Pennsylvania Municipal Authorities Association

August 30, 2016

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Together we'll go far

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Disclosures

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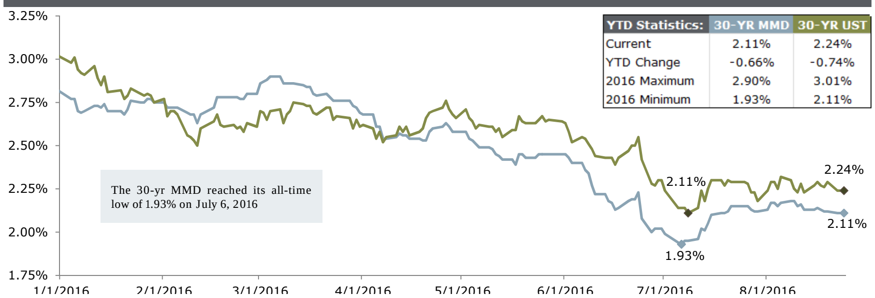
Agenda

I. Capital Market Update

Interests Rates are Near Historic Lows

30-Year Tax-Exempt and Taxable Rates



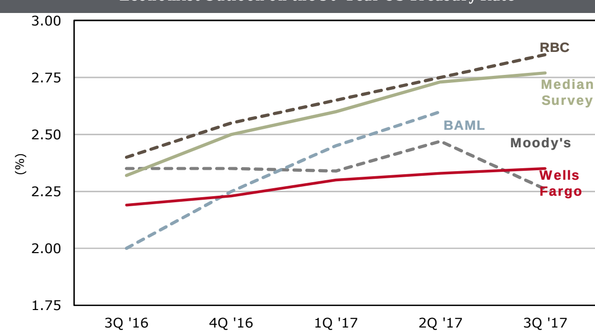
Data source: U.S. Department of Treasury for 'UST' rates; Thomson Reuters TM3 for MMD rates, as of August 24, 2016.

10-Year Tax-Exempt and Taxable Rates

Data source: U.S. Department of Treasury for 'UST' rates; Thomson Reuters TM3 for MMD rates, as of August 24, 2016.

Economic Forecast

Economist Outlook on the 30-Year US Treasury Rate



Source: Bloomberg, as of August 19, 2016.

Wells Fargo U.S. Economic Forecast

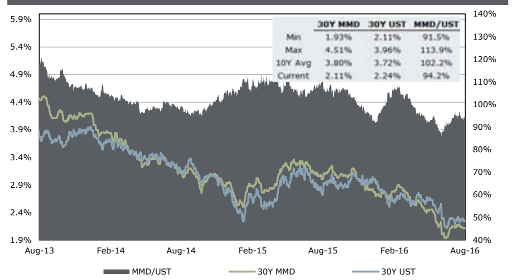
	Actual						Forecast					
	2015				2016				2017			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Real GDP[4]	2.00	2.60	2.00	0.90	0.80	1.20	2.00	2.10	1.80	2.20	2.00	1.80
Unemployment Rate	5.60	5.40	5.20	5.00	4.90	4.90	4.80	4.70	4.70	4.60	4.60	4.50
Consumer Price Index[5]	(0.10)	0.00	0.10	0.40	1.10	1.10	1.20	1.60	2.30	2.20	2.30	2.30
Fed Funds Target Rate	0.25	0.25	0.25	0.50	0.50	0.50	0.50	0.75	0.75	1.00	1.00	1.25
10-Year Note	1.94	2.35	2.06	2.27	1.78	1.49	1.49	1.53	1.57	1.62	1.68	1.73
30-Year Bond	2.54	3.11	2.87	3.01	2.61	2.30	2.19	2.23	2.30	2.33	2.35	2.38

Forecasts, as of 8/10/2016

Source: Wells Fargo Securities, LLC Economic Forecast as of August 10, 2016.

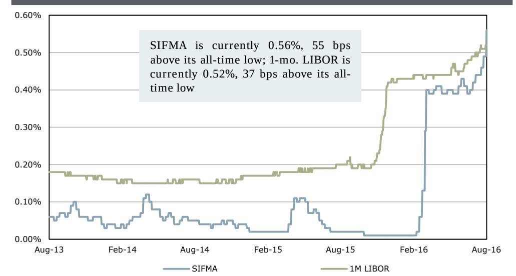
Municipal Market Snapshot

Tax-Exempt/Taxable Ratios



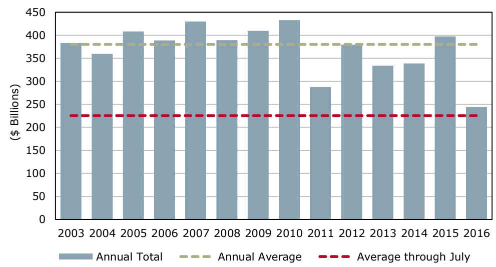
Source: Thomson Reuters TM3 for MMD and U.S. Department of Treasury for 'UST', as of August 24, 2016

Short-Term Interest Rates



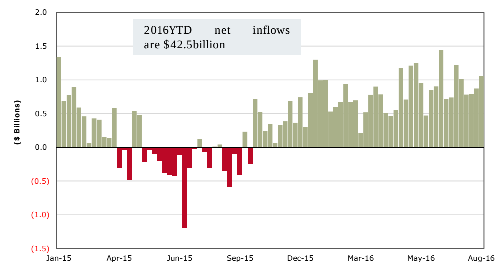
Source: Bloomberg, as of August 24, 2016

