



Association of Metropolitan Water Agencies

Prospects for Bond Financing

October 18, 2011

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Section 1

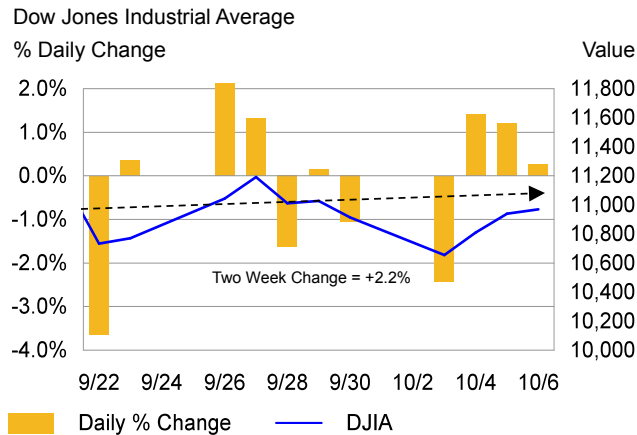
Municipal Market Trends

- Both domestic and global equity and debt markets have been extremely volatile over the past several weeks
- Macro market factors impacting volatility include swinging reactions to: fears of a global economic slowdown, the Federal Reserve Board's execution of Operation Twist, and the evolving fiscal situation in Europe

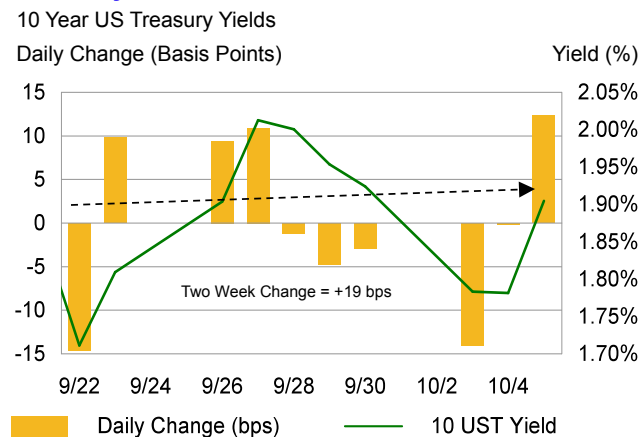
MUNICIPAL MARKET TRENDS

Global Markets Snapshot

Equities Markets Remain Volatile

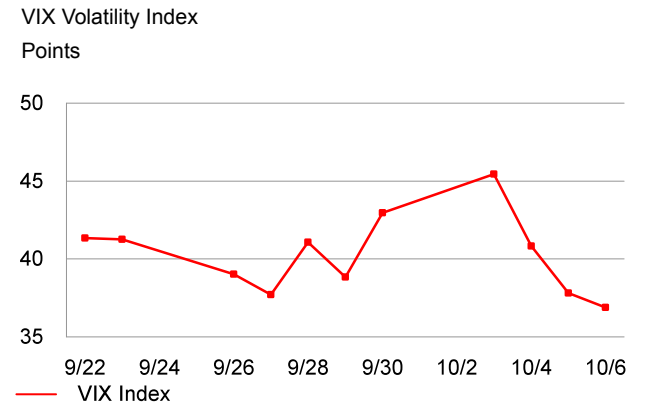


Treasury Market Has Sold Off

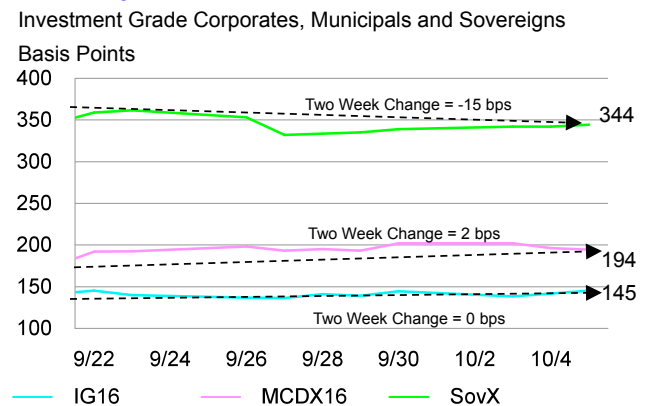


Source Bloomberg, Morgan Stanley Quotient as of October 5, 2011

Market Volatility Remains Elevated



Credit Spreads Remain Elevated



MUNICIPAL MARKET TRENDS

Municipal Market Supply and Demand Dynamics

Supply Dynamics

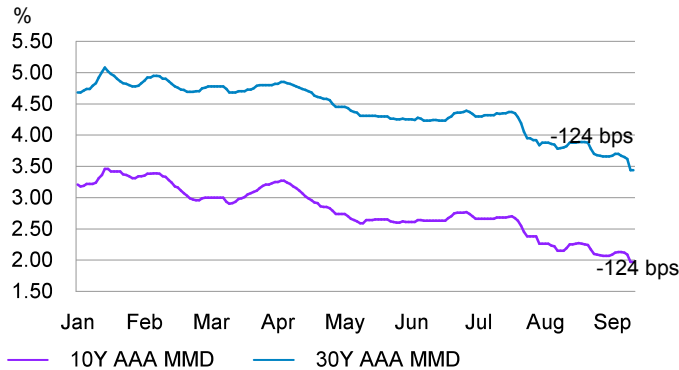
- New-issue supply continues to increase
- Tax-exempt municipal issuance net of redemptions in 2011 expected to remain negative

Demand Dynamics

- Bond fund flows have turned positive
- While absolute rates remain historically low, the market is experiencing renewed interest from crossover and arb accounts as muni ratios (as a % of treasuries) edge higher
- Demand continues to vary across credits as well as across the curve

