraging of "Tender Option Bond" (TOB) programs. These programs represented the primary demand component of the municipal market between 2002 and 2007 and the leverage assets were held by proprietary areas of investment banks and hedge funds. The former was relied upon to provide liquidity to investors but could not in 2008 and 2009 as expected by both institutional and retail investors, because of their own internal problems. Leading high-yield leverage municipal bond mutual funds lost more than -30% during the de-leveraging period.

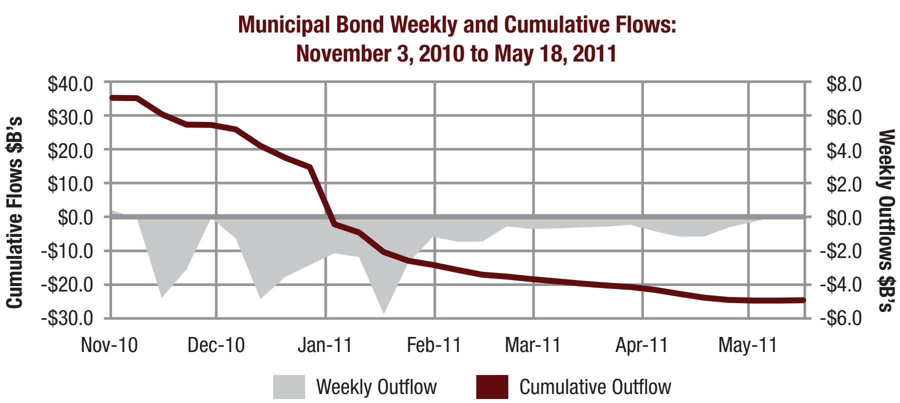

Figure 11: 4Q10 and 1Q11 reflected a period of municipal investors fleeing the market. Analyst Meredith Whitney aggressively promoted errant research on financial and popular media outlets that raised fears among investors. S&P's downgrade of 50% of the municipal tobacco sector to "junk" status prompted mass mutual fund liquidations, as leading funds (specifically Oppenheimer's high-yield fund, ORNAX) suffered sharp and considerable losses. Following the losses in leading funds on November 12, 2010, mutual investors withdrew $5B from mutual funds that prompted a continued outflow through 1Q11.

PERFORMANCE DURING EXTREME PERIODS IN THE MUNICIPAL MARKET: 2008 to 2012

The first 5 years of ETFs' evolution have included periods of great municipal market volatility, stress and challenges. This environment has been excellent to compare the tendencies and behavior of the ETF product to its mutual fund brethren. Specifically the two periods illustrated in **Figures 10** and **11** offer comparisons between leading ETF products and representative mutual funds. **Figure 12** provides the percent change of Market Vectors' intermediate (ITM), long (MLN) and high-yield (HYD) funds, Blackrock's MUB (the largest municipal ETF), Vanguard's intermediate and long investment-grade funds and Oppenheimer's top performing high-yield mutual fund (ORNAX). **Figure 12** shows the relative change for the overall periods (gray highlight) and the movement for specific shorter periods in which events shocked the municipal market and subjected investors to abnormal stress and volatility. In 2008, the demise of bond insurance and de-leveraging created numerous shocks to the municipal market between September 9 and October 17. In addition, the predominant evaluation benchmark changed its structure adding detrimental pressure on specific days of October 6 and 14, contributing to sharp price movement. Specific to Market Vectors, its long ETF was in its nascent stages and its greater volatility was directly attributed to limited volume and inefficient liquidity for the entire period. However, it remains noteworthy that the Market Vectors long fund did reflect greater declines, even in 2010, than its peer group. Nonetheless, since 2010, performance has been comparable and the negatives in the weak market were offset by the greater gains in an improving market. Market Vectors ETFs have tended to reflect greater price volatility than its peers but also has contributed to better performance.