Annual Municipal Bond Volume*



Source: Bond Buyer: "A Decade of Municipal Bond Finance," as of July 31, 2016.
*Represents long-term issuance; excludes short-term notes and remarketings

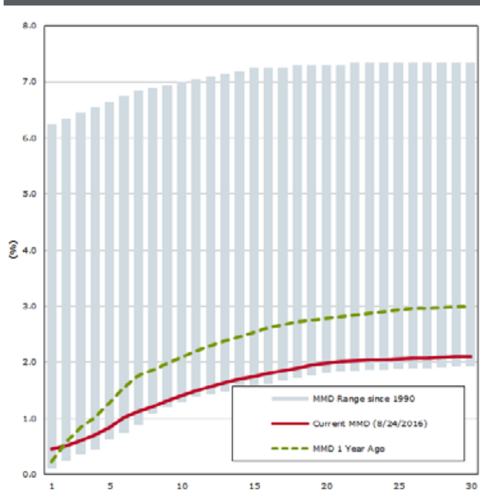
Municipal Bond Fund Flows



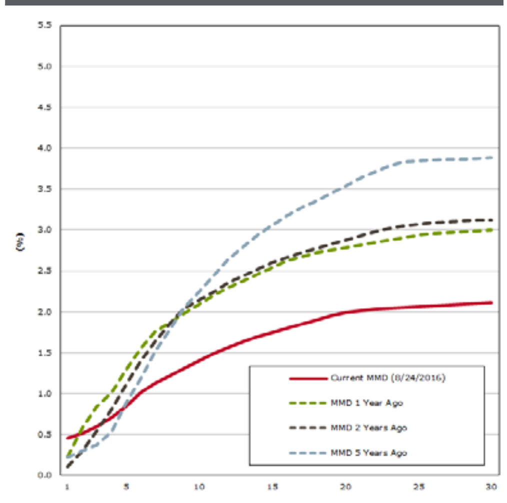
Source: Lipper, A Thomson Reuters Company, as of August 17, 2016. Chart represents only funds that report weekly. 2016YTD net inflows represent funds that report weekly and monthly.

Historical Tax-Exempt Rates

Historical "AAA" MMD Ranges vs. Today's "AAA" MMD



Historical "AAA" MMD Yield Curves



Current tax-exempt rates are at or hovering near their 25-year historical lows

Source: Thomson Reuters TM3; MMD range from January 1, 1990 through August 24, 2016.

II. Municipal Market Overview

National & Pennsylvania 2016 YTD Issuance Discussion

National Market Supply[(1)]

- Through August 19, municipal supply totaled $280 billion, or a 0.83% decrease from the same time period in 2015
- Of the total supply, $204 billion were negotiated transactions, while approximately $67 billion were competitive issuances, representing approximately 73% and 24% of the market, respectively
- Fixed rate transactions totaled more than $267 billion, or more than 95% of total supply
- At more than $252 billion, tax-exempt issuances represented approximately 90% of total supply
- Year-to-date, average weekly issuance totals $8.2 billion

Pennsylvania Market Supply[(1)]

- Through August 19, Pennsylvania municipal supply totaled approximately $13 billion, or a 9.8% decrease from the same time period in 2015
- Of the total supply, approximately $9.6 billion were negotiated transactions, while $3.2 billion were competitive issuances, representing more than 73% and 24% of the overall Pennsylvania municipal supply, respectively
- Fixed rate transactions totaled more than $12.2 billion, or more than 93% of the Pennsylvania municipal market
  - This was a drop from last year's $13.6 billion of fixed-rate supply through the same time period, representing a decrease of more than 10%
- At $12.9 billion, tax-exempt issuance represented more than 98% of the total supply

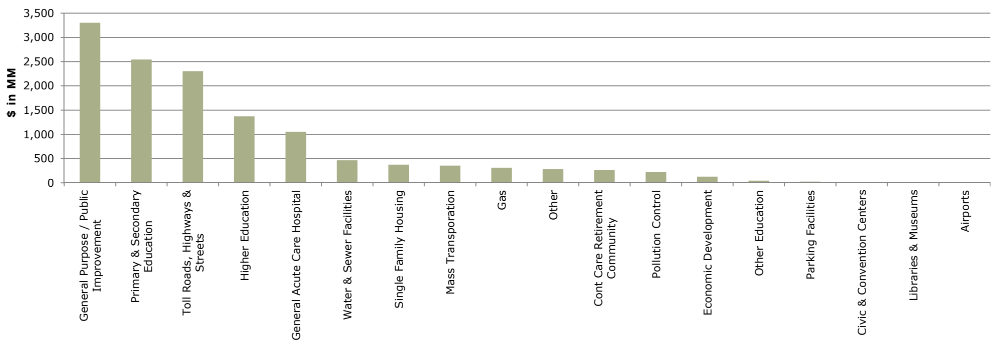
(1) Source: Thomson Reuters, as of August 19, 2016

Pennsylvania Municipal Issuances

Largest Pennsylvania Issuances YTD[1]