Long-Term Municipal Yields Continue to Decline

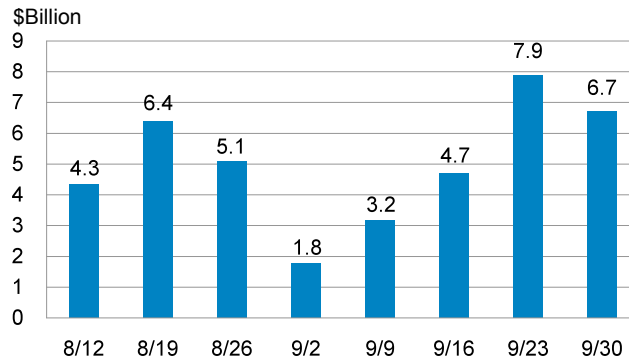
10Y and 30Y AAA MMD: 2011YTD



Source Morgan Stanley Quotient

Weekly New Issue Supply Picking Up

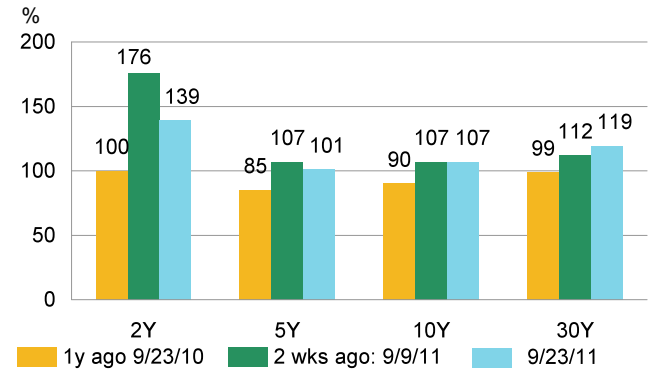
Weekly Municipal New Issue Supply



Source Thomson Reuters

Tax-Exempt Ratios Have Increased

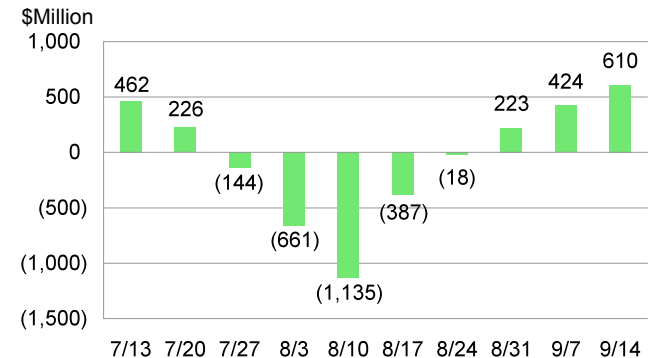
AAA MMD as a % of US Treasuries



Source Morgan Stanley Quotient, Bloomberg

Bond Fund Flows Have Turned Positive

Weekly Municipal Bond Fund Flows

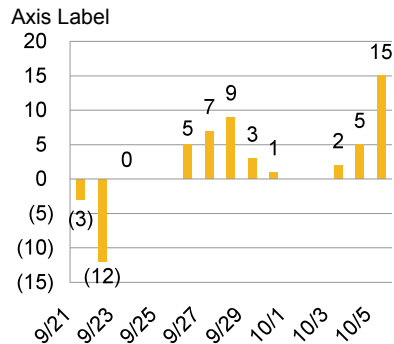


Source ICI

- MMD has recently shown volatility levels that have not been seen since the winter of 2010 with daily changes of up to 15-20 basis points

Daily Changes in 10Y MMD

September 21 to October 5



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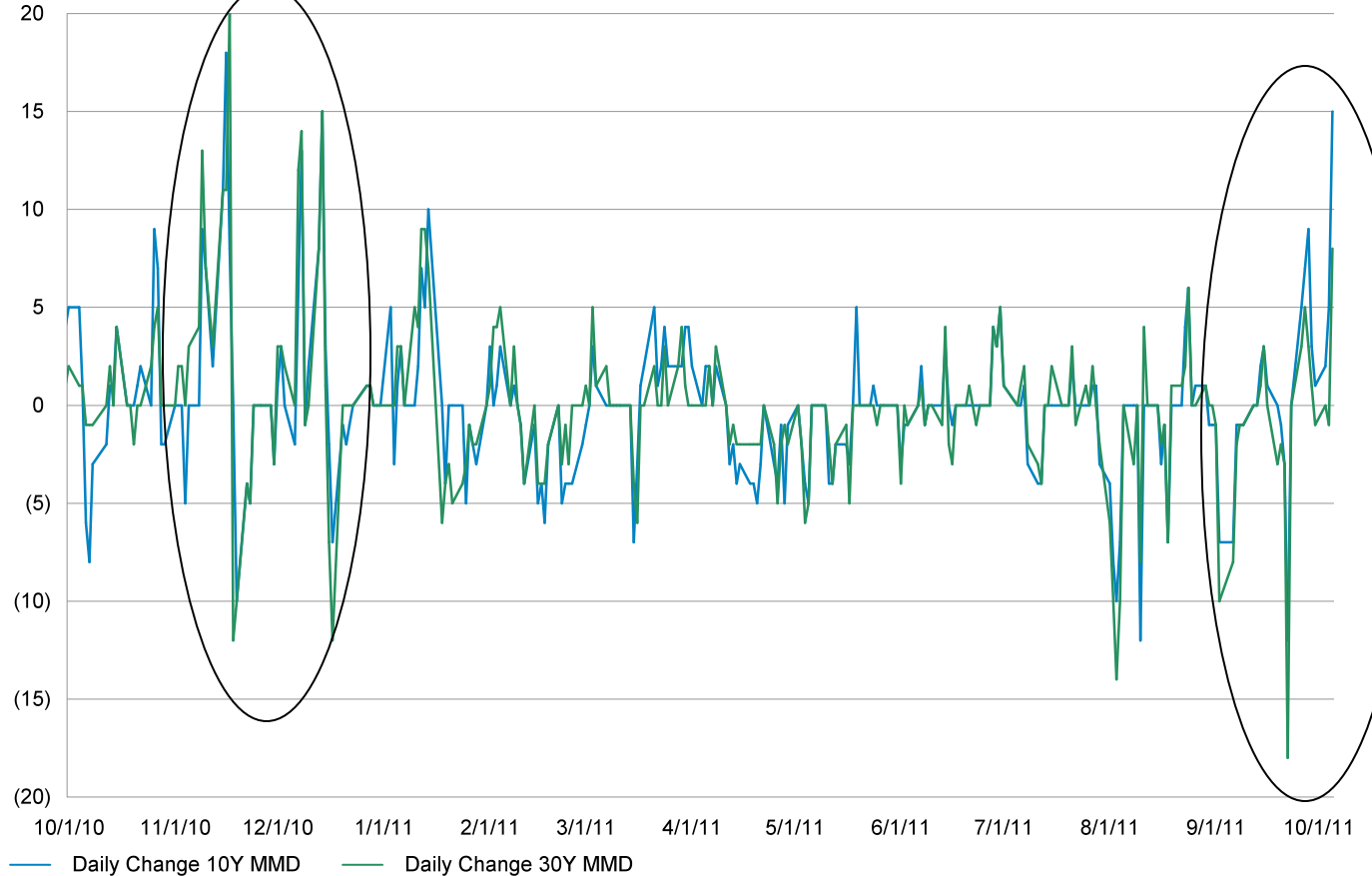
Tax-Exempt Rates Are Extremely Volatile Again