Also, the table shows the tendency of, regardless of period, that the NAV of the mutual fund and ETF are comparable. Indeed, the correlation between NAVs is very high. Again, the distinguishing characteristic of the ETF price is the greater volatility relative to NAV of the ETF or mutual fund. The close relationships between NAVs are attributable to the similarity of evaluation services utilized throughout the municipal industry. As discussed earlier, the limited daily price discovery impedes robust evaluation techniques to account for the eclectic nature of municipal securities. Therefore, the modeling for daily evaluations generates similarities among investment-grade funds. There are, however, distinctive differences in the high-yield sector where mutual fund complexes have deployed aggressive strategies to enhance returns. Most often the distinguishing characteristics are accomplished by excessively long maturities, concentrated credit risk, or concessions to the lowest-rated bonds. In 2010, following S&P's downgrade of tobacco bonds, the Oppenhemier funds, ORNAX, suffered a -5.5% decline in the week following the event because of its large concentration in the sector. The indexed high-yield ETF, HYD, price actually gained 0.51% and the NAV declined only -3.41%, **Figure 12**.

In 2011, the market recovery, after the tobacco downgrade and the diffusion of Meredith Whitney's inaccurate prognostication of municipal default, revealed the attributes of ETFs' greater price volatility, as investment-grade ETFs outperformed the funds.

In 2012, the reduced municipal market volatility was exhibited in the negative price movements in the seasonal correction of 1Q12 and the corrective price activity following the Puerto Rico downgrade by Moody's in December 2012.

Overall, the stress periods of the municipal market reinforced the perspective that on-demand execution carries with it the risk of illiquid market conditions and greater volatility. An investor focused on the volatility may draw incorrect conclusions, and may well be better served by utilizing the closing NAV for evaluative and strategic purposes. Again, the greater flexibility of execution and dynamic nature of price activity requires a better informed investor and greater understanding of market context.

Key Stress Periods of the Municipal Bond Market Illustrating the Price Dynamics of ETF Price Performance

	Share Price		NAV	Vanguard NAV	Share Price	NAV		Share Price	Vanguard NAV
Date	**MUB**	**MLN**	**MLN Portfolio**	**Long**	**HYD**	**HYD**	**ORNAX**	**ITM**	**Intermediate**
ETF & Fund Change: November 20, 2012 to December 18, 2012 (Puerto Rico Downgrade)									
Total Change	-3.22%	-3.53%	-2.26%	-1.51%	-2.13%	-1.18%	-1.56%	-2.29%	-1.31%
Post PR Downgrade	-2.29%	-2.82%	-1.71%	-1.17%	-1.24%	-1.48%	-1.94%	-0.97%	-0.90%
ETF & Fund Change: January 18, 2012 to March 20, 2012 (Seasonal Decline)									
Total Change	-3.00%	-2.85%	-1.36%	-1.21%	0.26%	1.05%	0.85%	-3.00%	-1.68%
ETF & Fund Change: January 20, 2011 to September 23, 2011 (Whitney Mitigated - Investors Return)									
Total Change	10.01%	15.26%	14.18%	8.15%	8.51%	6.59%	11.15%	11.41%	6.57%
ETF & Fund Change: October 20, 2008 to February 18, 2009 (Recovery Post Subprime)									
Total Change	8.84%	10.78%	12.38%	8.99%	n/a	n/a	-13.84%	13.57%	8.40%
01/12/09 to 01/27/09	-2.97%	-2.71%	-2.71%	-0.77%	n/a	n/a	0.37%	0.34%	-0.08%
12/02/08 to 01/12/09	9.10%	9.42%	6.74%	5.13%	n/a	n/a	-6.02%	8.06%	4.56%
10/20/08 to 11/18/08	5.41%	10.39%	9.77%	5.37%	n/a	n/a	-1.56%	9.19%	4.94%
ETF & Fund Change: October 12, 2010 to January 18, 2011 (Tobacco Downgrade)									
Total Change	-8.50%	-15.35%	-13.63%	-8.30%	-12.08%	-9.32%	-14.56%	-8.13%	-6.19%
10/11/10 to 11/11/10	-3.72%	-4.51%	-3.08%	-1.68%	-5.60%	-1.35%	-1.22%	-3.09%	-1.29%
11/11/10 to 11/19/10	-0.74%	-2.91%	-3.40%	-2.33%	0.51%	-3.41%	-5.51%	-1.25%	-1.90%
12/17/10 to 01/14/11	-3.70%	-5.89%	-5.22%	-2.71%	-5.55%	-3.32%	-5.25%	-2.15%	-1.58%
ETF & Fund Change: September 9, 2008 to October 17, 2008 (Lehman Bankruptcy and Benchmark Alterations)									
Total Change	-11.38%	-20.12%	-20.54%	-11.77%	n/a	n/a	-29.18%	-13.33%	-8.38%
09/15/08 to 09/16/08	-1.04%	-0.66%	-1.86%	-1.06%	n/a	n/a	-2.02%	0.05%	-0.53%
09/17/08 to 09/18/08	-1.73%	-2.09%	-2.81%	-1.49%	n/a	n/a	-2.55%	-0.38%	-1.61%
10/06/08 to 10/07/08	-2.60%	1.84%	-0.51%	-0.29%	n/a	n/a	-1.42%	1.81%	-0.24%
10/06/08 to 10/10/08	-8.79%	-2.90%	-8.34%	-3.88%	n/a	n/a	-12.14%	-3.39%	-2.30%
10/14/08 to 10/15/08	-2.98%	-0.78%	-0.64%	-0.41%	n/a	n/a	0.00%	-0.21%	-0.41%