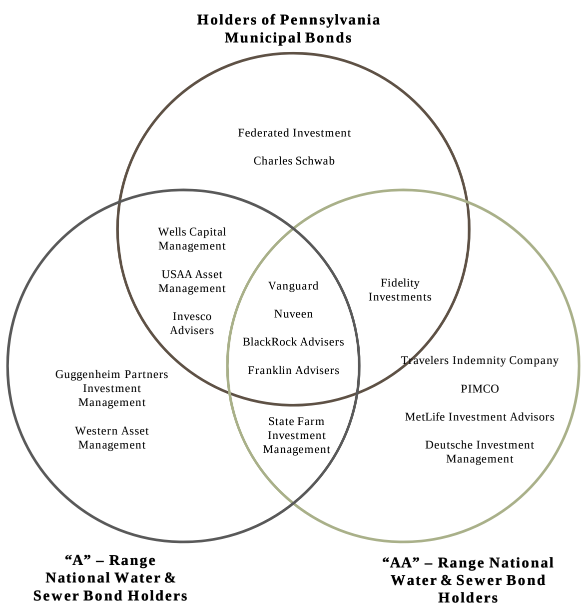
Issuer	Description	Par	Sale Date	Bid Type
Commonwealth of Pennsylvania	General Obligation Bonds, Second Series of 2016	1,208,725,000	8/9/2016	Competitive
Commonwealth of Pennsylvania	General Obligation Bonds, First Series of 2016 & First Refunding Series of 2016	990,550,000	6/1/2016	Competitive
Pennsylvania Turnpike Commission	Turnpike Subordinate Revenue Refunding Bonds, Second Series of 2016	649,545,000	5/24/2016	Negotiated
Pennsylvania Turnpike Commission	Turnpike Revenue Bonds, Series A-1 of 2016	447,850,000	6/9/2016	Negotiated
Pennsylvania Turnpike Commission	Turnpike Subordinate Revenue Bonds, Sub-Series A-1 and A-2 of 2016	389,155,000	3/31/2016	Negotiated
Pennsylvania Turnpike Commission	Turnpike Subordinate Revenue Refunding Bonds, Series of 2016	360,990,000	2/11/2016	Negotiated
Pennsylvania State University	Bonds, Series A of 2016 and Refunding Bonds, Series B of 2016	351,940,000	6/7/2016	Negotiated
Pennsylvania Turnpike Commission	Oil Franchise Tax Senior Revenue Refunding Bonds, Series A of 2016 and Oil Franchise Tax Subordinated Revenue Refunding Bonds, Series B of 2016	313,990,000	8/2/2016	Negotiated
City of Philadelphia	Gas Works Revenue Refunding Bonds, Fourteenth Series (1998 General Ordinance)	312,425,000	8/18/2016	Negotiated
County of Allegheny	General Obligation Refunding Bonds, Series C-75 and General Obligation Bonds, Series C-76	276,815,000	6/23/2016	Negotiated

Issuance Purpose[2]



(1) Source: Thomson Reuters TM3, as of August 24, 2016
(2) Source: Thomson Reuters, as of August 19, 2016

Institutional Investors of Pennsylvania Bonds[1]



(1) Source: IPREO BD Advanced, as of August 24, 2016

Institutional Investors of Pennsylvania Bonds

Pennsylvania-Specific Funds(1)

- Pennsylvania state specific mutual funds are required to maintain at least 80% of their portfolio investments in Pennsylvania tax-exempt bonds
  - As a result, these funds are often willing to pay-up for access to Pennsylvania municipal bonds
- According to data from Thomson Reuters, assets under management by the top ten managers of Pennsylvania tax-exempt bond funds totaled $8.3 billion as of August 17, 2016
  - The top 5 – Vanguard, Franklin, Oppenheimer, Fidelity and Delaware - are responsible for over $6.7 billion
- Please see below for a list of the top investors with Pennsylvania funds:

Institutional Investors	PA Fund Assets ('000)	Total Assets ('000)
Vanguard	$3,592,255	$139,447,784
Franklin	$1,361,448	$71,755,914
Oppenheimer	$782,466	$24,139,005
Fidelity	$503,634	$33,155,076
Delaware	$501,666	$4,523,177
BlackRock	$486,887	$16,211,399
Nuveen	$368,142	$42,890,516
BNY Mellon	$261,974	$5,283,684
Eaton Vance	$240,483	$9,040,990
Western Asset	$232,483	$13,302,362
Wells Fargo	$208,683	$22,442,702
Putnam	$205,526	$6,254,381
Federated	$201,111	$5,332,505
Dreyfus	$166,412	$8,459,829
Invesco	$135,050	$16,033,933
MFS	$128,124	$10,431,840
SEI Investment Management	$127,979	$5,279,535
Alliance	$98,251	$10,713,892
First Investors	$34,974	$1,502,455