Last Year: October 2010 to Present

Daily Change in Long-Term AAA MMD

October 2011 to Present

(basis points)



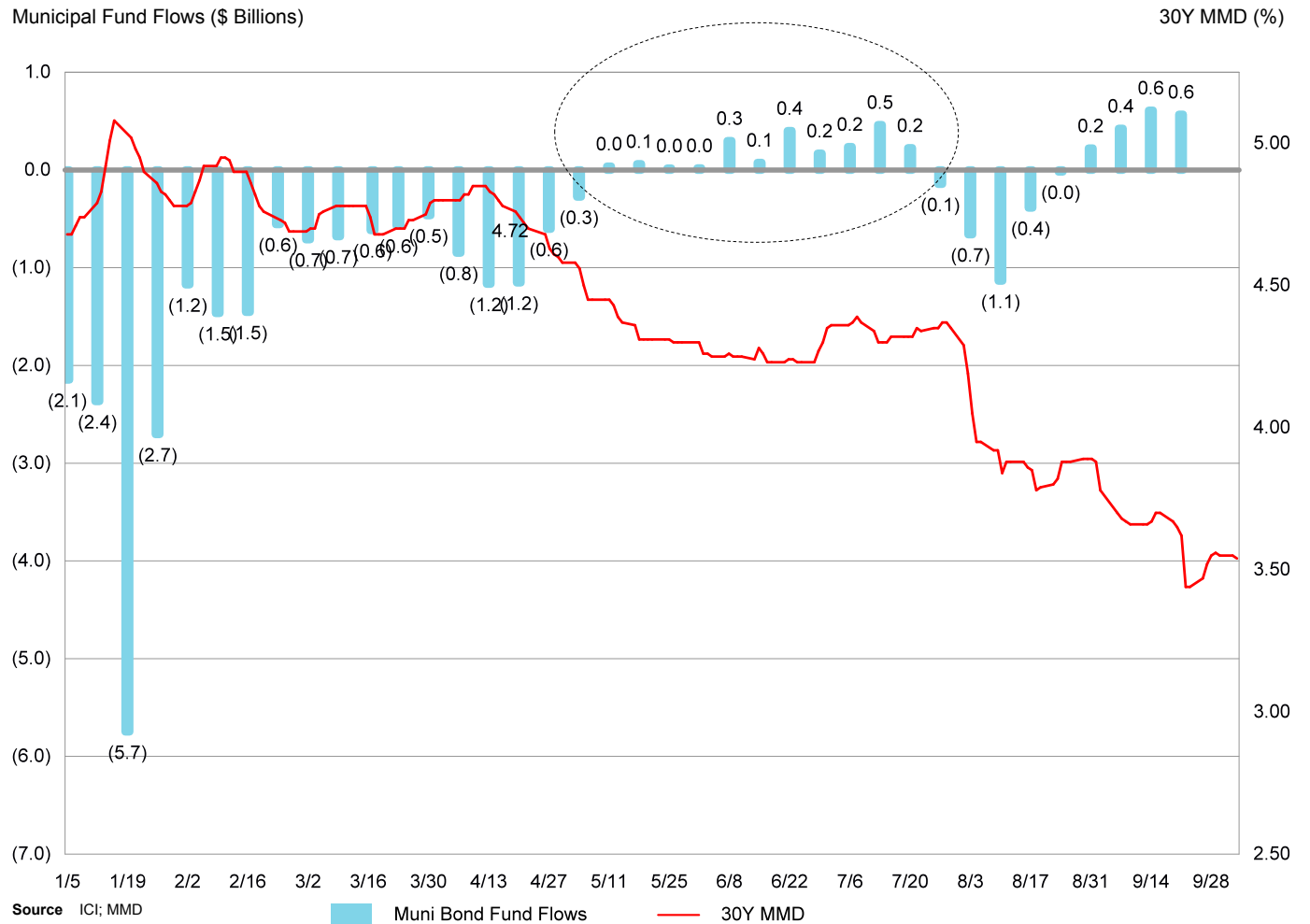
Source Morgan Stanley Quotient, Bloomberg

- Long-term funds are now seeing inflows
- Short-term/intermediate funds continue to see inflows

MUNICIPAL MARKET TRENDS

Outflows From Municipal Bond Funds Have Moderated

Municipal Bond Fund Flows vs 30Y MMD Rates





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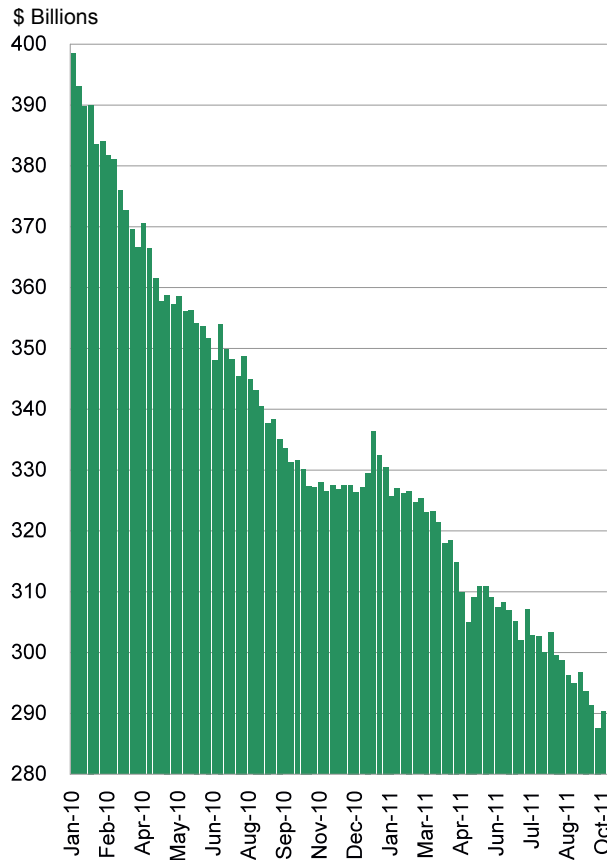
- Money market funds have fallen
 - Current balance: \$290.3 Bn
- SIFMA reset at 0.14%
 - 2 basis points below the previous week's rate
 - 58.17% of 1M LIBOR (0.24067%)
 - 36.50% of 3M LIBOR (0.38361%)
- Variable-rate issuance has declined since the global credit crisis
- The use of alternative variable-rate products that do not require bank facilities has increased