Figure 12: Since 2008, the municipal market has had 5 specific periods of volatility. Negative periods have been often associated with large mutual fund redemptions or credit headlines; while sharp rallies generated from fundamental events have contributed to strong gains. When there is significant volatility, the ETF price reflects its greater sensitivity to market events than the NAV of the underlying index or comparable fund NAV. The ETF price volatility requires that investors are more knowledgeable of market conditions impacting their investment so that the purpose and discipline of their investment in the municipal sector is not compromised.

CONCLUSION: ETF PRODUCT

After five years, the municipal ETF investment vehicle has established itself as part of the municipal market product mix. The distinctive attribute of on-demand execution, on an exchange, provides investors with a degree of transaction flexibility that replicates the ownership of individual bonds, with the added benefit of the products' incorporated diversified portfolios and strategies. The underlying ETF index NAVs correlate highly with comparable mutual fund products. Therefore, individual investors derive access to fund strategies, but with lower costs and inter-day market access for managing a personal investment plan. ETFs offered by mutual fund complexes have tended to mirror their fund products, whereas Market Vectors and PowerShares have offered a distinctive array of investment vehicles. The former's "lineup" of products and strategies allow for specific opportunities for interest rate management and credit exposure that exemplifies the key ETF attributes for individuals' access to the municipal sector. Using various measures of performance (total rate of return and Sharpe ratios), volatility and correlation, the Market Vectors' product line illustrates the preferable risk-reward ratio that an ETF product can offer with the ever important on-demand execution. Finally, for whatever concession might be sacrificed by investing in an indexed product rather than a "top" performing actively managed fund, an investor is often additionally compensated by the daily certainty/transparency of credit risk exposure, constant portfolio structure and consistency of performance/volatility.

APPENDIX I – MUNICIPAL INVESTMENT PRODUCTS, A HISTORY

The municipal ETF space has grown steadily in assets over the past five years since the products debut in September 2007. Despite being introduced at a municipal market price peak, the first ETF, Blackrock's iShares MUB, has garnered the greatest amount of assets, $3 billion. In 2012, there are additional platforms, including fund families that offer the municipal ETF products with distinctive strategies to attract assets. The total assets in municipal ETFs, as of December 31, 2012, exceeded $12 billion, with nine ETFs having captured more than $500 million of investor funds each.

Municipal bonds have long been packaged for investors to assist in diversifying credit risk. The first unit investment trusts in 1961 were a fixed number of bonds of which investors could purchase shares, i.e., units. The trusts generated interest income and possessed attributes that increased the advantage of the tax-exemption and had a defined maturity. In 1976, the actively managed mutual funds emerged to add active management to municipal bond product offerings. The concept of total rate of return became an integral part of asset gathering and was an advantageous marketing characteristic as interest rates declined, from the early 1980s inflationary spike, enhancing fixed-income performance. In the mid-1990s markets were no longer in a declining rate environment, fund complexes gravitated toward an index approach of management to follow the popular strategies being marketed in the equity space. The index strategy also reduced the associated costs of fund management as pressure to reduce fees became greater as costs had become a larger percent of the lower returns and yields. The competition to reduce fund fees became even more acute as popular financial journals touted that the top performing funds attained superior returns through cost management.

The 2000s increased the popularity of the exchange traded fund concept in the equity markets as independent financial advisors on large support platforms demonstrated a need for a diversified product offering, a security that would reduce accountability of the advisor and low associated fees. It was only a matter of time that the concepts embraced by equity investors migrated to the fixed-income area, and finally, to the municipal bond sector.