(1) Source: Thomson Reuters, as of August 17, 2016

III. Water & Sewer Rating Agency Criteria

Fitch Water and Sewer Rating Criteria

	Financial Profile	Governance and Management	Debt Profile	Operating Profile
Factors	i. Primary indicator ii. Operating history and projected performance iii. Trends/Stability iv. Stress Testing	i. Tenure/experience ii. Single purpose or general government iii. Functioning characteristics: - Strategic planning, financial or debt policies, disclosure, historical actions, politics	i. Primary indicator ii. Capital requirements iii. Debt pressures: debt/equity mix; existing and projected debt burden; asset leverage; amortization; structure and derivatives iv. Bondholder protections	i. Customer characteristics: diversity; trends ii. Facility characteristics: supply sufficiency, treatment capacity, regulatory position, facility condition, performance metrics iii. Service base economics
Stronger	i. Total debt service coverage (DSC) > or equal to 2x ii. Days cash and days of working capital of 1 year or greater iii. Residential charges for individual or combined utilities of < or equal to .6% or 1.2% of MHI, respectively iv. Free cash relative to depreciation > or equal to 100% v. A significant percentage of revenues recovered through base charges as opposed to volumetric charges	i. Management with extensive experience ii. Transparency and strong communication between management and governing body iii. Frequent analysis and accuracy of forecasts and resource management plans iv. Well developed and documented policies and procedures	i. Existing and 5 year projected debt per customer of $1,500 or less ii. Existing and 5 year projected debt per capita of $500 or less iii. Rate covenant > 1.25x ADS by net revenues iv. Amortization > or equal to 90% over 20 years v. Additional bonds test >1.25 MADS by historical net revenues vi. Cash funded debt service reserves at max allowable by law vii. Debt funding of capital of 50% or less	i. Customer accounts stable or growing <1% annually ii. Top 10 customers for retail utilities < 5% of system revenues; no customer accounts for more than 2% of system revenues iii. Treatment capacity >140% of demand iv. Annual renewal of 100% or more of depreciated assets v. Unbilled water of <10% vi. Full regulatory compliance
Midrange	i. DSC of around 1.5x ii. Days cash and days of working capital of around 6 months iii. Residential charges for individual or combined utilities of around .8% or 1.5% of MHI, respectively iv. Free cash relative to depreciation of around 85% v. Approximately 10% of revenues recovered through base charges	i. Generally stable management; board with modest turnover ii. Resource management plans, forecasts of demand and management policies that generally reflect current economic, system and political conditions	i. Existing and 5 year projected debt per customer of around $1800 ii. Existing and 5 year projected debt per capita of around $550 iii. Rate covenant of 1.15x -1.2x ADS by net revenues iv. Amortization of around 80% over 20 years v. Additional bonds test of 1.15x-1.2x ADS by historical or projected net revenues vi. Debt service reserves by cash or surety at max allowable by law vii. Debt funding of capital of around 75%	i. Customer account growth of 1%-3% annually ii. Top 10 customers for retail utilities of around 10% of system revenues; no customer accounts for more than 5% of system revenues iii. Treatment capacity of around 130% of demand iv. Some deferred maintenance v. Unbilled water around 12% vi. Limited regulatory noncompliance
Weaker	i. DSC of around 1.25x or less ii. Days cash and days of working capital of 3 months or less iii. Residential charges for individual or combined utilities in excess of 1% or 2% of MHI, respectively iv. Free cash relative to depreciation of 60% or less v. Little or no revenues recovered through base charges vi. elasticity of demand	i. Lack of experience and depth at the utility ii. Significant political pressure in the underlying municipality or in the members' service areas iii. Failure to maintain open communications between the utility and governing body which could translate into unexpected, significant rate increases iv. Lack of forecasts, resource management plans, policies and procedures	i. Existing and 5 year projected debt per customer of $2,100 or greater ii. Existing and 5 year projected debt per capita of around $600 or greater iii. Rate covenant of 1.1x or less 0f ADS by net revenues iv. Amortization of 70% or less over 20 years v. Additional bonds test of 1.1x or less ADS by historical or projected net revenues vi. No debt service reserves vii. Debt funding of capital of around 90% or more	i. Customer account growth in excess of 3% annually ii. Top 10 customers for retail utilities over 20% of system revenues; individual customer accounts for 10% or more of system revenues iii. Treatment capacity below 120% of demand iv. Significant deferred maintenance v. Unbilled water >15% vi. Material regulatory noncompliance

Source: Fitch's U.S. Water and Sewer Revenue Bond Rating Criteria, September 3, 2013

Moody's Water and Sewer Utility Scorecard Criteria

Factors	Weight
System Characteristics	**30%**
Asset Condition (Remaining Useful Life)	10%
Service area wealth	12.5%
System Size	7.5%
Financial Strength	**40%**
Annual Debt Service Coverage	15%
Days Cash On Hand	15%
Debt to Operating Revenues	10%
Management	**20%**
Rate Management	10%
Regulatory Compliance and Capital Planning	10%
Legal Provisions	**10%**
Rate Covenant	5%
Debt Service Requirement	5%
Raw Quantitative Rating	
Total Notch Adjustments	
Final Grid Indicated Score	

Factor Metrics/Rating level*	Aaa	Aa	A	Baa
System Characteristics				
Net Fixed Assets/Depreciation (years)	>75	75 > n > 25	25 > n > 12	12 > n > 9
Median Family Income as a % of US	>150	150 > n > 90	90 >n > 75	75 > n > 50
O&M Expenses ($ MM) [1]	>65	65 > n > 30	30 > n > 10	10 > n > 3
Financial Strength				
Annual Debt Service Coverage	>2.0	2.0 >n >1.7	1.7 >n > 1.25	1.25 > n > 1.0
Days Cash On Hand	>250	250 > n > 150	150 > n > 35	35 > n > 15
Debt to Operating Revenues	<2.0	2.0 < n < 4.0	4.0 < n < 7.0	7.0 < n < 8.0
Management				
Rate Management	Excellent	Strong	Average	Adequate
Regulatory Compliance and Capital Planning	Fully Compliant	Actively Addressing	Moderate violations	Significant violations
Legal Provisions				
Rate Covenant	>1.3	1.3 > n > 1.2	1.2 > n > 1.1	1.1 > n > 1.0
Debt Service Requirement	MADS	3 prong	< 3 prong or springing	No DSRF
Total Notch Adjustments	**Additional service area strength or diversity; Significant customer concentration; High/Low DSC; Structural Enhancements/complexities; Especially Strong or Weak Management and etc.**			