MUNICIPAL MARKET TRENDS

Short-Term Market Update

Tax-Exempt Money Market Assets Have Fallen

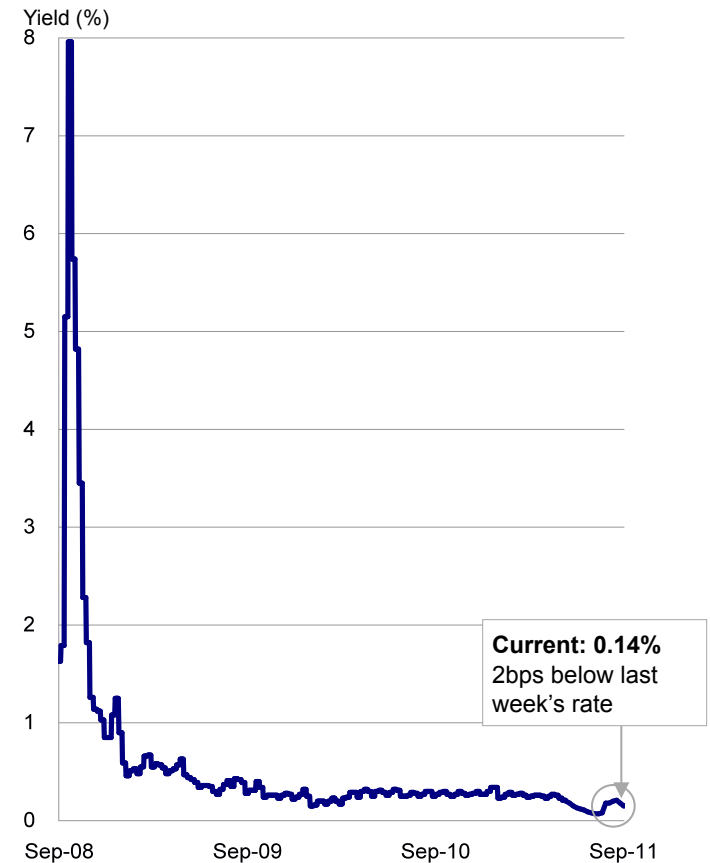
Assets Under Management



Source Investment Company Institute

Tax-Exempt VRDB Rates are Low

SIFMA Index



Source SIFMA

U.S. growth expectations have been downgraded owing to a number of factors:

- Concerns about the willingness of businesses to hire and invest
- Continued consumer deleveraging process will constrain retail spending
- Lower exports and slower growth in domestic consumption
- Continued weakness in the housing market will further constrain the consumer and economic growth

MUNICIPAL MARKET TRENDS

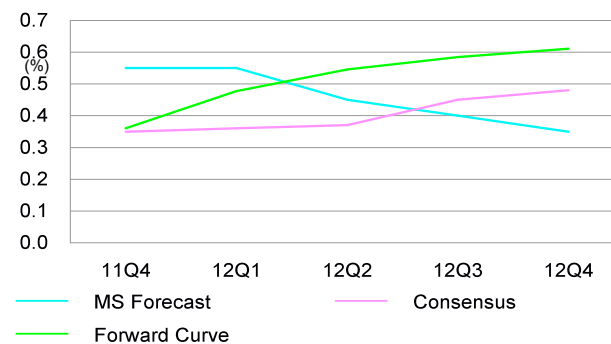
Morgan Stanley Outlook vs. Consensus

Interest Rate Outlook

	Morgan Stanley Interest Rate Outlook ⁽¹⁾						Consensus ⁽²⁾				
	Fed Funds Target	3M LIBOR	2Y UST	5Y UST	10Y UST	30Y UST	Fed Funds Target	3M LIBOR	2Y UST	10Y UST	30Y UST
October 7	0.07	0.39	0.29	1.07	2.08	3.02	0.07	0.39	0.29	2.08	3.02
11Q4	0.02	0.55	0.15	1.00	2.00	2.95	0.02	0.35	0.25	2.18	3.51
12Q1	0.02	0.55	0.15	0.90	1.75	2.75	0.02	0.36	0.33	2.38	3.68
12Q2	0.02	0.45	0.18	1.10	1.90	2.90	0.02	0.37	0.46	2.56	3.87
12Q3	0.02	0.40	0.20	1.25	2.00	3.00	0.02	0.45	0.61	2.77	4.05
12Q4	0.02	0.35	0.25	1.50	2.25	3.25	0.02	0.48	0.73	3.00	4.26

Source Morgan Stanley Research, Bloomberg

MS Forecast vs. Forward Curve



Notes

1. Morgan Stanley forecast as of October 7, 2011. All forecast values are for the end of the designated period
2. Bloomberg weighted average. Data as of October 7, 2011

US Forecast at a Glance

As of October 7, 2011

	2009	2010	2011E	2012E
Real GDP (%Δ Q4/Q4)	-0.50	3.10	1.80	2.00
CPI (%Δ YOY)	1.50	1.20	3.40	1.90
Unemployment %	10.00	9.60	9.10	8.90
EUR/USD (Dec.)	1.46	1.34	1.30	1.35