GROWTH OF ASSETS & RECENT HISTORICAL PERSPECTIVE OF THE MUNICIPAL INVESTOR

Municipal bond holders have historically been dominated by direct individual ownership. Through the 4th quarter of 2012, $1.679 trillion of all municipal bonds were held by individuals out of an outstanding $3.7 trillion. Mutual funds made up another $628 billion.

In recent years, there was a clear movement of bond ownership from individuals to managed and diversified products. In fact, from 2008 through 2012, mutual funds saw a 61.3% jump in assets under management (AUM), municipal exchange traded funds increased 434.8%, while households decreased 2.5% over the same time period. This shift in assets has been accelerated even more recently with the latest Federal Reserve data showing that in 2012 exchange-traded funds and mutual funds together accumulated almost $100 billion in new assets while the household category shed roughly $125 billion. This change in investor behavior is one we expect to continue, and in turn, should help grow the fund complexes. The municipal bond exchange traded fund (ETF) is a young investment vehicle but one that offers unique qualities that all investors should consider. The principal reason for this trend has been a re-institutionalization of retail demand for municipals over the last half decade. The demise of municipal bond insurance that wrapped more than 50% of outstanding issuance with a top "AAA" credit rating made the risks associated with individual bond ownership more challenging. The evaluation volatility and losses in recent years from the deleveraging of municipal proprietary accounts and hedge funds in 2008-2009, as well as Meredith Whitney's incorrect default assumptions, that contributed to extraordinary mutual fund redemptions and losses in the 4th quarter of 2010 have encouraged individuals to seek professional oversight of their municipal investments. Most recently, negative credit headlines (Puerto Rico, Jefferson Co., Alabama; Detroit, Michigan; Harrisburg, Pennsylvania), tax-reform and the sequester implementation have made individual investors more aware of federal policy and default risk in the municipal space, further leading them to seek professional management of their assets. Although headlines have been growing, **MMA** stresses that default risk in municipal bonds still retains historical safety, as only 0.35% of outstanding municipal bonds are in default. As of April 5, 2013, the current par in an "uncured" default condition (i.e., bond holders not being paid) was $15.7 billion (of the near $4 trillion outstanding municipal debt), **Figure 13**. In addition, nearly $6 billion of the $15.7 billion was represented by Jefferson Co., Alabama, and American Airlines debt.

Par (and #) of Outstanding Muni Bonds with an Uncured Default, Reserve Draw, or Other Impairment ($MM)

Sector	Last 5 Wks	All Notices	DEFAULT	Support	Other
ALL	$8,047 (128)	$48,773 (746)	$15,762 (409)	$21,104 (210)	$11,906 (127)
IDB	$841 (5)	$5,573 (55)	$4,387 (30)	$675 (16)	$512 (9)
Land Secured	$650 (36)	$4,935(308)	$3,424 (197)	$1,166 (93)	$345 (18)
Toll Road/Transit	none	$3,662 (3)	$90 (1)	$1,339 (1)	$2,233 (1)
Local Housing	$112 (12)	$747 (64)	$608 (48)	$43 (7)	$96 (9)
Retirement	$483 (16)	$2,010 (74)	$558 (33)	$296 (12)	$1,156 (29)
Hospital	$804 (6)	$1,587 (31)	$1,146 (16)	$264 (4)	$177 (11)
Hotel	$217 (6)	$814 (13)	$342 (7)	$373 (5)	$98 (1)
Other Risky Sectors	$811 (32)	$20,210 (144)	$1,506 (65)	$15,046 (53)	$3,658 (26)
Safe Sectors (GO, Non-Go, Wtr, etc.)	$3,794 (15)	$9,235 (54)	$3,701 (12)	$1,903 (19)	$3,631 (23)
Initially Non-Rated Bonds	$2,160 (98)	$13,662 (555)	$9,136 (353)	$2,455 (129)	$2,071 (73)
Initially Insured/LOC Bonds	$3,548 (17)	$22,276 (85)	$3,707 (8)	$10,915 (55)	$7,654 (22)
Initially Rated, Uninsured Bonds	$2,297 (12)	$12,225 (79)	$2,375 (27)	$7,723 (25)	$2,127 (27)

Figure 13: Detroit now accounts for the majority of "safe sector" issues listed under "Other" status. Other trends in 2013: slower rate of issuers being added to the database implies a maturing distressed universe.

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