Rating	Overall Weighted Score
Aaa	0.5 - 1.5
Aa1	1.51 - 1.83
Aa2	1.84 - 2.17
Aa3	2.18 - 2.5
A1	2.51 - 2.83
A2	2.84 - 3.17
A3	3.18 - 3.5
Baa1	3.51 - 3.83
Baa2	3.84 - 4.17
Baa3	4.18 - 4.5
Ba1	4.51 - 4.83
Ba2	4.84 – 5.17
Ba3	5.18 – 5.5
B1	5.51- -5.83
B2	5.84 – 6.17
B3	6.18 - 6.5

*The final methodology provides rating levels below Baa but the scorecard is truncated for presentation purposes
[1] O&M Expense ranges vary by system type such as Water & Sewer, Stormwater and Gas or Electric Utility. The above reflects Water and Sewer Utility Systems
Source: Moody's US Municipal Utility Revenue Debt Criteria, December 15, 2014

Evaluating the Impact of S&P's Water and Sewer Rating Criteria

- In January 2016 S&P implemented its new Municipal Water and Sewer Utility Enterprise Criteria
- The new criteria applies to S&P's 1,500 public, unenhanced, revenue secured, utility system ratings
- S&P estimates the new criteria to impact about 25% of its portfolio: about 50% to upgraded and 50% downgraded.
  - Based on testing no primary factor is driving the changes nor are the changes concentrated by region or size
- The model focuses on two key areas, with lower scores equating to higher ratings:
  - Enterprise Risk Profile
  - Financial Risk Profile
- A few notable new metrics include:
  - Qualitative factors (Operational Management and Financial Management Assessments)
  - Broader All-In Debt Service Coverage Calculation
  - Bill Affordability Metrics including % of population below the poverty line

S&P Water and Sewer Utility Enterprise Criteria

Factor	Weight
ENTERPRISE RISK PROFILE SCORE	
Industry Risk	20%
Economic Fundamentals	45%
Market Position	25%
Operational Management	10%
FINANCIAL RISK PROFILE SCORE	
Coverage Metrics	40%
Liquidity and Reserves	40%
Debt and Liabilities	10%
Financial Management Assessment	10%
ENTERPRISE RISK PROFILE SCORE	
FINANCIAL RISK PROFILE SCORE	

Entterprise Risk Profile	Financial Risk Profile					
	1 Extremely Strong	2 Very Strong	3 Strong	4 Adequate	5 Vulnerable	6 Highly Vulnerable
1 Extremely Strong	aaa	aa+	aa-	a	bbb+/bbb	bb+/bb
2 Very Strong	aa+	aa/aa-	a+	a-	bbb/bbb-	bb/bb-
3 Strong	aa-	a+	a	bbb+/bbb	bbb-/bb+	bb-
4 Adequate	a	a/a-	a-/bbb+	bbb/bbb-	bb	b+
5 Vulnerable	bbb+	bbb/bbb-	bbb-/bb+	bb	bb-	b
6 Highly Vulnerable	bbb-	bb	bb-	b+	b	b-

Overriding Factors:

Caps/Notch Adjustments based on:

- Vulnerable Operational or FMA practices
- Risk associated with local issuer credit distress or bankruptcy
- Very weak coverage or liquidity
- Local economy/wealth characteristics
- Large expected increase in debt without a strong capital plan

Standard and Poor's, Request for Comment: U.S. Public Finance Waterworks; Sanitary Sewer, And Drainage Utility Systems: Methodology and Assumptions, December 11, 2014

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Qualifications: Mr. Coursey has over 21 years of municipal finance experience and is currently a Managing Director in Wells Fargo's Public Finance Department within the Northeast Group, and manages the Philadelphia office. He has served as lead banker on transactions for a broad range of clients including municipalities, school districts, higher education institutions, health care systems and other non-profit issuers / conduit issuers of municipal bonds. Mr. Coursey has served as the lead banker on senior managed transactions for such clients as the Pennsylvania Turnpike Commission, City of Baltimore, City of Philadelphia, the Philadelphia School District, the District of Columbia and the Commonwealth of Puerto Rico. Prior to joining Wells Fargo, Mr. Coursey provided Financial and Swap Advisory services to the same base of clients. He also has prior experience as an institutional investor gained while working as a Fixed Income Trader and Analyst for the tax-exempt mutual funds of the Vanguard Group in Malvern, Pennsylvania.

Mr. Coursey earned a B.A. degree in Communications and Linguistics from the University of North Carolina and is a Chartered Financial Analyst. Mr. Coursey is a member of the National Association of College and University Business Officers (NACUBO).

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Pitch Materials Record Retention Page

Pitch Materials Record Retention Page [To Be Excluded From Client's Version]

- Preparation of materials coordinated by: Henry Ren, *Associate*
- Additional materials provided by: Credit Strategies
- Presentation of materials coordinated by: Julius Coursey, *Managing Director*
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2016 PMAA

TheAuthorities
PENNSYLVANIA MUNICIPAL AUTHORITIES ASSOCIATION

Update on Borrowing Markets and Regulations

August 30, 2016

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Topics for Discussion

- **Municipal Advisory Rule**
- **Borrowing Options Available**
- **Other Municipal Updates**

Public Financial Management, Inc.

20

- **Municipal Advisory Rule**
- Borrowing Options Available
- Other Municipal Updates

Public Financial Management, Inc.