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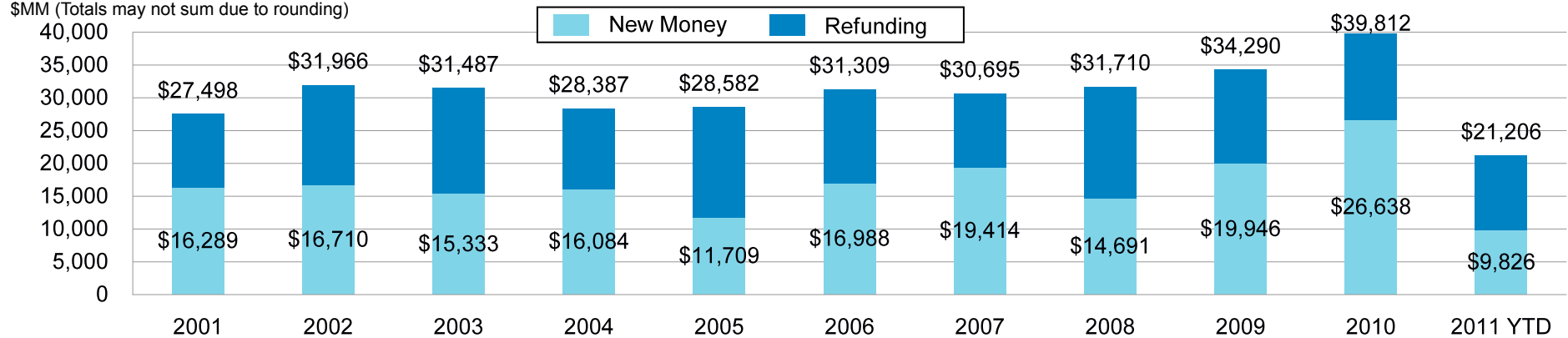
Section 2

Water and Wastewater Market Update

Trends in Municipal Water and Wastewater Debt Issuance

Total Issuance By Year

\$MM (Totals may not sum due to rounding)



Total Municipal Issuance	\$287,725	\$358,357	\$383,337	\$359,753	\$408,309	\$388,442	\$429,893	\$389,469	\$409,688	\$432,987	\$199,205
% W/WW	9.56%	8.92%	8.21%	7.89%	7.00%	8.06%	7.14%	8.14%	7.57%	9.61%	10.65%

- 2010 was a record year for municipal water and wastewater debt issuance
- Limited variable-rate debt issuance due to historically low fixed interest rates and limited availability of cost-effective credit facilities
- Fixed-rate refunding transaction volume remained high, reflecting low interest rates and variable-rate debt restructuring
- Taxable Build America Bonds issuance totaled approximately \$5.931 billion in 2009 and \$16.488 billion in 2010
- Total water and wastewater issuance in 2011 is expected to be under \$30 billion, reflecting the accelerated new money issuance in 2010



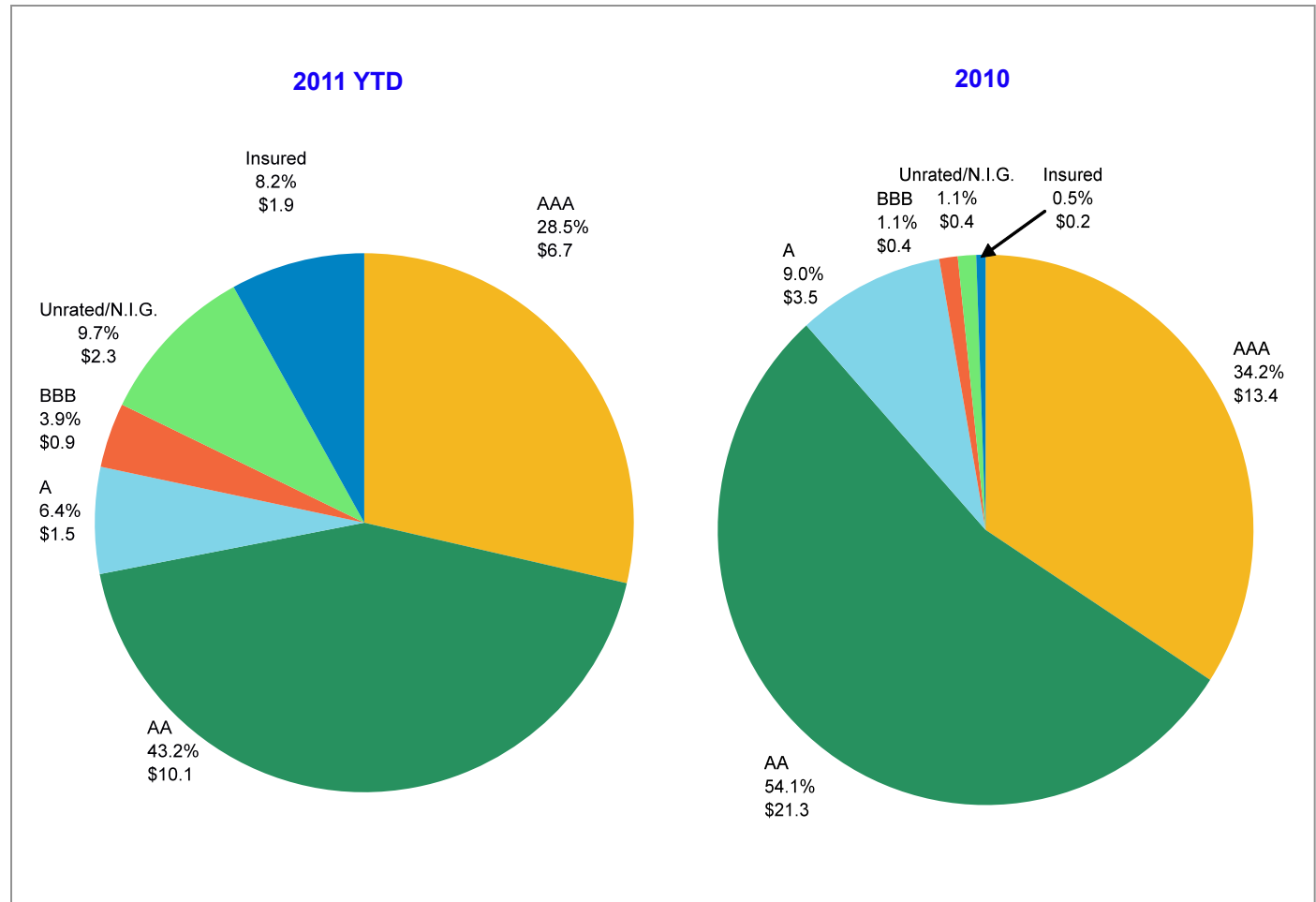
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- Water and wastewater fixed-rate financings in 2010 were generally highly rated, with 88% rated AA and higher, and an additional 9% rated A
- That trend continued in 2011 with 71.7% of financings rated AA and higher
- Water and wastewater issuers benefited from the stable credit outlook and high regard that essential service utility credits have in the marketplace
 - Strong demand for water and wastewater issues by both tax-exempt and taxable investors
 - We expect that this will continue in 2012

WATER AND WASTEWATER MARKET UPDATE

Municipal Water and Wastewater Fixed-Rate Debt Issuance by Rating Category

Issuance by Credit
(\$Bn)



Source Thomson Financial

2011 Water and Wastewater Utility Transactions

Negotiated Long-Term Tax-Exempt Transactions Above \$100MM

Issuer	Ratings	Par (\$MM)	Sale Date	Spread to MMD (bps)	Yield (%) / Final Maturity
NYC Municipal Water Finance Auth	Aa2/AA+/AA+	450.0	1/19/2011	+56	5.54 (2043)
City of Raleigh- North Carolina	Aa1/AAA/AAA	108.3	1/27/2011	+21	5.00 (2040)
City of Houston Combined Utility System	NR/AA/AA-	273.3	2/23/2011	+54	5.07 (2033)
NYC Municipal Water Finance Auth	Aa2/AA+/AA+	541.8	3/24/2011	+47	5.20 (2043)
Massachusetts Water Resources Auth	Aa1/AA+/AA+	150.0	5/11/2011	+45	4.68 (2041)
City of Baltimore (Wastewater)	Aa2/AA/NR	103.9	6/7/2011	+30	4.55 (2041)
Waterworks Board, City of Birmingham	Aa2/AA-/NR	133.6	6/7/2011	+95	5.10 (2041)
Metropolitan Water District of So. Cal	Aa1/AAA/AA+	167.9	6/8/2011	+3	2.46 (2020)
City of Houston Combined Utility System	Aa2/AA/NR	426.4	6/9/2011	+55	4.80 (2040)
NYC Municipal Water Finance Auth	Aa2/AA+/AA+	662.2	6/16/2011	+50	4.43 (2032)
City of Suffolk – Virginia	Aa2/AA+/AA+	114.6	6/22/2011	+24	4.48 (2041)
Gwinnett Co Water & Sewer Auth	Aaa/AAA/AAA	163.6	6/28/2011	+15	3.47 (2025)
City of Dallas – Texas	Aa1/NR/AAA	239.4	7/7/2011	+35	4.73 (2040)
Tampa Bay Water Auth	Aa2/AA+/AA+	289.6	7/19/2011	+55	3.68 (2024)
Colorado River Muni Wtr	A1/AA-/NR	131.2	7/21/2011	+62	4.90 (2036)
Greater Chicago Metro Wtr Dt	Aaa/AAA/AAA	370.0	7/21/2011	+41	4.36 (2032)
Fort Worth City – Texas	Aa1/AA/AA+	151.2	8/11/2011	+34	3.81 (2031)
Los Angeles Dept of Wtr & Power	Aa2/AA/AA+	307.1	8/11/2011	+42	4.30 (2041)
Cucamonga Valley Water Dt	Aa3/AA+/NR	109.5	8/16/2011	+70	4.50 (2035)
Citizens Authority	A1/AA/NR	1,035.4	8/17/2011	+100	4.95 (2041)
King County – Washington	Aa2/AA+/NR	494.3	8/22/2011	+47	4.27 (2041)
Houston City – Texas	NR/AA/AA-	166.7	8/24/2011	+37	2.62 (2021)
Tampa City – Florida	Aa1/AA+/AA+	121.1	8/31/2011	+62	4.18 (2031)
Fulton County – Georgia	Aa3/AA-/AA-	251.8	9/7/2011	+58	3.71 (2028)
Cape Coral City – Florida	Aa3/AA+/A ⁽¹⁾	175.0	9/8/2011	+126	4.93 (2041)
So. California Metropolitan Water District	Aa1/AAA/AA+	157.1	9/14/2011	+52	4.03 (2036)
San Antonio City – Texas	Aa1/AA/AA+	165.1	9/15/2011	+43	4.10 (2041)
Las Vegas Valley Water District	Aa2/AA+/NR	346.5	9/28/2011	+104	4.54 (2038)
California Department of Water Resources	Aa1/AAA/NR	216.9	10/7/2011	+48	4.15 (2035)



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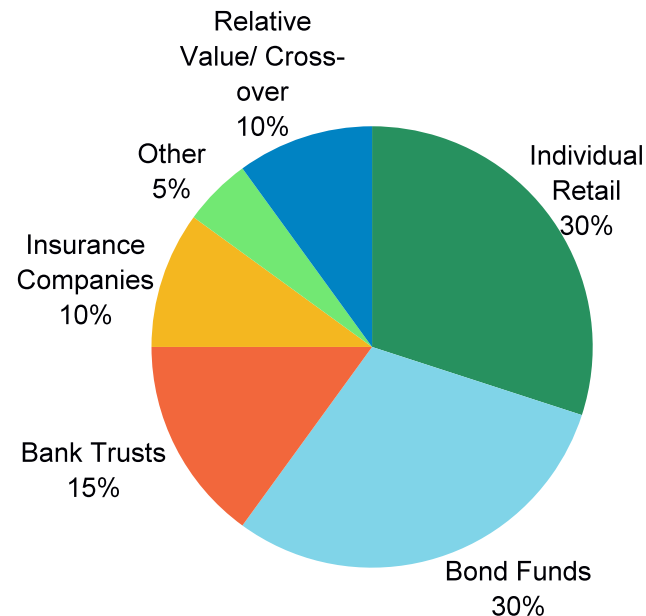
Section 3

Investor Marketing and Distribution

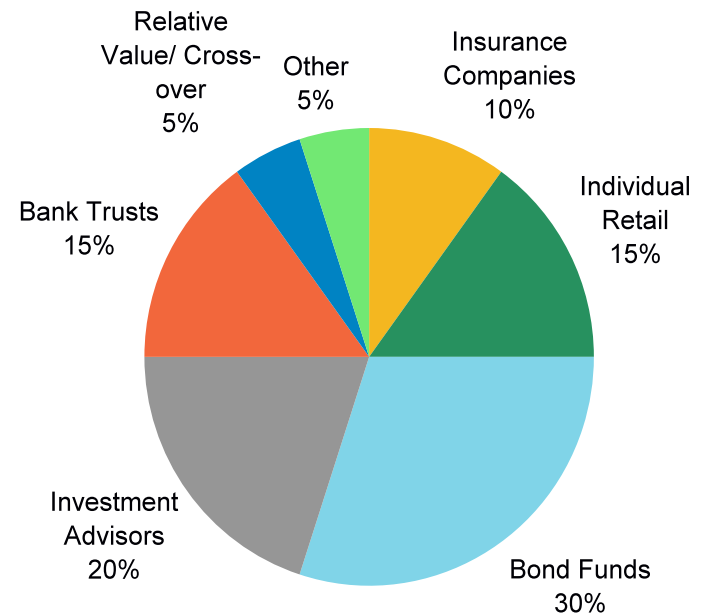
Investors in Tax-Exempt Municipal Bonds

- Prior to the financial crisis, retail investors were the predominant investors in tax-exempt municipal bonds
- Since the financial crisis began, a new class of professional retail, "Investment Advisors," has evolved
- The deterioration of states' financial conditions have led investors to prefer essential service revenue credits over general obligation bonds