21

New Municipal Advisor Rules

- On September 18, 2013, the SEC approved final rules (the "Rules") governing the definition, registration and regulation of municipal advisors ("MAs").
- The Rules became effective **July 1, 2014.**
- The Rules have the potential to fundamentally alter the way issuers interact with public finance bankers.
- The Rules limit the ability of bankers to provide ideas, suggestions, analysis, assistance or other services to issuer clients in many circumstances outside of an underwriter engagement unless a Municipal Advisor has been appointed.
- There is no way for issuers to simply "opt out" of the Rules outside of certain exemptions. The Rules affect issuers in the engagement of their various financial professionals and how they receive their financial advice going forward.

- Intro / Municipal Advisory Rule
- **Borrowing Options Available**
- Other Municipal Updates

Basic Borrowing Options

I. Bond Issue (Fixed or Variable)

II. Bank Loan

III. Bond Pool Loan

IV. Funding/Grants (PENNVEST, etc.)

What is a Municipal Bond?

- Similarities to a mortgage
  - Long term borrowing, typically 20 to 30 year term
  - Fixed or variable interest rate
  - Principal & interest payments
  - Borrowing costs are paid at settlement
- Differences from a mortgage
  - Instead of borrowed funds coming from a bank/financial institution (which obtained the funds from depositors/investors), they are provided directly by investors
  - Interest is typically paid semi-annually and principal is paid annually to a bank, then distributed to the investors
  - Security (collateral) is a Issuer's taxing power rather than the real estate
  - Interest paid is tax-exempt, which results in lower interest rates
- Types of Bonds
  - General Obligation Bonds
    - A bond secured by an issuer's full-faith, credit, and taxing power
  - Revenue Bonds
    - A bond secured by a specific revenue stream.

Fixed Rate Bonds

- Most common type of financing for PA local governments
- Usually up to 30-35 years in length
- Level vs. Wrap structures
- Typically Higher Up-front Financing Costs; Lower Interest Rates
- Ability to refund after 5 years (BQ) or 7-10 years (Non-BQ)
- Official Statement/ Credit Rating typically required

Financing Team
- Issuer
- Solicitor
- Bond Counsel
- Financial Advisor
- Underwriter
- Bond Insurer (if applicable)
- Credit Rating Agency
- Trustee/Paying Agent
- Architect/Engineer

Variable Rate Bonds – Current Update

- Variable Rate Bonds require a liquidity facility
  - Expensive
  - Sometimes difficult to obtain (although recently improving)
- New forms of variable debt include Floating Rate Notes and other hybrids
- Variable Rate markets can be accessed through a Bond Pool program
  - Administrative fees

Financing Team
- Issuer
- Solicitor
- Bond Counsel
- Financial Advisor
- Underwriter
- Liquidity Facility
- Remarketing Agent
- Credit Rating Agency
- Trustee/Paying Agent

Variable Rate Debt Instruments

- Following the market collapse in 2008, liquidity to support variable rate bonds has become a scarce commodity
- If available at all, the price is much more expensive
  - 15 bps per year in 2007 vs. 75-125 bps now
- New alternatives include the Floating Rate Note
  - Private placement with bank
  - Long term amortization with 2-4 year mandatory tenders
  - Rate is equal to an index (LIBOR, SIFMA, etc.) plus a spread (often contingent upon credit rating)
  - Eliminates certain risks inherent to VRDBs (bank risk, basis risk)
  - Still maintains interest rate risk and renewal risk

Initial Steps for Bond Issues

- Make sure financials (Audits, Budgets, etc.) are in line.
  - Continuing Disclosure
  - Credit Rating/insurance purposes
  - Investor due diligence
- Appoint Financing Team as soon as possible.
  - Financial Advisor and/or Underwriter
  - Bond Counsel
- Once appointed, begin discussion options available.
  - Type
  - Size
  - Timing
  - Structure

Basic Steps – Bond Issue

1. Discuss opportunity/options with client
2. Receive official authorization from client
3. Prepare POS (update statistical data, issuer financials etc.)
4. Apply for Credit Rating
5. Apply for Bond insurance (if necessary)
6. Finalize POS
7. Market Bonds (underwriter's job)
8. Price Bonds
9. Prepare Final Official Statement
10. Prepare Legal documents for executing
11. Settlement of Bond

2-6 Months (Depending on scope/size of borrowing)

Bank Loan Overview

- Typically used for smaller, shorter amortizations
- Rates are either fixed, variable or combination of both
- Lower up-front financing costs and less administrative requirements
- Depending on market conditions, banks can offer interest rates that could be better than the bond market, typically interest rates are higher than the bond market.
- Different funding options (line of credit, etc.)
- Depository relationship might be required.
- Typically prepayment available at anytime without penalty

Financing Team
- Issuer
- Solicitor
- Bond Counsel
- Financial Advisor
- Bank/Lender

Bank Loan Requirements

- Typically, bank loans do not require a Trust Indenture and any covenants required with Trust Indentures, such as Debt Service Reserve Funds and Rate Covenants.
- In those cases, a simple Loan Agreement between the Authority and the commercial bank is all that is required. In this type of transaction, the Trustee would no longer be needed.
- By removing the Indenture by refinancing the existing debt, the DSRF can be used by the Authority today rather than being used to pay debt service at maturity. Those funds could be used to reduce the debt or even for current projects.
- In many cases, the Debt Service Reserve Fund is invested in products such as US Treasuries, which provide a negative flow since the actual yield of the existing bonds is much higher.