Prior To the Financial Crisis



Today





- Establish the trading value and name recognition of the credit in the marketplace
- Effective communication of the credit structure and plan of finance combined with a broad based marketing approach will lead to the widest investor distribution, lowest cost of financing and successful transactions for issuers
- Leverage lead investor orders to build momentum

Investor Marketing Strategy Overview

Key Elements to Position Issuers for Broadest Distribution

- ✓ **Credit Education**
 - Credit Analysts will be the most important determinant of participation and price
 - For example, Morgan Stanley has a dedicated Credit Analyst who covers investor Analysts
- ✓ **Access to Senior Portfolio Managers**
 - Leverage an underwriter with a strong and experienced sales force
- ✓ **Development of the Most Efficient Structure**
 - Work with financial advisors, bankers, and investors to evaluate structuring enhancements
- ✓ **Orderly Process**
 - Develop and communicate a workable timeline for seamless execution

Emphasize Credit Strengths

- Strong history of rate increases
- Steady population (if applicable) in service area
- Strong debt service coverage covenants
- Maintenance of sufficient system liquidity

Address Potential Concerns

- Ability to withstand downturn in economy (essential services)
- Use conservative assumptions in revenue projections
- Emphasize revenues are isolated/protected; management is independent

Objective: Target price-makers, build positive momentum, and use price-takers to reduce cost

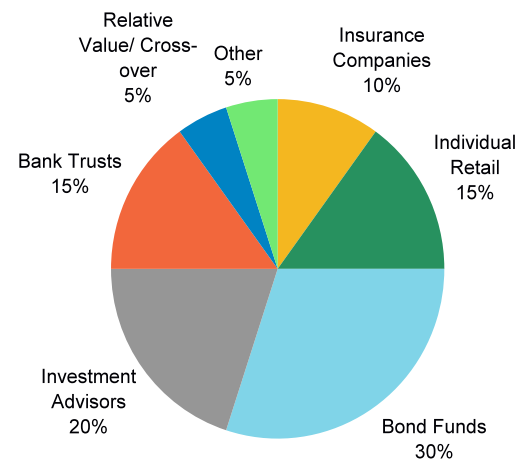
- Target current holders of bonds who are familiar with the credit
- Professional Retail (Separately Managed Accounts) have been the driving force in the market for most high grade transactions and will continue to play a crucial role in transactions as interest rates rise

Tax-Exempt Marketing Strategy

Institutional Marketing Strategy

- **Optimize Tax-Exempt Structure.** Targeted investors will depend on the final structure of the tax-exempt bonds within the plan of finance
- **Target Current Bondholders.** Leverage existing bondholders with an extensive marketing campaign to maximize competition for bonds
- **Target Alternative Investors.** Focus on levered bond funds (Blackrock, Nuveen, etc) looking to leverage AA rated bonds
- **Internet Road Show and One-on-One Calls/ Meetings.** Record and deliver an internet road show that can be viewed by investors and offer one-on-one calls/meetings

Expected Tax-Exempt Investor Distribution



Strategies to Increase Retail Interest and Leverage Institutional Demand

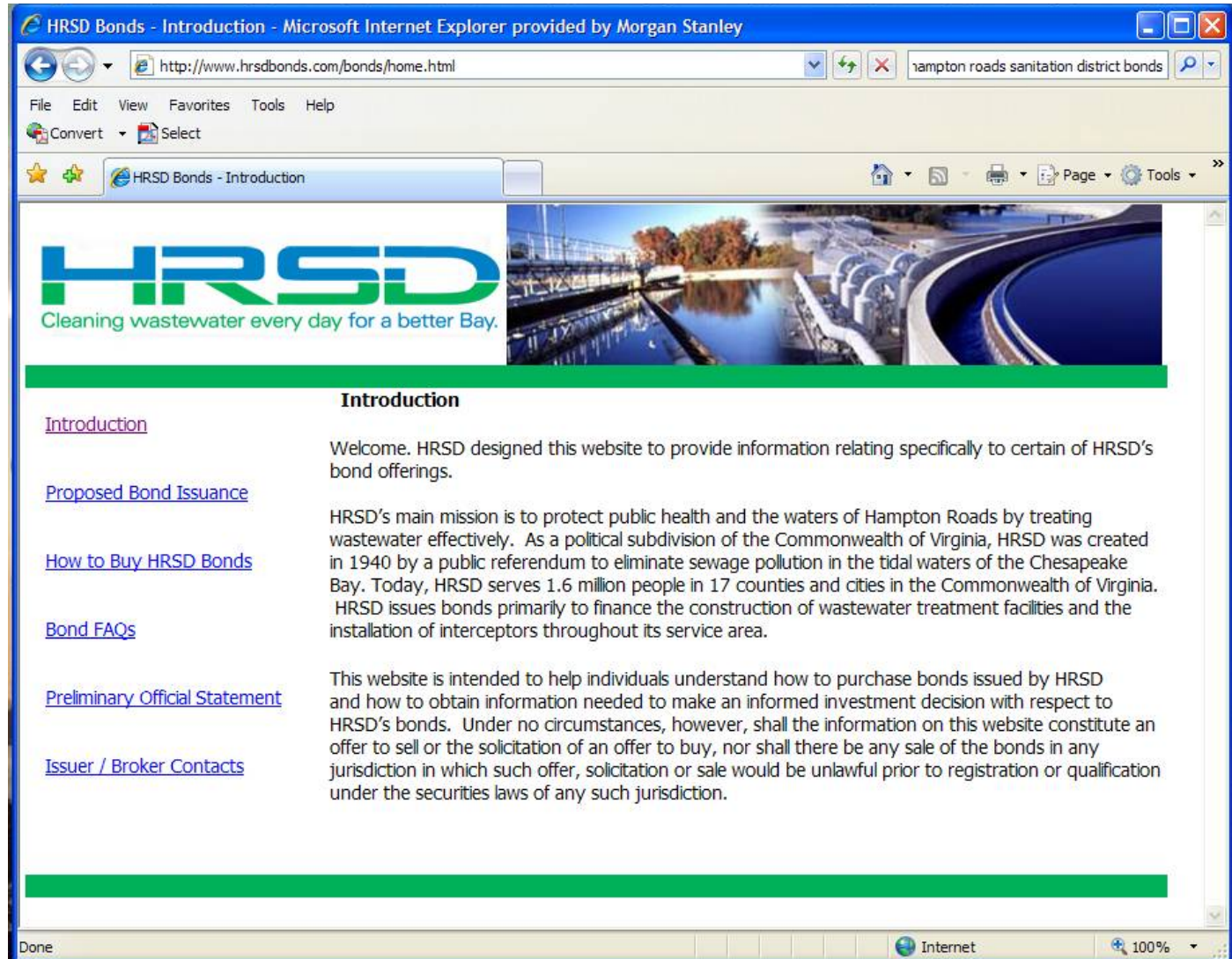
- ✓ Obtain optimal credit ratings and highlight **credit strengths**
- ✓ Use of **retail-friendly structures** such as bifurcated coupons on shorter maturities
- ✓ Separate one-day retail order period
- ✓ **Retail definition** includes bank trust funds, investment advisors and “traditional retail” with maximum \$1,000,000 order size per account in the current market, which has seen a recent uptick in participation from high net worth individuals and investment advisors
- ✓ **Early announcement** of the offering date allows brokers to “reserve space” in customers’ portfolios
- ✓ Hosting of “teach-in” with local brokers by banking team and JobsOhio representatives
- ✓ **Leverage syndicate’s retail network**

Issuers are using websites dedicated for investor relations

- Provide information on bonds and organization financials
- Detail upcoming offerings
- Provide information on how to buy bonds

INVESTOR MARKETING AND DISTRIBUTION

Use of the Internet



HRSD Bonds - Introduction - Microsoft Internet Explorer provided by Morgan Stanley

http://www.hrspbonds.com/bonds/home.html

hampton roads sanitation district bonds

File Edit View Favorites Tools Help

Convert Select

HRSD Bonds - Introduction

Home RSS Print Page Tools

HRSD
Cleaning wastewater every day for a better Bay.

Introduction

[Introduction](#)

[Proposed Bond Issuance](#)

[How to Buy HRSD Bonds](#)

[Bond FAQs](#)

[Preliminary Official Statement](#)

[Issuer / Broker Contacts](#)

Welcome. HRSD designed this website to provide information relating specifically to certain of HRSD's bond offerings.

HRSD's main mission is to protect public health and the waters of Hampton Roads by treating wastewater effectively. As a political subdivision of the Commonwealth of Virginia, HRSD was created in 1940 by a public referendum to eliminate sewage pollution in the tidal waters of the Chesapeake Bay. Today, HRSD serves 1.6 million people in 17 counties and cities in the Commonwealth of Virginia. HRSD issues bonds primarily to finance the construction of wastewater treatment facilities and the installation of interceptors throughout its service area.

This website is intended to help individuals understand how to purchase bonds issued by HRSD and how to obtain information needed to make an informed investment decision with respect to HRSD's bonds. Under no circumstances, however, shall the information on this website constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the bonds in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction.

Done Internet 100%



- On July 26, 2011, Morgan Stanley served as senior manager for the Greater Cincinnati Water Works' \$84.31 million Series 2011A offering
- The Series 2011A Bonds were used to fund \$64.8 million of new money projects as well as refund \$24.7 million of outstanding bonds
- The City and Water Works crafted a successful rating agency strategy, resulting in maintenance of Aaa/AAA ratings from Moody's and S&P
- The underwriting syndicate was able to attract significant investor interest, with over \$200 million of orders, including \$39 million of retail orders
- Despite volatile market conditions with uncertainty surrounding the Federal debt ceiling negotiations, the utility was able to lock in an attractive all-in true interest cost of 2.9% for the transaction and achieved NPV savings of \$1.5 million (6.1% of refunded par)


Morgan Stanley

INVESTOR MARKETING AND DISTRIBUTION

City of Cincinnati (Greater Cincinnati Water Works)

\$84.310 Million Water System Revenue and Refunding Revenue Bonds, Series 2011A

\$84,310,000



**City of Cincinnati
(Greater Cincinnati Water Works)**

**Water System Revenue and
Refunding Revenue Bonds
Series 2011A**

Ratings: Aaa/AAA (Moody's/S&P)

Sale Date: 07/26/2011

Lead Manager: Morgan Stanley

Financing Summary

	Details
Par Amount:	\$84,310,000
Net Premium:	\$8,294,947
Total Proceeds:	\$92,604,947
All-in TIC:	3.937%
Dated/Delivery Date:	08/11/2011
First Coupon	12/01/2011
Average Life:	13.664 years
Call Features:	Optional Par Call on 12/01/2021
Final Maturity:	12/01/2041
Final Maturity Pricing:	5.000% @ 4.500%
Project Fund Deposit:	\$64,795,000
NPV Savings (\$):	\$1,504,908
NPV Savings (%):	6.092%



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Section 4

Water Utility Industry Municipal Market Trends

Current Water Utility Municipal Market Trends

There are a number of municipal market trends that are expected to significantly impact the water utility industry over the next few years

- Increasing focus on underlying credit by investors with the decline in the use of municipal bond insurance
- Greater importance of comprehensive primary market disclosure and more timely secondary market disclosure
- Increasing issuer internet applications (e.g. filings with EMMA, dedicated investor relations websites and advertising)
- Evolving use of variable-rate debt and other bond structures by issuers
- Federal legislative and budgetary challenges and initiatives
 - Proposed limitations on tax-exempt interest deductibility
 - Reduction in SRF funding and regulations
 - Private activity bonds volume cap
 - Proposed federal infrastructure bank



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WATER UTILITY INDUSTRY MUNICIPAL MARKET TRENDS

Thank You

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Appendix A

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DISCLAIMER

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