Bank Loan - PFM's RFP Process

- The bank loan process begins with the RFP distribution to PFM's database of local & state-wide banks
  - Recent financial documents, including audits & budgets, are shared along with the RFP
- Once the bank proposals are received, we analyze each one based on certain criteria including:
  - Rate type: fixed v. variable
  - Pre-payment penalties
  - Bank fees
  - Depository relationship requirements
  - Other restrictions
- The results from the analysis are then compiled into an easy-to-read summary that is used to determine which proposal is the best fit for the issuer's needs
- Negotiations with winning bank(s) take place to improve results for the issuer
- If it's determined that the bank loan is acceptable to the financing team would work to establish a settlement date and finalize the sale

Bond Pool Loans

- Access to otherwise expensive variable rate market via pooled loan program
- Usually variable rate (some pools offer fixed rates)
- Some pools provide partially subsidized costs of issuance
- Bond Documents, but no Official Statement
- Examples include:
  - Emmaus General Authority
  - Delaware Valley Regional Finance Authority

Financing Team
- Issuer
- Solicitor
- Bond Counsel
- Financial Advisor
- Program Financing Team

Funding/Grants

- Include state and federal programs
  - PENNVEST
  - RUS Program
  - H20
- Subject to availability and project eligibility
- Rates are either fixed, variable or combination of both
- Amortization schedule dependent on project/issuer
- If selected, project oversight and input sometimes mandated
- Interim financing often needed

Financing Team
- Issuer
- Solicitor
- Financial Advisor
- Funding Program

Approaches to New Money Financing

- **Interim Funding** – short term borrowing prior to permanent financing
- **Draw Down Bank Loan** – Permanently finance today, but funds available to use for a two year period.
- **Current Funding** – wait for construction bids
- **Advance Funding** – borrow all (or a portion) prior to construction bids
- **Multiple Financing** – spread borrowings over different calendar years, taking advantage of IRS limits and staggering impact vs. increased costs of issuance

Refinance Existing Debt

- The current low interest rate environment presents many refinancing opportunities
- Local authorities should examine the possibility to refinance existing bond issues, bank loans, Pennvest, RUS Loans and any other outstanding debt
- Replacing existing higher interest rates with new lower interest rates can potentially save hundreds of thousands of dollars

Existing High Interest Rate

New Low Interest Rate

$$$ SAVINGS!!!

XYZ AUTHORITY SERIES OF 2011				EXISTING DEBT	XYZ AUTHORITY SERIES OF 2016				NEW REFINANCING DEBT	
1	2	3	4	5	6	7	8	9	10	
Date	Principal	Rate	Interest	Fiscal Year Debt Service	Date	Principal	Rate	Interest	Fiscal Year Debt Service	Annual Debt Service Savings
3/15/2016			59,811.25		3/15/2016			3,648.83		
9/15/2016	70,000	3.000	59,811.25	189,622.50	9/15/2016	130,000	0.860	21,893.00	155,541.83	34,080.67
3/15/2017			58,761.25		3/15/2017			21,334.00		
9/15/2017	605,000	2.750	58,761.25	722,522.50	9/15/2017	650,000	0.920	21,334.00	692,668.00	29,854.50
3/15/2018			50,442.50		3/15/2018			18,344.00		
9/15/2018	615,000	3.100	50,442.50	715,885.00	9/15/2018	645,000	1.000	18,344.00	681,688.00	34,197.00
3/15/2019			40,910.00		3/15/2019			15,119.00		
9/15/2019	640,000	3.250	40,910.00	721,820.00	9/15/2019	655,000	1.120	15,119.00	685,238.00	36,582.00
3/15/2020			30,510.00		3/15/2020			11,451.00		
9/15/2020	660,000	3.600	30,510.00	721,020.00	9/15/2020	660,000	1.260	11,451.00	682,902.00	38,118.00
3/15/2021			18,630.00		3/15/2021			7,293.00		
9/15/2021	1,035,000	3.600	18,630.00	1,072,260.00	9/15/2021	1,020,000	1.430	7,293.00	1,034,586.00	37,674.00
TOTALS	3,625,000		518,130.00	4,143,130.00	TOTALS	3,760,000		172,624.00	3,932,623.83	210,506.17

- Intro
- Borrowing Options Available
- **Other Municipal Updates**

Continuing Disclosure Compliance

- If an Authority has outstanding bond issues, there are now more stringent rules regarding disclosure.
- The Municipal Securities Rulemaking Board ("MSRB") has launched a disclosure website to aid issuers in complying with their continuing disclosure requirements.
- This website is the Electronic Municipal Market Access ("EMMA") and can be found at www.emma.msrb.org.
- Failure to comply with continuing disclosure requirements could make it difficult to issue bonds in the future (including any refinancings), as well as potentially face penalties and/or fines from regulators.

MSRB
Municipal Securities Rulemaking Board

Credit Rating Scale

MOODY'S DESCRIPTION OF RATINGS		
Investment Grade	Aaa	Strongest
	Aa1/Aa2/Aa3	Very Strong
	A1/A2/A3	Above-Average
	Baa1/Baa2/Baa3	Average
Below Investment Grade	Ba1/Ba2/Ba3	Below-Average
	B1/B2/B3	Weak
	Caa1/Caa2/Caa3	Very Weak
	Ca	Extremely Weak
	C	Weakest

S&P DESCRIPTION OF RATINGS		
Investment Grade	AAA	Strongest
	AA+/AA/AA-	Very Strong
	A+/A/A-	Above-Average
	BBB+/BBB/BBB-	Average
Below Investment Grade	BB+/BB/BB-	Below-Average
	B+/B/B-	Weak
	CCC+/CCC/CCC-	Very Weak
	CC	Extremely Weak
	C	Weakest

Current Status of Bond Insurers

- On January 1, 2008, **<u>all</u>** of the insurers below were rated AAA by Moody's and S&P

Insurer	MOODY'S INVESTORS SERVICE	STANDARD & POORS RATING SERVICE
Assured Guaranty Municipal Corp. (AGM)	**A2 / Stable**	**AA / Stable**
Build America Mutual (BAM)	**Not Rated**	**AA / Stable**
National Public Finance Guarantee Corporation	**A3 / Negative**	**AA- / Stable**
MBIA Insurance Guarantee Corp	**Caa1/Negative**	**CCC/Negative**
CIFG	**WD / Rating Withdrawn**	**WD / Rating Withdrawn**
Ambac	**WD / Rating Withdrawn**	**WD / Rating Withdrawn**
FGIC	**WD / Rating Withdrawn**	**WD / Rating Withdrawn**
Syncora Guarantee Inc./XL Capital Assurance	**WD / Rating Withdrawn**	**WD / Rating Withdrawn**
ACA	**Not Rated**	**WD / Rating Withdrawn**

Update on Borrowing Markets and Regulations

August 30, 2016

State law

- Municipal Authorities created pursuant to Municipality Authorities Act of 1945 (“Act”).
- Act provides that an Authority may issue municipal bonds pursuant to a resolution adopted by the Authority.
- Debt issued by municipal authorities is not considered debt of the municipality and is not restrained by debt limits applicable under LGUDA

Types of Financings

- Fixed Rate Transaction–Public
  - Terms of bonds set at pricing of the transaction
  - Documentation typically includes:
    - Resolution
    - Indenture
    - Offering Document
    - BPA–Negotiated Deal
    - CDA
    - Tax Documents
    - Closing Certificates

Types of Financings

- Fixed Rate Transaction–Private
  - Terms of bonds set at outset based on negotiations with Bank
  - Bank purchases Bonds for its own account
  - Documentation typically includes:
    - Resolution
    - Indenture
    - Offering Document–maybe needed if Bank wants the ability to sell Bonds at a later date
    - Tax Documents
    - Closing Certificates
    - Disclosure?

Types of Financings

- Variable Rate Transaction–Public
  - Terms of bonds based on a market Index–LIBOR/SIFMA
  - Bonds typically secured by a bank letter of credit or standby BPA
  - Letter of Credit
    - Provides both liquidity and credit support for the bonds
    - Purchases of bonds look to Bank for repayment. Bank looks to Authority
  - Standby BPA
    - Provides liquidity support only.
    - Authority makes scheduled principal and interest payments
    - SBPA used in the event that Bonds are unable to be remarketed

Types of Financings

- Variable Rate Transaction–Public
  - Documentation
    - Resolution
    - Indenture
    - Offering Document
    - Reimbursement Agreement
    - CDA
    - BPA
    - Tax Documents
    - Closing Certificates
    - Remarketing Agreement
    - Swaps?

Types of Financings

- Variable Rate Transaction–Private
  - Terms of bonds based on index
  - Bank purchases Bonds for its own account
  - Documentation typically includes:
    - Resolution
    - Indenture
    - Offering Document–maybe needed if Bank wants the ability to sell Bonds at a later date
    - Tax Documents
    - Closing Certificates

Bonds have been issued

- My bonds have been issued, now what?
- Post issuance compliance

What is Post Issuance Compliance?

Three Major Areas:

- Tax Law
- Securities Law
- Bond Document Covenant Compliance

Tax Compliance

- Use of Bond Proceeds
- Use of Bond Financed Facilities
- Arbitrage – Investment Yield Restrictions and Rebate Requirements
- Remedial Actions

Tax Compliance – Use of Bond Financed Facilities

- Limitations on "private use"
  - Generally, no more than 10% of proceeds of a governmental issue
- Examples
  - Leases to nongovernmental persons
  - Sale of bond-financed assets
  - Management contracts and other contracts

Tax Compliance – Remedial Actions

- Issuer may take remedial actions discussed in Treasury Regulations to cure deliberate action
  - Redemption/defeasance
  - Alternative use of disposition of proceeds
- Voluntary Closing Agreement Program
- Continuing Education

Securities Law–Continuing Disclosure

- SEC Rule 15c2-12
  - Binding Commitment–CDA
  - Obligated Party or Issuer has responsibility for content of primary offering documents and continuing disclosure materials
  - Ongoing procedures and monitoring

Securities Law–Continuing Disclosure

- The continuing disclosure information is required to be electronically filed with the Municipal Securities Rulemaking Board's Electronic Municipal Market Access ("EMMA") system
- Annual financial information and operating data

Presenters

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Josh Pasker concentrates his practice in finance matters of states, municipalities, and their authorities.

Josh serves as bond counsel, underwriter's counsel and borrower's counsel for a variety of public finance transactions including:

- Airport Revenue Bonds
- General Obligation Bonds
- Higher Education Bonds
- Multifamily Housing Bonds
- Student Loan Bonds
- Transportation Bonds
- Wastewater Revenue Bonds
- 501(c)(3) Bonds

Josh also counsels issuers and borrowers on securities laws, tax laws and post issuance compliance procedures relating to tax-exempt bonds.